

# Rethinking the Musical Instrument

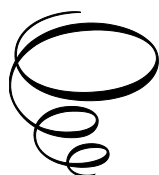


# Rethinking the Musical Instrument

Edited by

Mine Doğantan-Dack

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Mine Doğantan-Dack

## FOREWORD

### MINE DOĞANTAN-DACK

Western musical practices are thoroughly intertwined with musical instruments—material objects often, though not always, conceived and designed with the sole purpose of producing sound and making music. Indeed, musical instruments, “as producers of humanly organized sound” (Johnson 1995: 259), are crucial and indispensable actors in the majority of musical cultures. As Kartomi noted “not all cultures have classifications of instruments”, but “few cultures may be isolated as having no musical instruments at all” (1990: xvii). Musical instruments are an integral part not only of the kind of music created, but also of the social and cultural meanings that diverse musical behaviours engender. They significantly shape the ontological conceptions and epistemological understandings of music, of performing, of musical agency, expressivity, musicality, etc. in any given cultural context.

While the establishment of music performance studies as a musicological discipline in the twenty-first century generated a very large body of research on a wide range of topics related to music making, the nature of musical instruments as well as their role in musical practices, and in wider cultural contexts more generally, remain an under-explored area. Within the discipline, there is a general tendency to speak of “the performer” as an abstract, homogeneous category, without taking into account the kind of musical instrument that mediates acts of music making, and indeed music itself as a temporally emergent, sounding phenomenon. In reality, different kinds of musical instruments involve different expressive affordances, support different artistic aims, give rise to different phenomenologies of performance making, and generate different kinds of performer identities. To date, there has been significant research on the history and acoustical properties of western musical instruments (e.g. Baines 1992; Campbell et al. 2004; Chaigne and Kergomard 2016; Donington 1982; Fletcher and Rossing 1998; Montagu 1976, 1979, 1981), and some research on their cultural-symbolic connotations (e.g. Doubleday 2008; Winternitz 1979). There is also growing interest in studying the historical background of contemporary musical instruments, including the history of modernist



experiments undertaken with the intention of inventing new instruments in the twentieth century (Patteson 2015), and the historical practices of instrument design and musical notation as ancestors of new digital music technologies (Magnusson 2019). One recent publication—*Musical Instruments in the 21<sup>st</sup> Century: Identities, Configurations, Practices* (2017)—which focuses on the role of contemporary electronic and digital instruments in the context of electronic music and sound art, also addresses philosophical/critical issues such as the conditions under which an object is acknowledged as a musical instrument in a given cultural context, or how new instruments forge new instrumental identities. Within this flourishing research area, there is still little scholarly work, however, on the artistic affordances of different acoustic, electronic and digital instruments, their critical reception in cultural contexts, the nature of the embodied interactions they generate in composing and performing music, and the expressive and communicative meanings that emerge as a result of such interactions. *Rethinking the Musical Instrument* aims to take some steps towards filling this gap in research.

In 2015, as part of the annual international *Music and Sonic Art: Practices and Theories* conference that I co-organise with Dr John Dack, I initiated a special conference session titled “Rethinking the musical instrument”. Subsequently, this session became a popular component of the conference, attracting a rich variety of papers every year, and giving the delegates the opportunity to debate both philosophical/critical and practical/artistic questions and topics such as:

- What makes an instrument “musical”?
- What kinds of artistic, epistemological, and cultural issues lead to the creation of new musical instruments?
- In what ways do digital musical instruments differ from acoustical instruments?
- The gestural affordances and ergonomic principles of musical instruments, and the musical meanings that emerge as a result of these affordances and principles;
- Phenomenologies of music making in the context of particular kinds of musical instruments;
- Relationships between creativity in performance, musical interpretation and musical instruments;
- The role of musical instruments in the emergence of musical identities;
- The discourses surrounding musical instruments in different genres, styles and traditions.

