PERFORMING STUFF
Human-Entity Interactions in
Contemporary Artistic Practice

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Editorial

Practice Entangled

COLIN FRANK

When I created the call for proposals for this edition of the journal, I had no idea the extent to which a non-human force would tear through the world. Before the coronavirus SARS-CoV-2 came to have consequences for humans globally, I had asked artistic-researchers to observe their interdependence with and reliance on things, that is to say, I wanted them to consider how the materials of their practice shape their artistry and how non-human stuff can feedback in the making process. I wanted to collect perspectives on material agency within contemporary artistic practice, and to concretise and reflect on these experiences by presenting examples and theories. From ecologic, posthuman, and assemblage theories the interconnectedness between humans, non-humans, and other forces has become increasingly apparent. Applying this sensibility to artistic practice, I wanted to ask: how are we entangled within assemblages of actants? What are practitioners’ responses to the agencies of others, and how does one transform their practice when they are observant and accepting of these forces? This idea of ‘actants’ is borrowed from actor network theory to designate entities that are sources of action, be they human, non-human, or non-individual.1 There may not be any particular motivation on an actant’s behalf, and it “is neither an object nor a subject but an ‘intervener.’”2 Once come together with other entities, often in indeterminate ways, an actant can shape and alter events. The coronavirus provides an impressive example of a non-human actant influencing—it being not quite alive nor dead captures the vibrancy of matter.3 In its coming together with immune systems, air particles, long distance transportation networks, governments, communities, healthcare systems, and many more, it has appeared as a massively impactful force. Out of the things that have transformed artistic practice in recent memory, the coronavirus could be counted as a significant one, although it is but one factor amidst many that influence artistic practitioners. Within this edition, the coronavirus’ impact is not discussed extensively. Many of the practitioners presented herein talk of works performed pre-pandemic, when it was acceptable to have multiple persons in the same room, in some cases even touching. Resultantly, the things discussed are highly varied, as people could easily meet one another, rehearse legally in enclosed spaces, or travel internationally without quarantining. Perhaps because there were many possibilities to do things, throughout this journal each author has a completely different concept of what is an influencing agent on the practice they are discussing. The diversity of things presented encompasses tuning forks, violins, items from childhood homes, new electronic instruments, 3D virtual reality objects, traditional instruments from a rural Italian village, recording devices, flower pots, digital effects pedals, the space between performers, a flute, a drum with a shoe brush, a cymbal, and more. Even the idea of an object is broken with and unbounded to reconsider disciplinary divisions, to incorporate under-represented histories, to hear marginalized voices, to consider the importance of the body, and, as Maria Sappho Donohue succinctly suggests in her article, to ‘give a fuck.’

Admittedly, my request for articles was a dash greedy on my behalf, as my current research is attempting to understand my own multidisciplinary and perceptive practice as arising partially from the physical objects and agentic others I encounter. However, considering that there has been little discourse about the agency of objects from contemporary music practitioners, I was keen to hear their opinions on the subject. There has been much discourse on non-human agency from within sociological disciplines—perhaps closest to home being the Contemporary Music Review’s issue on Music, Mediation Theories and Actor-Network Theory,4 which provides variegated analyses of music practices as entangled with other acting agents—as well as within performance scholarship broadly, including the Performance Research journal’s issue ‘On Objects’5 and, surveying from within the theatrical arts, the book Performing Objects and Theatrical Things.6 These volumes undoubtedly have referenced influential humanities scholarship outside artistic and performance disciplines, resultantly allowing for a rethinking of the material world that artists are forever immersed in. Ideas such as actor-network theory, assemblage theory, posthumanism, object-oriented philosophy, and new materialism, to name but a few, provide rich ways of thinking about humans as entangled with non-humans. Within music performance scholarship these ways of thinking are beginning to appear. For instance, Joe Cantrell, in his article ‘Sounding New Materialism’, considers how an effect pedal’s manufacturing, a process entwined with environmentally destructive methods and human exploitation, imprints itself onto further levels of making-with the machine;7 Andrea Neumann co-constructs with her self-developed ‘Inside-Out’ piano, generating a performance practice contingent on the unpredictable properties of the found materials she uses;8 and Beavan Flanagan, by looking to object oriented ontology and transcontinental materialism, speculates on music performances that do not rely on humans necessarily present at all, thus considering a music for objects that operate on their own accord.9 This journal hopes to contribute to these discussions.

Practitioners are, wittingly or not, caught up in a give-and-take between their own wants and the wishes of the materials they work with. In this sense, rather than believe that a performer can completely control their instrument—an illusion which the concept of virtuosity manifests—there is instead a dialogue between human and instrument. The

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3 Vibrant, lively energy as existing within inert matter is wonderfully discussed by Jane Bennett. Not only does she discuss materials as agentic but also their effects on the socio-political. See Bennett, Vibrant Matter.
6 Marlis Schweitzer and Joanne Zerdy, Performing Objects and Theatrical Things (Palgrave Macmillan, 2014).
idea that an instrument extends a performer’s intentions seems out of place when objects are viewed as agential. Rather, a system of exchange occurs, whereby the performer and materials configure one another in a “mutually constitutive process through which users, technologies, and environments are dynamically engaged in refashioning one another in a feedback loop.”

Seen from such a co-productive and enmeshed angle, it is easy to conceive of arts practice ecologically, as a collection of varied actants all pushing and stretching with their own intentions. Actants can break off and assemble with others, resulting in the formation of decentered conglomerates, as nicely described in the rhizomatic model Deleuze and Guattari propose. Practice is caught up in a messy assemblage of factors, all with agentic forces that can lead in often unpredictable, intangible directions. Such precariousness can be approached by either attempting to completely eradicate it, in other words trying to squash it under the guise of control, or by openly allowing for its shifts, changes, and uncertainties. The latter case is an acceptance of not-knowing on the practitioner’s behalf, and in my opinion is a more valuable and beneficial way to acknowledge intra-action with one’s materials.

Being responsive and attentive to the acts of agents allows for ethically astute co-productivity, along with, as Rosi Braidotti suggests, “new conditions for knowledge production and consequently new relational encounters”. Such a becoming-with acknowledges that humans are interrelated beings, and that, as we go to make stuff happen, we are not just affecting other people but also the wider environment. Ignoring the agency of others, hacking away blindly, or attempting to master or reign supreme over the non-human materials that one works with could potentially lead to environmentally destructive habits. As Jane Bennett suggests, human bodies are not exclusively human, they are comprised of myriads of organisms, minerals, and foodstuff ingested every day. She asks, “if we were more attentive to the indispensable foreignness that we are, would we continue to produce and consume in the same violently reckless ways?” With this in mind, why would we be careless, controlling or ignorant of the material stuff we use when our artistic practice is so reliant on, entangled with, and constructed by them? I would encourage such an ethics to not just be considered in the minute details of practice, but further expanded to the whole network and economy of art production. It could be wise to extend Juliette Fraser’s idea of shared capital beyond just the people collaborating in a project, such that the non-human world supporting it also benefits. Such an aim is not easily nor instantaneously achievable, and there is no straightforward or certain pathway. However, by gradually building awareness through discussion and by critically observing one’s own activities, it may be possible to formulate positive, morally sound action.

The articles within this journal all contribute in unique ways to this discussion of how contemporary practices are enmeshed with non-human entities. They spiral off from this central theme too, demonstrating just how complex and multifaceted artistic practice is. As this journal is an experimental publication stemming from the postgraduate community at the University of Huddersfield, the articles herein contain highly diverse presentation methods, including interactive elements, co-authored conversations, interview transcripts, and other more nuanced and atypical approaches to argument structuring. The first article, by D Henry McPherson, critiques when improvising performers are named or associated with a certain discipline, an act that affixes them to a training, school, or category. He argues for an opening-up of disciplines, proposing to go beyond and across boundaries; something to be found in the concept of transdisciplinarity. His argument weaves between movement, sound, gesture, objects, space, and theatre—constituting the materials of practice themselves as nonfixed and unbounded—all interspersed with videos of improvisations. Following this paper is the Mixed Currents research project’s article about making the violin trio piece Imitate Elegance Expertly (2019). The collaborative project, of which I was a part, looks at how violins and digital recording technologies influenced the creative process. With the violin steeped in a long history of virtuosic performance, and its holding posture rigidly established, this project experimented by breaking those ingrained habits to contemplate what contemporary virtuosity could be. The article further reflects on the accumulation of audio and video recordings across the project, and how they were reincorporated into the creative process. This is followed by Hakan Ulus’ discussion of the tuning fork in his compositional practice. By considering that a produced object opens an artistic void, one that can be filled by compositional aestheticization of the object, he investigates the tuning fork’s ‘Gehalt’. He speaks of objects’ ability to form striking, aesthetically charged personal events, wherein an object (including artwork) can impact one’s life. In this regard, he considers certain objects to contain more latent aesthetic potential than others—potential that can be released through compositional endeavours—and presents his own aestheticization of the tuning fork through unique performance techniques. Returning to an expanded idea of what an influencing agent can be, Solomiya Moroz, Cristina Fuentes Antoniazzi, Iona Krawczyk, and I discuss disciplinary training, the space between performers (using the concept of ‘ma’), subjective embodied scores, and percussion objects as influencing the collaborative process. The article contains individually authored sections that are interspersed with the other group members’ comments, resultantly exposing the multiple perspectives that coexisted during the collaborative process.

Local history and knowledge are explored in Cristina Ghirardini’s investigation of composer Domenico Torta’s Sinfonia del mondo (2013/20). She examines unique, hand crafted instruments from Torta’s home village of Rivera presso Chieri, and how Torta composes with these items to combine the traditional performance practices of the village with contemporary theatre and symphonic practices. She discusses techniques and sounds in detail, and how

13 Rosi Braidotti, Posthuman Knowledge (Medford, MA: Polity, 2019), 68.
14 Bennett, Vibrant Matter, 113.
these relate to the village’s specific rural activities and natural sounds from the surrounding landscape. This is followed by Linda Jankowska and Katherine Young’s correspondence about their collaboratively made performance/installation boundarymind. In the creation of their work they look back to objects from their childhoods in Poland and Mississippi, connecting these places together by reflecting on the personal significance of certain evocative objects. They draw inspiration from Olga Tokarczuk’s idea of tenderness and Pauline Oliveros’ quantum listening to formulate a feminist artistic methodology. From here, Maria Sappho Donohue’s interactive article presents underrepresented practitioners within the field of free improvisation, and expands what an object or actant can be to encompass political movements, social oppression, community action, costume wearing, and much more. By presenting a topic-web and providing question-buttons to click on, an interconnected and complex map of voices, histories, and activism emerges. She demonstrates the destructive workings of a pervasive Eurologic mindset—that it can erase, dominate, subjugate, make abject and call others hysterical—and presents alternative practices to this hegemonic discourse.

The last three articles look to electronic, technological or entirely virtual non-human agents. They question how humans may co-construction with human-made technologies, and demonstrate that artistic practice has become so entangled with machinic design and development that, perhaps, there is not necessarily a boundary between humans and non-humans. Andrew Watts converses with artists working in and around Silicon Valley’s high-tech sector, investigating three primary questions concerning posthumanism. In considering the relation between people and technology, and how technological advancements impact bodies, thinking, and the human voice, he surveys a wide range of concerns and approaches for dealing with contemporary society. The interviews raise more questions than answer, demonstrating that there is no fixed way for humans to encounter machines. Post-percussionist Noam Bierstone investigates hands-on electronic devices by discussing approaches to playing performer-controlled electronics. By embracing the unpredictability of electronics, he argues for an adaptable practice that listens intently and reacts quickly to their changing attributes. He demonstrates this approach by giving details about two pieces he performs, The Threshing Floor (2014) by Mauricio Pauly and Message from the Lighthouse (2009/16) by Hanna Hartman. Finally, Przemysław Danowski dives into the virtual domain by discussing design of, composition with, and performance with virtual instruments. He discusses the ‘monad’, a virtual instrument that he and two colleagues created, and its performance practice in their piece Connexion (2019). Without the same limitations that real-world objects have, he foresees virtual reality as an exciting site for future education, experimentation, and creation.

Interspersed throughout this issue are photographs that Brice Catherin and I took during this past summer and autumn. We decided to pin each photo onto Google Maps at a location closest to where it was taken. By connecting each spot in Google’s route planner, based on the photos’ consecutive order from the start to end of this journal, we created a journey that traverses across England and Scotland, to Geneva, and with an additional stop in Amsterdam Schiphol airport. Each unique site that the object is placed at enhances, estranges, or conceals the object, resultantly imbuing the series with mysteriousness. I feel that the photos subtly speak to the multifaceted nature of the situation across the past few months as well as Brice and I’s independent, multinational experiences of it.

I hope that this diverse collection of articles will contribute to the growing discussion surrounding humans’ being influenced by and work with non-human actants in the context of artistic practice. By observing practice as bound up and entwined in the messiness of the material world, then ways of co-constructing with and means of acknowledging the forceful, life-energy of stuff is more necessary than ever as the world progresses into an increasingly precarious, unstable, and interconnected future. Paying attention to and accepting the voice of non-human agents will be increasingly important as additional major actors, possibly similar in scale to Covid-19, make their selves known. Attentiveness by artists will be but one force contributing to a more collaboratively constructive future.
“So what’s your discipline?”