The chapters in this volume all originated as presentations given within the “Rethinking the musical instrument” sessions of the annual international *Music and Sonic Art* conference between 2015-2019. The topics covered include: instrumental phenomenology; physicality of instrumental performance; historical discourses around musical instruments; the role of the instrument in musical analysis; appropriation of acoustical instrument discourses in digital culture; instruments as compositional tools; digital instrument design, etc. Among the instruments discussed are the piano, the double bass, the cello, the clarinet, the pipe organ, the harp, the fortepiano, the classical guitar, the Vietnamese guitar, the synthesizer, and various other electronic and digital instruments.

In its broad outline, the volume proceeds from acoustical to digital instruments, and from critical/philosophical enquiry and historical considerations to artistic research projects. In Chapter 1, I discuss why it is pedagogically and artistically beneficial to think of the piano as an artistic collaborator in piano performance, and argue that the widely reported experience of becoming one with one’s instrument in expert instrumental performance presents certain phenomenological peculiarities in artistic pianism arising from the nature of the unique relationship between a pianist and her instrument. Chapter 2 by Margarethe Maierhofer-Lischka unpacks the notion of effort in performance as it relates to the experience of playing and the reception of the double-bass. Through an interdisciplinary approach that draws from dance theory, musicology and music psychology, the chapter also considers how the notion of effort can be applied in music analysis. In Chapter 3, Ellen Fallowfield studies string multiphonics, with particular focus on the instrument of the cello. After reviewing the literature on extended and other contemporary techniques, as well as the various technique manuals that have been provided by other authors, she discusses Cello Map, a database she created in order to provide user-friendly resources to promote not only technical knowledge but musical creation. Chapter 4 by Scott McLaughlin is about the instrument of the clarinet. Written as part of an AHRC-funded project, “The Garden of Forking Paths”, it foregrounds the material singularities of the clarinet in order to mobilize its resonant topography for compositional purposes. Chapter 5 by Andrew Blackburn considers the history of the pipe organ from an ontological and epistemological perspective, and examines some contemporary classical compositions that expand the sonic possibilities of the instrument and bring it into contact with electronic and digital technologies. Chapter 6 is a historical study by Temina Cadi Sulumuna on the instrument of the harp. Through a detailed scrutiny of nineteenth-century journalistic discourses, Sulumuna presents a critical

view of the harp and of the harpist, emerging from their reception by the French culture during this period. In Chapter 7, Stephen Husarik continues the historical approach, this time in relation to a particular piece of music by Ludwig van Beethoven: the author argues that there is an intimate connection between the formal structure of the composer's piano sonata Op.111 and the specific features of the Broadwood fortepiano, now housed in the National Museum of Hungarian Culture in Budapest, for which he composed this sonata. In this connection, Husarik considers the particular pedal mechanisms of the Broadwood instrument in question. Stefan Östersjö's contribution, Chapter 8, takes the reader to another geographical location, south of Vietnam: it traces the development and transformation of a particular tune from the early twentieth century, and explores how the western guitar, re-fretted, became part of its performance tradition. The chapter draws on ethnographic and autoethnographic data to explore the artistic affordances of this re-fretted "Vietnamese" guitar and its use in both traditional and experimental music.

The next two chapters in the volume are more theoretically oriented and serve to move the discussion towards electronic and digital musical instruments. Chapter 9 by Olaf Hochherz draws from the theories of Hans-Jörg Rheinberger in order to present the argument that in "musical experimentation", musical instruments are not employed as fixed tools to solve artistic problems, but that they also change themselves as they interact with the various components of the experiment environment: in this sense, an instrument in a musical experimentation oscillates between being a technical object and an epistemic thing. In Chapter 10, Katharina Schmidt explores the concept of "musical expertise" through the lens of recent theories of extended mind and epistemic tools. After presenting an interdisciplinary theoretical background in order to re-conceptualize musical expertise as a dynamic co-dependency between musicians, their instruments and the performance environment, Schmidt discusses "feedback music" as an instance of this new conceptualization.

In Chapter 11, Wernicke bridges the world of acoustical and digital musical instruments by considering how the discourses around the former influence the reception of the latter. Written as part of the "Musical Interface Designs: Augmented Creativity and Connectivity" project, the chapter shows that acoustical instrument metaphors related to certain pre-digital skills can function as powerful influencing factors when users engage with digital instruments. In Chapter 12, James Mooney explores how new musical instruments are invented through a case study of the English experimental musician and instrument builder Hugh Davies. Based on a close study of archival sources, Mooney develops the argument

that “instrumentalising”, that is the totality of the processes through which new instruments come into existence, is a thoroughly socio-material phenomenon intertwined with discursive practices in a culture. Chapter 13 by Marc Estibeiro and David Cotter concerns the encounter between the acoustic guitar and electronic musical instruments. After a critical exploration of some of the important ontological issues regarding musical instruments—i.e. “what is a musical instrument?”, “what is the relationship between the instrument and the performer”, etc.—Estibeiro and Cotter provide a historical background for expanding the sonic possibilities of the guitar through electronics, and present a new artistic research project in this connection. Chapter 14 by Anne Veinberg and Felipe Ignacio Noriega similarly concerns expanding the artistic affordances of an acoustical instrument, in this case the piano: the authors discuss *The CodeKlavier*, a system they invented with the aim of exploring the practice of coding through pianistic means and expressivity, and its artistic and performative implications. In Chapter 15, Ewan Stefani narrates the history of analogue synthesizers, their performance practices, their design and classification, and the discourses that have surrounded these instruments that are currently actively chosen by many over digital technologies. In this connection, Stefani also discusses the various relationships between digital musical instruments and analogue synthesizers. Sébastien Lebray’s chapter—Chapter 16—continues the discussion of synthesizers in the context of a specific musical genre, namely the French House. Lebray argues that among the factors that define this genre, the specific instruments used by its practitioners play a significant role, giving French House its particular aesthetic and musical identity, and distinguishing it from other Houses such as Chicago and Deep House. Chapter 17 by Slavisa Lamounier and Paulo Ferreira-Lopes introduce the reader to a new digital musical instrument invented by the authors: the Digital Sock. The chapter provides a detailed account of the processes that resulted in the creation of this new instrument, which has been designed with the intention of investigating body-instrument interaction through the employment of wearable technology. In the final chapter of the volume, Chapter 18, Diana Cardoso and Paulo Ferreira-Lopes reflect on the current proliferation of digital musical instruments and the factors that need to be taken into consideration to ensure that specific digital instruments with artistic potential continue to make a sustained contribution to musical culture.

I hope that this volume will be of interest to all those who work with musical instruments and instrumental sound, and that readers from diverse backgrounds including musicology, performance studies and sound art,

will find the discussions and perspectives presented here inspiring, and will engage with their creative, aesthetic, scholarly, social and cultural implications in their own work.

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# CHAPTER ONE

## THE PIANO AS ARTISTIC COLLABORATOR

### MINE DOĞANTAN-DACK

In various interviews she gave over the last few decades, pianist Martha Argerich (b. 1941), when asked about her decision to stop giving solo recitals in the 1980s, often noted feeling lonely while playing on her own in public, and said that she “found this hard to bear. ... [Alone] on stage I had the strange feeling of being separated, stranded. ... I have a great need for company when I am on the platform, and making music with other people gives me that feeling” (ABC Classic 2019). Argerich is not the only pianist who speaks about the experience of solo piano performance in these terms.<sup>1</sup> As discussed by music critic Charles Michener in his article on the art of the concert pianist, expressions of loneliness and isolation emerge as a deeply engrained aspect of the solo pianist’s psyche, and as a common trope in discourses around pianism (Michener 2005). The belief that “Every solo pianist is lonely on stage” is prevalent even in non-classical genres such as jazz and free improvisation (Broecking 2021: 314). My aim in this chapter is to reflect on the complex network of cultural and psychological factors behind this recurrent trope that fails to recognize the agency of the instrument of the piano as an essential component of artistic pianism, and thereby (mis)represents the solo artistic work that a pianist undertakes as a companionless endeavour. I argue that phenomenologically the pianist and the piano are interdependent in co-determining each other as musician and musical instrument respectively. Just as “the piano does not exist as a *musical instrument* prior to its emergence in the kinaesthetic-affective consciousness of the pianist, who constructs its instrumental identity through embodied interactions with it” (Doğantan-Dack 2015a: 178), the pianist cannot come into being as a musician in the absence of artistic engagement with the material properties and musical affordances of the instrument of the piano. Since a pianist’s