At a recent free improvisation conference (hosted online due to the global pandemic) I spent the best part of two hours improvising in my bedroom in front of a webcam. At the end of the improvisation, in which I had poured water on myself, sung, twisted my body against the floor, blown into a recorder, shouted at the recorder, bitten into a banana, stood for six minutes as the improvisation, in which I had poured water on myself, sung, twisted my body against the floor, blown into a recorder, shouted at the recorder, bitten into a banana, stood for six minutes as

1 Throughout this article, the terms ‘improvisation’, ‘free improvisation’, and ‘improvised practice’ are used essentially interchangeably. To address the breadth of possible definitions for improvisation is beyond the scope of this article. To contextualise this writing, however, I offer a personal definition of improvisation as ‘a performance practice in which individual’s creative-expressive activity is spontaneous, self-generative, self-referential, and self-determining’.

2 In making this assertion I draw in particular on Philip A. Ewell, ‘Music Theory and the White Racial Frame’, Music Theory Online 26, no. 2 (June 2020), in which he makes the case that the terms “European, western, traditional and canonic” are used euphemistically in lieu of “whiteness” and its cognates (27).

3 I recently observed conversation and discussion in this vein between improvisers at the Weekend of Improvisation in Glasgow (WIG), and in pedagogical discourse at the METRIC conference in Estonia in (both in January 2020). I observed the phenomenon several times arising as a point of contention during the Creative Gesture, an interdisciplinarily improvised music and dance residency at the Bardol Centre for Arts and Creativity in 2018. It has been discussed in my own studio research group among participants in my PhD project Bodies of Meaning, and has also been touched upon, albeit not within a strictly improvisational context, in discussions of identity and expanded contemporary musical practice with peer researchers and visiting speakers at CeReNeM.


Thoughts on the process of naming

In my experience as a practitioner—in the studio, in workshop, at conferences, and in performances—the naming of improvisers as disciplinary entities seems to arise from a constellation of several interdependent factors (see Fig. 1). Firstly, and perhaps obviously, it derives in part from the kind of activity with which individuals are involved when improvising, as perceived by both improviser and any observer; with both the specificity of the improviser’s embodied expressivity, and practically with the way the improviser is observed to be expressing (or perhaps just to be ‘doing’).

The specific ‘way in which an improviser is expressing’ at any one time is something I have come to refer to in my practice as an improviser’s given modality. To describe a modality is to indicate that certain aspects of an improviser’s activity are designated as the focus of their intention, the focus of their embodied expressivity, and by extension what might be felt as the invited focus of the observer’s attention.8 Succinctly, this can be understood as an individual’s improvising, at any given moment, through/by sounding, through/by moving, through/by vocalising, through/by verbalising etc., or frequently through complex and often obscure combinations of these, in a merging of intention and embodied expressivity. This concept can be applied across a continuous sequence of activity, becoming a descriptor of the way an improviser embodies across a given duration, or at the level of individual gesture and action as isolated incidents. I find the term useful to investigate different varieties of embodiment which are assumed in free improvised performance, because it allows for both self-reported and (external) analytical description of improvisation without using language bounded in discipline—ex. ‘dancing’, ‘playing’, ‘singing’. I contend that while the concept of modality is related to discipline, and indeed while hierarchies of modality comprise a key component of understanding the boundaries of performing disciplines (as will be discussed later), modality itself is not inherently of any discipline in particular.9 That said, modalities of sounding quite clearly have a particular entanglement with things named as instruments, or objects played as instruments, or object-instruments; these entities being often, though not always, co-active with improvisers in the activity of sounding, involved in sonic activation in some capacity.

In addition to the concept of modality, a second factor to the naming of improvisers with disciplinary identities encompasses judgements based on the relationship between an improviser’s perceived modality and existing disciplinarily sanctioned axiological frameworks. That is to say, the constituent aesthetics, ethics, formalisms and vocabularies of embodiment of disciplines with which given modalities are associated, disciplines in which modalities are privileged either as the primary, or as a permissible, mode of expressive activity. In choosing to sound, for example, one can bring oneself into relationship with axiologies of disciplines where modalities of sounding are privileged. In choosing to use words, to verbalise, one can be brought into relation with disciplines where text, oration, declamation, even notions of narrative, are held to be of expressive importance. How a modality is embodied in relation to notions of disciplinary axiology is an important contributing factor in naming.

A third factor, affecting both previous points, is any overarching disciplinarity in the context or framing of the improvisational event. This might include very physical architectural affordances such as a stage, sprung floor or marley, proscenium arch, audience seating, and the presence of instruments or instrument-objects, as well as sociocultural ritual and behavioural markers such as applause, a physical programme, literature and media, specific clothing and hairstyle of performers, or the permissibility of food and alcohol consumption.

8 Although it is important to stress however that this can only ever be an invitation.

9 Use of this term must, of course, be contextualised in relation to other factors affecting improvisation such as the person, place, time, and other elements of sociocultural context to avoid reductivism. However, I maintain that the concept can be a useful tool when analysing and discussing improvisation in supradisciplinary settings.
Björn Heile, referring to musical contexts, stresses the importance of this ‘framing’, stating that:

Concerts of classical (and, to a lesser extent, jazz and popular) music are governed by strict boundaries between what constitutes the aesthetic event and what does not. The performance space, the filing in of the musicians, their dress, and their gestures do not form part of what is usually regarded as ‘the performance’—although they are critical in ‘framing it’.10

I would propose that this framing also includes any naming of event-contexts as something like trans-, inter-, multi-, poly-, pluri-, or cross-disciplinary.

The coming together of these factors in constellation can give rise to the naming of an improviser with an inferred disciplinary identity. While the case could be argued that naming is not a problem in and of itself, my issue is that any fixing of identity can have a potentially determinising effect on the way that an improviser’s activity is received, ‘read’, assessed, judged, interpreted, and ultimately valued in a given improvisation. It poses a problem to me as an improviser working within expanded or experimental practice, within free improvisation, as one who invariably finds themselves performing in ostensibly privileged modalities and certain disciplines in the Western/White-Eurocentric frame (as will be explored below).

If an improviser’s practice involves the assuming of diverse and often concurrent modalities, but they are somehow marked, named, as emerging from, or belonging to, a given discipline and disciplinary background, then because of the entrenched relationship between certain modalities and certain disciplines in the Western/White-Eurocentric frame (as will be explored below), they are invariably brought into relation with disciplinary axiologies; with the particular aesthetics, particular vocabularies of embodiment, and associated notions of formalism, skillfulness, even perhaps mastery, etc., to which discipline-aligned identities are inexorably bounded. To be in relation with these axiologies first and foremost is to be oriented relative to the value-systems and discourses of privilege, where certain forms and genres, certain bodies, certain entities and interactions, are held to be of greater or lesser worth within given contexts (and sometimes within contexts falsely purported to be universal). In diverging from these systems, they risk being rendered other, and their improvisational activity being devalued.

Second to this issue is what I view as the compounding of the potential for the transformation of self as a form of creative agency, both for the improviser, and for other entities with which they might interact. In improvising, the boundaries, definitions and roles of distinct entities within the psychophysical space of performance can shift substantially as improvisers negotiate and renegotiate their relationship with other bodies, objects, self, and room, in activity which is spontaneously self-generative and self-referential. Fixing the identity of the improviser by extension risks fixing the definitions of other entities with which the improviser acts in co-relation.

I propose that to address the above issues requires: the practical (improvisational) subversion of hierarchies of modality manifested in explicitly disciplinary contexts, but that this itself requires also a recognition of enduring relationships between certain disciplines and certain modalities as constructed in the White-Eurocentric/Western frame; the encouragement of the criticism of existing disciplinary axiologies, with regards to processes of othering and structures of hegemonic power; a pedagogical and discursive-analytical shift towards viewing improvisers and improvisations as singularity contexts, foregrounding improvisation’s temporal-situational specificity as a practice of presence and presentness over the replication and reproduction of disciplinary forms; and a reconsidering of the usefulness of utilising disciplinary language and fixing notions of identity when describing and conceptualising free improvisation. Below, I first want to touch on the relationship between disciplinary axiologies and privilege. Secondly, I want to detail the relationship between discipline and modality in contemporary performing practice. Thirdly, I will outline the transdisciplinary concepts which I feel might provide space for re-evaluation of the notion of identity as applied to improvisation.

Disciplinary Axiologies, Power, and Privilege

From a disinterested position, the existence of a disciplinary axiology might not be considered so much an issue in and of itself. Scott Currie draws on Becker’s theory of Art Worlds,11 suggesting that axiology of Jazz improvisation ‘worlds’ or ‘scenes’ arises

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in processes of dissemination, in the emulation of paradigmatic performances, and in performers’ creation of on-stage personae and of generalised others.

… the common stylistic commitments that make group improvisation possible and productive may begin with widely acclaimed paradigmatic performances, whose import is then encapsulated in the shared technical conceptions of artistic peer circles, broadened through articulation with the consensus aesthetic principles of cultures industries, and deepened by investment with the normative beliefs associated with audience identification and consumption.

Ultimately, through improvisational interaction predicated on such shared paradigms, conceptions, principles, and beliefs, jazz musicians construct and project mutually compatible creative selves, whose stage encounters with one another suggest dramaturgical processes of meaning production, which endow the interplay of their spontaneous aesthetic gestures with narrative significance.12

The system that Currie describes could be treated as a mythological one—which is not to suggest that it is not real—but rather that it is replete with fictions and constructions, including culture-heroes, world-shaping events, narratives of creation, and the interpretation of constellations of entities (of observed relationships between things), from which are drawn meanings and understandings for the entity-inhabitants of the world, and by extension, implications for the future of the world. Parameters of this world-system are defined through a continuous process of reshaping, enacted essentially in storytelling—what Currie hints at as dramaturgy—this being unique to or shared between given communities, individuals and epochs.13

However, mythological or not, it would be remiss to suggest that axiological systems—the production of “consensus aesthetic principles”, forms, genres, or discipline-specific languages of embodiment—can be taken either as total abstractions or as politically neutral; these systems are invariably bounded in geopolitical power-structures and the specific languages of embodiment—can be taken either as total abstractions or as politically neutral.14 They are not only shaped by and in turn shape their environment, they are inextricably connected to it, and their existence is predicated on it.15

All discipline-specific systems, techniques and methodologies are related to the production of (dogmatic) knowledge. Relying on scientifically ratified—or thus unquestionable—principles, dogmatic knowledge, like the symbolic order, has the force of a law. It is beyond debate.14

She invokes Foucault’s assertion that the “disciplines characterize, classify, specialize; they distribute along a scale, around a norm, hierarchize individuals in relation to one another and, if necessary, disqualify and invalidate”,16 highlighting that the methodological differences which she takes as constituting the delineations between the disciplines are “far from neutral”.17 Stephen Amico asserts the same case strongly in relation to what he proposes as the “[sub]-discipline” of Ethnomusicology, as a field reliant upon “colonialist ideology, continually reproduced in relation to both ethnicity […] and ethnography”, and one in which an “ideological-methodological matrix has led to the production of a theoretical narrowness predicated upon and engendering the construction of ‘others’”.17

Ramsay Burt also touches on issues of power, regarding “Theater Dance”, its processes of canonicising, and subsequent questions of who constitutes a “valid public”,18 as do numerous contributors to Brown and Longley’s Undisciplining Dance:19 Efva Lilja writes that in choreography one can speak “about the hierarchies that guide language, art, and everyday life, about infrastructure, power and about who owns the right of interpretation”20 (aligning with Burt’s discussion of “publics”), while Elizabeth Dempster recognises the potential of discipline to embody hegemony, not just in terms of geopolitics, but also in terms of the prioritising of the textual and the verbal over other forms of embodied knowledges. Dempster claims “we also know that the subjection of dance and performance to textual paradigms has not yet been overturned”,21 and that there are “risks and dangers in becoming inter-disciplined, insofar as that may entail learning to embody and enact a powerful discipline’s discourse and genres”.22

Recent critiques on the subject of power, privilege and whiteness in the field of music and sound can be found in Philip A. Ewell’s article Music Theory and the White Racial Frame,23 in Anne C. Schreffler’s short post The Myth of the Canon’s Invisible Hand,24 and in Marie Thompson’s Whiteness and the Ontological Turn in Sound Studies;25 the academic and otherwise online controversy generated in response to the former of these texts, related

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13 The framework of discipline, as adjacent to its usual definitions as a field, sphere, or horizon of knowledge, could be conceived as a world-system whose boundaries are constructed in mythology; one in which entities and forces created by storytelling become established phenomena which are then considered fundamental—the stuff of world’s functioning. But mythology can, of course, be reinterpreted, and relationships might thereby be reconstituted.
16 Lushetich, Interdisciplinary Performance, 7.
22 Dempster, ‘Undisciplined Subjects’, 43.
to the 12th volume of the *Journal of Shenkerian Studies* in particular, highlights to my mind quite poignantly the imperative of discussion and critique in this sphere. Outside academia, various contemporary initiatives such as the Institute for Composer Diversity, Castle of our Skins, or Decolonizing the Music Room, as well as prominent and long-established entities such as the Feminist Improvising Group or AACM, have aimed in their performance programming, education and outreach work, to counteract the dominance of particularly privileged narratives in spheres of sound-related performance and pedagogy.

I would propose it is not at all unreasonable to suggest that structures of power, by dint of their global sphere of influence and their pervasive entanglement with institutions (and thereby processes of training and culture dissemination) might condition received notions of ‘quality’ or ‘value’ as applied also to free improvisation, invariably and critically impacting the reception and interpretation of embodiment, conceptions of form, structure and reference, the creation and maintenance of publics and communities, and being complicit in the generation and perpetuation of normative understandings of ‘skillfulness’. Compounded in this inherent issue of a disciplinary axiology’s relationship to privilege-structures, what is problematising in my view is that in being named with a particular disciplinary identity, any or all of an improviser’s activity can be held up against that identity and qualified by the value-systems to which that identity pertains. In diverging from this identity, by means of assuming an alternative modality which the discipline renders excluded or at the least non-valued—expression which does not successfully, as Terry Threadgold writes, ‘perform [the discipline’s] genres […] speak and write and embody its favourite discourses, myths, and narratives’—the improviser can be rendered other.