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<sup>1</sup> The word “solo” etymologically comes from the Latin “solus” for “alone”.

artistic agency emerges simultaneously with the coaction and agency of the piano, the pianist, even in solo performance, is never alone in making music. Given that highest levels of music performance anxiety are triggered in solo performing contexts (Papageorgi et al. 2011; Spahn et al. 2016), constructing solo piano performance as the work of the pianist alone does not promote a healthy performance culture, since “being alone” can slip into “feeling lonely” (Firestone n.d.); nor does it reflect the full phenomenological reality of pianism. The pedagogy and practice of artistic pianism would, therefore, benefit from rethinking the piano as an artistic collaborator.

The origins of one discursive thread that effaced the piano from understandings of artistic pianism and shifted all artistic agency onto the pianist can be traced back to the early nineteenth-century when the solo piano recital emerged as a new category of musical presentation. Historically, the very conception of an exclusively solo piano concert has been integrated with a sense of separation between the virtuoso pianist and audiences. Launched by Franz Liszt in 1839 in Rome, and initially called “pianistic monologue” (*monologue pianistique*) (Hamilton 2008: 41), the traditional solo piano recital operated by focusing the collective gaze of the public upon the pianist, who performed on her own in the middle of an often raised and large platform, which intensified the perception of her separateness, distinctness and detachment from all those present in the auditorium. The placement of the piano on stage to give access to the profile of the pianist, who does not make eye contact with listeners and appears to be communing with another realm, also created an aura of mystique around solo pianism.<sup>2</sup> Liszt is known to have exploited this spatial and psychological separation as a source of empowerment from the first. In one of his letters to the Parisian salonnière Princess Belgiojoso, he refers to the solo piano recital as “this invention of mine” and writes that he dared “to give a series of concerts entirely alone, affecting the style of Louis XIV and saying cavalierly to the public ‘Le concert, c’est moi’” (Williams 106-107)—or, “I *am* the public concert”. This image of the virtuoso pianist ruling over audiences has been intensified by nineteenth-century portrayals of Liszt’s playing as a subjugating act that tames, and at times destroys the instrument of the piano. Referring to a caricature published in *La Vie Parisienne*, Davison notes that “as late as 1886 Liszt was shown with four arms on each side, demolishing a keyboard at its

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<sup>2</sup> According to Harold Schonberg, the first pianist to play with his right side to the audience in a public concert was Jan Ladislav Dussek (1760-1812) (Schonberg 1987: 62).



extremities” (2001: 210)—an image that supports the cultural construction of virtuoso pianism as a violent physical act and affirms the pianist as the sole agent as well as the source of an absolute authority on stage.

While one can argue that such images of virtuoso pianism constitute an extreme end of the spectrum with regard to the representation of the relationship between the pianist and the instrument of the piano, this relationship has, nevertheless, always been constructed and understood in hierarchical terms. As detailed by Ivan Raykoff in his 2014 book *Dreams of Love: Playing the Romantic Pianist*, the piano—in accordance with two tropes that have been circulating widely in cultural discourses since the nineteenth century—has been imagined as a woman or a wild animal whose agentic qualities would be vanquished by the domineering male virtuoso (Raykoff 2014: 115). While western musical instruments other than the piano are also frequently anthropomorphised and gendered (Service 2012), the clear power hierarchy that has been established between the pianist and the piano in popular discourses is striking: importantly, it leaves no room for thinking this relationship in terms of equal partnership or collaboration. Indeed, these discourses that prompt the pianist to transform the piano into an absent presence in her consciousness—that is, to renounce its capacity to *act on and affect* her during the act of music making—can encourage the emergence of not only feelings of dominance à la Liszt but also of loneliness à la Argerich.

It should be noted that the absence of the instrument in thinking and talking about music making has not been limited to cultural contexts of artistic pianism: the disappearance of the musical instrument in general from musical thought has been symptomatic of a scholarly agenda that deliberately left out all the material and embodied conditions of musical creation and communication from its discourses during the twentieth century. In promoting a textualist, work-centric and disembodied view of music, traditional musicology in fact eliminated from its purview not only the instrument but also the performer as irrelevant to the generation of musical meaning. Musical performance came to be conceived as the middle stage of a disembodied chain of communication—a mind-to-mind game extending from the composer to the listener (Cusick 1994)—and the ideal performer was constructed as the faithful servant of the composer’s musical intentions: a “self-effacing” musician “whose highest aspiration—like that of high-class servants—should be invisibility” (Cook 2013: 15). This widespread ideology that dominated western art music practices since the nineteenth century encourages the performer to give little or no thought to her embodied relationship with her instrument as foundational to the origination of musical meaning, and as in essence a thoroughly situated,

contingent and dynamic phenomenon. Instead, it represents the act of music making in terms of the projection of the abstract structural properties of the musical work, and of a pre-determined expressive content that the composer presumably inscribed in notation.<sup>3</sup> One detrimental consequence of such thinking has been that the expressive qualities of music that are *imagined* as originating in certain structural features—for example, a generalized image of a *ritardando* at a phrase ending, or of a *forte* for a dissonant note—are treated as equivalent to actual expressive nuances created in singular, situated, and thoroughly embodied contexts of music making. In other words, expressiveness in performance is divorced from the contingencies of the performing body and of the musical instrument, and the moment of making expressive nuances is represented as a much less agentic affair than it actually is. The work-centric scholarly discourses, which also permeate instrumental pedagogical thinking (Hunter and Broad 2017), dismiss the singular origins of expressive music making in the interaction between the unique body of the performer and the unique material qualities of a particular instrument; these discourses also overlook the singular, fine-grained qualia of actual musical sounds that result from this interaction and the crucial role they play in the generation of musical signification. Such deep-rooted suppression of the performing body and of the instrument can trigger an emotional experience of absence (Roberts and Krueger 2021), contributing to feelings of loneliness and isolation in performance, which appear to arise frequently in solo artistic pianism.

Another discursive thread concerning the disappearance of the distinct agency of the musical instrument in music making can be located within music psychological research that explores embodied music cognition and performance expertise. Recently, there has been growing interest in studying music learning within the theoretical context of “4E cognition”, which conceptualizes cognitive processes of learning as “*embodied, embedded* in a relevant environment, *extended* beyond the boundaries of the body, and as *enacted* by a relational process comprising brain, body, and environment” (Seibert 2019: 11). 4E approaches have also been gaining traction in research on instrumental music education (Schiavio et al. 2021). In this literature, instrumental expertise is theorized in terms of the “merging” of the performer and the instrument, which is understood as “the condition of possibility to engage in an embodied interaction with music while

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<sup>3</sup> The idea that musical structures, implied by the pitches and rhythms notated in a given musical score, exclusively determine the correct performance expression of a piece of music is one of the most pervasive beliefs in discourses on musical meaning, analysis and performance (Doğantan-Dack 2015b).

performing” (Nijs 2017: 49). It is argued that as a result of this merging process, the instrument becomes an *extension* of the performing musician’s body, mind and self, and the performer *becomes one* with her instrument.<sup>4</sup> Instrumental expertise thus involves the incorporation of the musical instrument into the performer’s body schema through unconscious sensorimotor processes such that the instrument becomes *transparent* or disappears from the musician’s consciousness (Leman 2007; Nijs 2017; Nijs et al. 2013; Rojas 2015). In expert performance the musical instrument is no longer required “to be explicitly represented” and the performer can “respond to the musical environment without cognitive reflection and solely [rely] on acquired skills” (Nijs 2017: 51). The transparency of the musical instrument in expert performance represents an instance of Heideggerian “smooth coping”, which reveals entities in the environment as “ready-to-hand” (Wheeler 2005).<sup>5</sup> This is at the same time an experiential mode of being at home, of intimate familiarity and belonging, of being immersed in a world that is not broken down into the subject-object duality.<sup>6</sup> One can argue in this connection that the absence of the instrument from discourses on expert music making is not entirely unexpected or unjustified, since expert performers do not experience and think of their instruments as separate from their bodies and selves: in its continuous and consistent presence as an extension of the performer’s body and mind, the instrument as a *distinct agent* can be forgotten in performance.