This othering also constitutes a kind of naming, one rooted in the theoretical narrowness which Amico highlights as predicated on the construction of others; one which Currie fails to interrogate, it seems, for its political implications, which ultimately reinforces existing parameters of discipline-sanctioned ‘success’. On one level, in the case of being rendered other from one discipline by dint of divergent modality, an improviser could potentially become correlated against the axiology of another discipline—one with which expression in that alternative modality is associated, also affected by the overarching disciplinary context of the event—with its own problems of privilege, its own systems of naming and othering. More crucially however, the rendering of otherness implies a nominal fixedness of the identity of both performer and of discipline, predicated on an understanding of specific forms of expressivity being immutably delineated as discipline-aligned. Efva Lilja highlights the perils of this, discussing the silencing of the Dancer:

> Dance and choreography are often referred to as silent art forms, since we are expected to work outside of verbal or literary formats. The presumption is that those who do not speak are silent. This is underpinned by how the dancer’s identity is formed, generally dominated by physical skills training based on imitation and repetition. Studios are still equipped with mirrors to certify the physical progress. Dancers are to this day mostly supposed to work from the idea that the body is their only tool. This attitude is devastating, undermining both the dancer’s confidence and understanding of self. The dancer turns silent, since she is not expected to have a voice.

The idea of a fixed disciplinary identity of the dancer bounded in the body and the implicit modality of moving reads, in Lilja’s writing, as a restriction of creative agency; as a literal silencing, the wider implications of which I feel are amplified in Lilja’s use of she/her pronouns. Steve Paxton hints at the same phenomenon, in another way, when he comments on a historic review of the *Judson Dance Theater*:

> It might assumed that because dance is a medium employing the human body, foregrounding the body would be essential and inevitable, but in reviews of Judson Dance Theater it has been seen that the bodies and movements of the non-dancers (who were actually painters, composers and musicians) are mentioned more than those of the dancers. It is as though the term dancer suggested a generic body type, already known all too well. A dancer’s job was to dance in work by a choreographer. What was seen was not their body, but the movements their body made, their technique, perhaps their interpretation.

The performers in Paxton’s anecdote here find themselves dragged deterministically into relation with discipline. It is telling that they are named either as *or* other to the discipline, even by Paxton, whose comments indicate that the relationship between a discipline-aligned identity—*painter, composer, musician*—and their modality—*their moving*—ultimately affects the way in which their performative activity is discussed in the review. To me, it indicates that the movement-expressions of the individuals across the company were not afforded parity of value in this performance; they were inexorably bounded in an inferred disciplinarity. It is interesting also that Paxton clearly views the disciplinarity ascribed to those named ‘dancers’ as tantamount to an erasure of their individuality. Where Lilja’s dancer falls silent, Paxton’s dancer becomes disembodied.

It is important to recognise that, as above, this naming can occur even in contexts which purport pluralism. James Andean, writing about the University of the Arts Helsinki’s...
Interdisciplinary Improvisation Research Group, comments that although in the group’s sessions the practitioners gravitated towards a centralised performance practice beyond the boundaries of what might be considered their respective disciplinary affiliations, these affiliations were still tangibly present:

Instead of remaining within the confines of our own disciplines, and attempting to communicate across the borders, we quickly discovered that instead, the group was gravitating towards a central point, where our various practices met, mingled, and combined, creating a single performance practice, that clearly draws on aspects of theater, sound, visual art, and so on, but is somehow either none of these, or all at once. Group members found themselves performing a combined practice, with a given individual shifting emphasis somewhat, from moment to moment, in the direction of a particular art form or another, without ever—only rarely—taking a clear position within a single discipline. […]

That being said, however, we have none of us entirely escaped our history. In the same action undertaken by different performers, one catches a glimpse, at least some of the time, of an increased focus on that performance action as theater, or as sonic art, or as performance art, or dance, and so on, possibly revealing, to the attentive spectator, something of that performer's background.31

Lauren Hayes comments that in the opening concert of the 2018 iteration of LLEAP at Arizona State University, “it was evident that there was a clear divide between performers with experience in movement-based performance practices, and those for whom it was fairly new”.32 What is revealing in Andean and Hayes’ comments, and substantiates my own recent experience in attending various interdisciplinary events, is that even in an environment which advocates pluralism, an individual’s activity may still often be brought into relation with a perceived home-disciplinarity or disciplinary familiarity; in an identity which is inferred or ‘glimpsed’, based on something in a performer’s activity that indicates disciplinary alignment. Interestingly, Hayes comments that physical positioning of performers had a bearing on her understanding of this, writing:

Firstly, in terms of positioning within the space, as we started to set up our equipment, people tended to frame the perimeter, some being further separated by the barrier of a table […] Without any prior discussion of strategy, I did not find any meaningful way to move from behind my station to explore the floor space in front.33

I would argue also that this ‘glimpsing’ of ‘something’ is itself a process palpably connected to received notions of skilfulness as delineated in the “discourses, myths and narratives”34 propagated by discipline, and is therefore entangled with the normative privilege-structures of axiological systems which seldom afford for value-parity of othered expressivities outside their own frames. In discussions of supradisciplinary practices, therefore, this ‘glimpsing’ itself I feel must be a point of practical and theoretical critique: What does is serve the improvisation, the group, the situation, the ethos or rationale of the event, to understand an individual’s activity through the lens of a disciplinarity as ‘glimpsed’? How might this ‘glimpsing’ reinforce normative understandings of embodied expressivity as governed by disciplinary frameworks, or contribute to processes of othering? How does the ‘glimpsers’, having ‘glimpsed’, thereafter participate in processes of valuing? What creative avenues might be discovered if these processes of ‘glimpsing’ could be suspended?

The above examples illustrate something akin to what Ramsay Burt describes when writing that “marking individuals according to a recognizable identity can reduce their interests to a particular identity politics”.35 The statement highlights what is in my view the core risk of any fixed naming, and indeed of processes of othering—reductiveness—which I contend in relation to contemporary practice in improvisation amounts to a restriction of the creative agency of the individual that can lead to devaluing. To be named in a fixed capacity is to have all activity brought into relation with this identity-marker; it is ultimately to have one aspect of an individual improviser, their perceived disciplinarity, foregrounded above all else.

Burt indicates an antidote to this issue when he describes the very viable occurrence that is an individual’s “choosing multiple and sometimes contradictory identifications”,36 he suggests that “the potential for agency” lies in a "singularity" of identification which affords for contradiction and plurality. This idea of singularity—perhaps hinted at by Andean as a “single performance practice”—is one thing I would propose is more useful to the study and practice of free improvisation than the imputation of fixed disciplinary identities. It is pointed to also by Lauren Hayes, who proposes—pursuing an enactivist approach to cognition in


33 Hayes, ‘Beyond Skill Acquisition’, 457.

34 Threadgold, ‘Everyday life in the Academy’.

35 Burt, ‘The Specter of Interdisciplinarity’, 6

interdisciplinary improvisation—that “improvisation can be an activity that does not need to be framed within the novice/expert model at all”. Citing musical improvisation, she states that “the knowing experiencing of improvisation does not depend on markers of skilful musical instrumental expertise at all, but rather on the instantiation of multiple sensitivities of the person as a whole”.

The way I interpret this singularity in the context of my improvised practice is first and foremost as a description affording for the totality of the individual improviser. Beyond disciplinarity, it is the question: who is this person (or what is this entity)? What is their body/bodymind? What is their ideo-embodiment, their voice, their expressivity? This might invariably incorporate notions of discipline, or ‘background’ but these must necessarily be brought onto the horizontal with other aspects of their personhood. It also extends beyond the individual, into constellations of co-relation with other entities, be they human or nonhuman: who is this person in this relationship? What is this group of entities? This singularity of identification is something I would postulate is likely far more complex than can be indicated by what amounts to a taxonomical marker of discipline. By shifting focus in this way towards a holistic understanding of individual improvisers as singularities (and perhaps more simply, just as ‘individuals’), the concept allows, to borrow from Hayes, for “a singularity of identification is something I would postulate is likely far more complex than can be indicated by what amounts to a taxonomical marker of discipline. By shifting focus in this way towards a holistic understanding of individual improvisers as singularities (and perhaps more simply, just as ‘individuals’), the concept allows, to borrow from Hayes, for “a singularity can be also applied to an understanding of time and context—not only ‘who is this person?’ ‘what is this entity?’ ‘what is this constellation?’ but ‘who is this person/what is this entity right here and right now?’ This feels more congruous with the temporal specificity of improvisation as a practice; that is, a practice which happens here, and in the present. From this perspective, any identities inferred must be considered temporally and relationally dependent; to be ephemeral, and thereby necessarily to be considered as unfixed.

This concept speaks to what reads very much, in MacDonald and Wilson, as pointing towards the axiology of improvisation itself; that value-systems of improvisation are actually often established on the linked ideas of newness and presentness, rather than on the successful execution of particular forms, embodiments, or nominal ‘virtuosity’ within a particular aesthetic framework. Concerning music, they state that “most [improvisation] is valued on the assumption that exciting new sounds are being deliberately shaped in performance by individuals choosing to do so in ways they have not done before”.

This statement highlights not only newness (“exciting new sounds”), but the presentness of that newness (“in ways they have not done before”) as being key to understanding improvisational value. Kent de Spain also indicates that temporal specificity is a key element to understanding ‘value’ in improvisation, based on responses from experienced movement improvisers in his research pool. He describes the “relativity of ‘What is Good?’” emphasising the importance of the adjunct questions “when and for whom?” One might well consider ‘where’ to be implicit in this statement.

To view not only improvisers but also their constellations with other entities and improvisational events themselves as singularities is, I feel, to begin to approach improvisation through its own means; that is, through a language of present relations. It is a concept that is neither solipsistic nor a-historical for in foregrounding the multiple and contradictory intersections of personal identities (disciplinary and non-disciplinary), it must necessarily extend into an understanding of entities in interrelation with each other, within the contexts in which they occur, and most importantly, within the contexts they co-create through practice. Before returning to this concept, and outlining how I feel it aligns with a transdisciplinarity approach to improvisation, I want to address the relationship between contemporary performance practices, discipline, and modality.

Contemporary Practices, Modality, Discipline and its Prefixes

It would be inattentive, in 2020, to suggest that contemporary practice in any formalised performing discipline in the West has not allowed for some time, and often in great measure, for bleed in its parameters regarding the concept of modality. Looking

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39 It’s important to stress here that in describing this understanding, I would emphasise the need for listening and for self-reported identification, particularly regarding the potential impact of intersections with non-disciplinary (i.e. broader social) identities.
40 Hayes, ‘Beyond Skill Acquisition’, 451. ‘Skilful’, in this usage, being something more expansive than the previously mentioned normative understandings.
41 Hayes, ‘Beyond Skill Acquisition’, 452.
42 MacDonald and Wilson, The Art of Becoming, 67.
43 Kent De Spain, Landscape of the Now: A Topography of Movement Improvisation (Oxford University Press, 2014), 93. It is worth pointing out that Spain qualifies his participants’ interview responses by stating that the research pool is “small and relatively homogenous” (93).
Ruth Zaporah’s and Pina Bausch’s Action-Theatre quotes various dance-artists and choreographers in advocating for the expansion of the idea of ‘are *music’; secondly, an inversion, that “all music is music theatre’. An understanding *are* music—first that “music-theatre” is a false-moniker, and that pieces named music-theatre “"New Discipline "practices which are modally pluralistic, an idea perhaps typified in Jennifer Walshe’s 2016 paper, ‘The New Discipline’. There is both a recognisably historical and very pertinent contemporary push towards holistic experimentalism and with contemporary approaches to performing across the disciplines.

From the perspective of the practitioner, to define today’s boundaries of discipline on the basis of modality alone would be decidedly incongruous with the current state of experimentalism and with contemporary approaches to performing across the disciplines. There is both a recognisably historical and very pertinent contemporary push towards holistic practices which are modally pluralistic, an idea perhaps typified in Jennifer Walshe’s 2016 manifesto on the New Discipline, the very title of which invites a re-reading of previously conceived disciplinary boundaries. Walshe provokes a dual perspective on contemporary music—first that “music-theatre” is a false-moniker, and that pieces named music-theatre ““are* music”; secondly, an inversion, that “all music is music theatre”. An understanding of theatricality in contemporary musical practice is integral also to the work of Jennifer Torrence, who states, on bringing the musician’s body into liveness or “foregrounding”,

that “regardless of how it happens, the emergence of the body demands a different type of performance awareness from the musician”.

It is telling that much naming of multimodal practices involves compound nouns including the constitutive word “Theatre/Theater”. It would appear, in The Specter of Interdisciplinarity, Burt again, in The Drama Review: TDR, 1972, cites Fried in a piece of writing from nearly forty years ago, wherein despite a strange distinction between what he terms “good art and theatrical art”, he identifies the spaces “between the arts” as being analogous with “theatricality”. Bjørn Heile draws, as indeed does Jennifer Torrence, on Michael Kirby’s theoretical continuum of ‘not-acting’ to ‘acting’, as a means of defining the boundaries of what he terms “Experimental Music Theatre”. He describes a practice which “eschews or subverts scenic illusion, dramatic representation, role-play, and fictional time” in which “the physical and gestural elements inherent in music making are the action”. Cage also professed poetically: “Theatre takes place/ all the time wherever one is and art simply facilitiates persuading one this is the case”. The idea it seems, is not new.