There is ample anecdotal evidence that performing musicians indeed frequently describe their instruments as natural extensions of their bodies. Cellist Michael Bach, for instance, speaks of his instrument as part of

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<sup>4</sup> O’Modhrain and Gillespie argue that “performer-instrument interaction is, in practice, a dynamic coupling between a mechanical system and a biomechanical instrumentalist. ... The idea that an instrument becomes an extension of the player’s body is quite concrete” (2018: 25).

<sup>5</sup> “Smooth coping, as Heidegger explains it ... is a process of real-time environmental interaction involving the subtle generation of fluid and flexible context-specific responses to incoming sensory stimuli” (Wheeler 2005: 134).

<sup>6</sup> According to Heidegger, “our primary epistemic mode of being arises from a deep phenomenological familiarity with the world, which in turn emerges from skilled practical activity [as] entities [are encountered] as *ready-to-hand*; and ... when the habitualness of this mode of being is disturbed by an unexpected change in the functioning of the ready-to-hand encounter, that moment is phenomenologically lit up, so to speak, as entities lose their transparency and reveal the subject’s separateness from them by drawing attention to their distinct nature. The world becomes, temporarily, *un-ready-to-hand*” (Doğantan-Dack 2020: 18).

himself, and not merely as another object he comes into contact with.<sup>7</sup> This kind of relationship with one's instrument is also referenced in appraising the quality of a performer's musicianship positively, as when pianist Bertrand Chamayou describes Argerich's pianism: "She has such a natural way to play, it's like the piano is an extension of her. ... The action between her fingers, wrists and arms—speaking just in a mechanical way, it is pure perfection. You have the feeling that she's not struggling at all, with anything" (Chamayou quoted in Parry 2021). When discussing issues of agency, ownership and expression in music performance, scholars often comment on this intimate relationship between a performer and her instrument (Auslander 2009; Burrows 1987; Le Guin 2006; Rojas 2015). Speaking from the listener's perspective, music philosopher Philip Alperson refers to this phenomenon as the "commonsense view" and argues that

The picture of a musician playing his or her musical instrument seems to be at the foundation of what we mean by the practice of music; ... It is misleading to say simply that musical instruments are discrete, self-subsisting objects held or manipulated by the performer. In some cases it is hard to tell where the body ends and where the instrument begins. (Alperson 2008: 37)

In instrumental pedagogical discourses, this kind of embodied consciousness in interacting with a musical instrument is put forward as a positive value and a desired goal. In his notes on piano pedagogy, pianist Frederick Hodges writes, for instance, that "the keyboard must ... become part of the body in performance" (Hodges 2010). In her book titled *Piano Lessons with Arrau*, Victoria von Arx gives an account of pianist Claudio Arrau's (1903-1991) philosophy of performance shaped by the principle of becoming one with his instrument and writes that

It was evidently natural for [Arrau] to see the work of the body and the manifestation of the soul in piano playing as a single, immediate, and indivisible phenomenon. ... In integrating expression and technique, he sought an integration of mind and body through which he could become one with his instrument and his music. (von Arx 2014: 75-76)

A recent study titled "Musician–instrument relationship as a candidate index for professional well-being in musicians" (Simoens and Tervaniemi

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<sup>7</sup> "It's an extension of your self, the instrument. It's not an object you are ... *traktieren* [German: 'To treat (as an object) with a connotation of thoughtlessness'] ... I don't know the English. It's an object you can use as an extension of your thinking" (Bach quoted in Davies 2001: 23).