This having been said, it feels reductive to claim, even in 2020, that specific modalities have no relationship to discipline whatsoever. To suggest so would be to neglect the existence of specific embodied knowledges—somatic-haptic, kinetic, temporal, sonic, proprioceptive awareness and techniques—cultivated through specific pedagogies, and often through years of training. Although Torrence details an extremely compelling journey of metamorphosis in relation to disciplinary identity, questioning at the end of Percussion Theatre: “[w]hat does the musician become when the hierarchy of music is flattened, where sound and instrumental thinking are no longer privileged at the top of the hierarchy?” she also acknowledges throughout her writing that her practice is one rooted in rigorous training, and in the lived experience of embodied sounding expressions in relation to instrument-objects:

The repetition of my training ‘orients the body in some ways rather than others’, and through this orientation the body itself takes shape through its contact with particular objects (Ahmed, 2006, p. 54 - 57). My body ‘bends and directs itself to the form and mechanics of an instrument’ (Craenen, 2014, p. 105). This ‘sedimented history’ orients my performance practice in particular ways. My practice orients towards sound and listening in a way that is unique in comparison to a performer whose ‘starting point’ is not music. My practice is oriented towards objects through sonic exploration.

The contemporary discourse on the relationships between performing disciplines would also suggest that modality is not an entirely neutral or unaffiliated factor in the conversation.

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44 Jennifer Torrence, Percussion Theatre: A Body in Between, Norwegian Academy of Music, no. 2 (10 May 2019).
47 Original French: “Pour moi, l’espace de la danse englobe aussi bien l’écriture que la photo […] Lorsque on me parle du studio de répétition comme du lieu de mon activité, je ne me reconnais pas là-dedans, ça n’existe plus.” (Translation mine).
49 Torrence, Percussion Theatre.
50 Burt, The Specter of Interdisciplinarity, 11-12
53 John Cage, Silence: Lectures and Writings, Repr (London: Marion Boyars, 1999), 174.
Disciplinarity, as Osborne notes, “has become problematic in multiple and contested ways”.55 The sheer prevalence of writing in performing arts academia surrounding disciplinarity and its various prefixes,56 is testament to its contemporary re-evaluation, to a perceived value located beyond the confines of monodisciplinarity, and a push towards pluralism. The trend is observable outside academia, in the literature of funding bodies,57 in artist biographies, in performance programming and curation,58 and noticeably on the front-facing of media of higher-education institutions.59

I would contend though that in the context of contemporary practices, the naming of a practice, a work, or an individual as interdisciplinary — as situated in a space between more than one discipline — or for that matter with any associated prefix-disciplinarity, speaks

55 Peter Osborne, ‘Problematising Disciplinarity, Transdisciplinary Problematics’, Theory, Culture & Society 32, no. 5-6 (1 September 2015), 4.
58 See an interesting article on the Walker gallery’s recently funded initiative to ‘advance the study of “interdisciplinary” art’ https://walkerkart.org/magazine/on-the-interdisciplinary.

to an indication of at least some weight which modality still bears in conceiving of what a performance discipline is.

A recent course offered by the Dance Research Studio in Shoreditch, London, was titled “The Speaking Dancer: Interdisciplinary Performance Training”. In addition to various other elements of pedagogy, one of which explored “the influence of visual and performance art disciplines and strategies in dance and choreographic practice”, which itself represents an interesting disciplinary distinction, the first module component of the programme was titled “The Interdisciplinary Performer (Voice and Movement Integration)”.60 This title implies that it is the coming together of voice and movement which marks this practice as interdisciplinary, speaking to an understanding that these modalities—that of vocalising/ verbalising and that of moving—are in some way disciplinarily aligned. In conjunction with the course-title, “The Speaking Dancer”, it echoes Lilja’s statement on silencing, suggesting that vocal modalities are in some form considered as other to dance from the outset. The opening of Integrative Performance: Practice and Theory for the Interdisciplinary Performer, offers up the question: “Why, when we learn to become performers, do we disintegrate ourselves and suppress our intuitive impulses by separating aspects of expression into categories of singing, dancing, and acting?”61 The titular use of “interdisciplinary”, and the suggestion of separated “aspects of expression”, again indicates some level of disciplinary distinction ascribed to vocal and movement modalities in particular, and furthermore that “acting” is held to be something else altogether. The Institute for Contemporary Arts’ initiative, The Tender Interval: Studies in Sound and Motion, describes itself as “a convening exploring the transformational qualities of sound and dance practices”.62 This ‘convening’ is later made analogous to ‘queering’, and is clearly an effort towards an integrative and pluralistic, decentralised notion of contemporary practice; however, the distinction between “sound” and “dance” practices in the initiative’s front-facing media highlights again some pervasive understanding of a modal differentiation where “dance” is made separate to “sound”.

These examples speak to what might be felt by contemporary experimental performers as a troublingly extant presence of hierarchies of modality ingrained in the Western/White-Eurocentric conceptualisation of separated and distinct performing disciplines; hierarchies that constitute, still, some form of understanding of the boundaries of disciplines with regards to performers’ expressivity, against which other forms of discipline are held to be delineated, and transgression beyond which is held to constitute a form of inter- or otherwise supra-disciplinarity. To name a performing practice as something like interdisciplinary seems to necessitate a recognition of disciplinary distinctions and of the manner in which those distinctions are constructed with regards to modal hierarchies. It feels to me that in pushing further into radical new practices, it is vital not to ignore this entanglement between discipline and hierarchies of modality, even if it might feel restrictive and problematising. To generalise

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and suggest that the assuming of a modality might not point towards disciplinarity through extant associations, or to suggest that the boundaries of discipline have been expanded so far as to sever from hierarchies of modality altogether, is to enact a form of abstract theorising which I contend is at the strongest a manifestation of privilege— which actually risks avoiding interrogation of the processes by which disciplines and their axiologies are constructed—and is at the least inattentive, neglecting broader social understandings of types of performance which might exist outside the conversations between peer-artist-researchers and academics, and outside the realm of experimental performance.

Walshe’s Manifesto is laudable in its call-to-arms to render the “ear, the eye and the brain […] active and engaged” in contemporary musical practice. It is filled with what I feel are very accurate descriptions of its pluralistic nature. But it is still rooted in the language of a discipline which prioritises the sonic over other things. It opens by making analogous pieces “which often invoke the extra-musical” and pieces “which activate the non-cochlear”, and while the last paragraph states that “the bodies playing the music are part of the music”, the ending of the text qualifies this by saying that they “inform our listening”. I would challenge whether using this language can be identified as placing the sonic and non-sonic on an equal footing, and whether this really indicates that music might be considered modally all-encompassing.