2013) provides evidence that feeling united with one's instrument is advantageous also in terms of physical and mental health. Further research is needed to understand the conditions under which expert soloists, who feel united with their instruments, might nevertheless experience the emotion of loneliness on stage—an emotion that is typically assigned a negative valence (Dahlberg 2007).

While some noteworthy conceptual and theoretical frameworks have been proposed in recent literature to explain the mechanisms that enable a performer to unite with her instrument in music performance practices (Leman 2007; Nijs 2017; Nijs et al. 2013), there is currently no systematic research regarding the psychological and phenomenological variations this ubiquitous phenomenon manifests in the context of *different* instruments. As I have written elsewhere

The general tendency, in performance studies, to speak of “the performer” in the abstract obscures the fact that in reality different kinds of musical instruments involve different expressive means, engender different phenomenologies of performance making and generate different kinds of performer identities. In terms of a musician's embodied expertise, a pianist is not the same kind of performer as a violinist. (Doğantan-Dack 2015a: 172-173)

Consequently, it is essential that in exploring the nature of the relationship between a performing musician and her instrument, the latter is not understood categorically, and that the researcher does not uncritically assume that the embodied and psychological mechanisms through which a cellist becomes one with her instrument, for example, would be identical with the mechanisms at work in the context of an oboist. It is also important to recognise that the *experience* of becoming and being one with one's instrument can involve many different facets that do not necessarily manifest themselves discursively. The umbrella notion of “becoming one with” can hide more than it reveals about the characteristics of this lived experience.<sup>8</sup>

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<sup>8</sup> For instance, a recent study that explored the similarities and differences between music and drama students' concepts of performance revealed that some music students conceptualized their instruments as “shields”, that is, as a form of protection or barrier to separate and hide them from the audience, and to “minimise the presence of the audience” in their awareness while performing (Ford 2013: 163). Further research is required to understand whether such a conceptualisation that constructs the instrument as a comfort zone is part of the process of developing expertise and becoming one with one's instrument.

In this connection, artistic pianism presents a particularly complex case with regard to the phenomenology of embodying and becoming one with the instrument in performance. In the research literature, where “the musical instrument” is often discussed as a homogeneous category, it is assumed that in an advanced stage of learning to play *any* musical instrument

where the necessary instrumental techniques have been mastered, we reach the status of habitual bodily action, and the musical instrument becomes transparent. ... As a result, body image recedes into the background and we have pre-reflective, non-objectifying body-awareness. At this stage, our attention is shifted from the proximal (our bodily states) toward the distal (for instance, to the melodic and harmonic structure of the music shaped through our embodied activity). (Kim 2021: 77)

In other words, once a certain level of expertise that allows the instrument to become an extension of the performer is attained, this embodiment relationship would be preserved—provided the performer remains in good technical shape through regular practice. The expert instrumental performer typically does not have to go through the embodying process repeatedly, and attempt to render the instrument transparent all over again in each performance.

In artistic pianism, by contrast, it is the skill of being able to continuously **re-embody** the instrument that defines expertise. The reason for this state of affairs is deceptively simple: with very few exceptions, and unlike other kinds of instrumentalists, pianists do not perform in public on their own instruments.<sup>9</sup> Instead they are “expected to arrive at the venue and accept the instrument provided” (Wilson 2016). The status quo of the concert pianist is such that she practices on her own piano, but performs each time on a different, unfamiliar instrument. Compared to string or wind instrumentalists, a pianist partners with many more instruments throughout her career, and a “successful” performance depends on her ability to develop an embodied knowledge, typically in a very short period of time, of the ways a certain piano responds to and supports her manual-tactile interactions with it. This state of affairs has significant implications for pianistic pedagogy and artistry, and for research on the relationship between the pianist and the instrument of the piano. The embodiment

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<sup>9</sup> Among the few concert pianists who toured with their own pianos are Vladimir Horowitz (1903-1989), Arturo Benedetti Michelangeli (1920-1995), and more recently Krystian Zimerman (b. 1956).