It is important to stress again that these disciplinary boundary distinctions are conceived of within the White-Eurocentric context, and that delineations of understandings of performance practices outside this context should not be presumed to be analogous. Kofi Agawu’s very comment on this, quoted in Adam Neely’s recently trending YouTube video *Music Theory and White Supremacy* (which is laudably detailed and accessible), illustrates this directly. Agawu writes:

> Imagine, if you will, a new world order in which African approaches to rhythm pedagogy predominated in the American academy. Patterns would be taught holistically rather than atomistically; theoretical work would privilege gestalten and larger rhythmic units over pulses akin to the movement of millipedes’ feet; and no one would be granted a music degree who could not dance!

Returning to the issue of naming: as indicated at the beginning of this article, while the assuming of a given modality can point towards a disciplinarity as outlined above, it cannot be said that a modality alone gives rise to the naming of an improviser with a disciplinary identity. It is the way in which a modality is *embodied* in relation to disciplinary axiologies, and in relation to other entities within the performance world (be they human or non-human), physical or non-physical objects, in a disciplinary context, which results in naming.

To address the complexities of embodiment feels beyond the scope of this article. Jennifer Torrence, again, engages thoroughly with issues of body, liveness, embodiment and gesture, in particular with relation to devising, and to co-performance with instrument-objects throughout *Percussion Theatre*, providing an excellent overview of the topic; Spatz discusses distinctions between embodied practice, technique, research, and knowledge at length in *Embodiment as First Affordance* and Warburton re-evaluates notions of embodiment in dance from an interesting phenomenological perspective in *Of Meanings and Movements*. What I would highlight again however, as previously articulated, is that as a constituent part of disciplinary axiological systems, vocabularies of embodiment and physicality are entangled within the same structures of privilege, power, and processes of othering which can be critiqued as having determinising effects on how an improviser’s activity is valued. I propose that in conversations where we advocate for the re-appraising of discipline, regarding its relationship to modality, this must come hand-in-hand with criticism of nominally ‘acceptable’ or ‘skilful’ embodiment, against which a performer’s modal activity may be subsequently qualified, and how these notions themselves might be impacted by normative understandings of what constitutes ‘valid’ bodies, performers, and publics.

**Towards transdisciplinarity**

What is it first to sound and then to move, and then to verbalise, and then to move again; or to enact something between all these things, at once discernibly related to some discipline or other, at once beyond or outside an established disciplinary embodiment? How does it serve our practice to suggest that all this is “music”, or all this is “dance”, or “theatre”?

At what point in the performance event is the identity of the performer inferred? For how long must one assume a given modality before it is considered embedded in embodiment? For how long must one enact any modal divergence before the boundaries of discipline feel challenged or are shifted?

How do we, as improvisers, navigate this issue, particularly in contexts where improvisation is co-present with other forms of practice? How is it possible to challenge the problematising, deterministic or restrictive aspects of a history of embodied disciplinarity which might inhabit an individual’s bodymind, awareness, and affect their interactions with other entities (with which they themselves inhabit events of performance), and at the same time acknowledge the existence and impact of that history; for its very real

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and discernible presence within their presence, and for the possibility that it can also, in addition to presenting restrictions, afford for creative agency?79

I believe that some kind of turning towards a solution for me and my problem with fixed-naming can be found, perhaps ironically, in the assuming of a disciplinary prefix, considering my practice through the language of transdisciplinarity, and combining this with the idea of viewing of improvisers and improvising events as singularities.

A basic definition of transdisciplinarity is that it is a supradisciplinary approach which “does not strive for mastery of several disciplines but aims to open all disciplines to that which they share and to that which lies beyond them”.70 It is, semantically, both across (encompassing) and beyond disciplinarity, placing disciplines themselves in a field of shifting relations. What transdisciplinarity is not is the absolute dissolution of discipline. Basarab Nicolescu’s influential Manifesto, states that transdisciplinarity “complements disciplinary approaches”, and that both “an excess of formalism [or] rigidity of definitions and a claim to total objectivity”71 or total abstraction, “entailing the exclusion of the subject, can only have a life-negating effect”.72 Practically speaking, for me, a transdisciplinary approach to improvisation does not represent an outright rejection of the languages, embodiments, and formalisms of the disciplines, it simply considers them in every single moment of performance to be unfixed. It entails “[t]he recognition of the existence of different levels of reality governed by different types of logic”,73 and that at any moment, for any duration, different “registers of sense”74 might come into play—that forms, relationships and bodies hitherto unimagined and unvalued might emerge, which invite audiences to view them within their own contexts.

Key applications of my understanding of transdisciplinarity to my improvising practice are the related notions of porousness and transformation. To be porous is, in one way, to embody Stacy Alaimo’s concept of trans-corpo-reality, in which our material bodies are rendered permeable in relation to the geo-bio-political,75 interrelated with conceptions of all delineated things. Alaimo proposes that to recognise this, and “[t]o analyze, theorize, critique, create, revolt, and transform as someone whose corporeality cannot be distinct from biopolitical systems and biochemical processes is to think as the stuff of the world.”76 It is also by extension to recognise a porousness in definition and identity. However, this permeability is not the same as non-definition, or an absolutist not-naming—and this point is key. It is essential to recognise the implications of drawing generic statements on total a-relation, a-causality or a-definition. To imply a total abstraction is to neglect the potentially determinising factors of socio-cultural context, power, and privilege in how entities are named, conceived of, and how their activity or interrelation in an improvisation may be interpreted. In particular, in improvising contexts that involve people whose identifications regarding race, gender, sexuality, disability, spirituality (etc.) may be unfortunately inferred or externally imputed, rather than self-reported, this can lean precariously towards erasure, where not-naming becomes consummate with performing whiteness—the false “claim to total objectivity”, which Nicolescu describes as “life-negating”.77

The same extends to non-human entities. Mel Y. Chen, in their discussion of the concept of animacies, take words as “a primary site in which the matter of the world takes shape and is affectively informed”.78 They write that “words, and genres of language, become akin to a first level of animation” where animation points to locating entities within a hierarchy of Animacy in which they are afforded notions of sentience, consciousness, and agency.79 We are to understand that the language ascribed to entities— their naming—is not to be taken as superficial, but forms a constituent part of their reality and how we experience them; a reality which is politised, which exerts force in all directions in interaction with other entities, and which cannot be ignored. MacDonald and Wilson, regarding improvisation explicitly, indicate the importance of words in their discussion of “talking about improvisation”:

Two musicians discussing a concert they have both just performed may exchange ideas on the good points and bad points of the music. They may reach an agreement, their views may differ, but the negotiated views exchanged will help construct how the event is remembered. Also, the version of the concert that emerges from this discussion can influence the music played in future concerts […] When discussing improvising, speakers create, negotiate, and maintain[] particular lines of arguments, and these lines of argument are linked to the musical identities and broader psychological identities of the speakers. Talking about improvising is important not just because it describes improvisation, but also because it constructs musical and social realities for those engaged in the dialogue.80

If, as Chen suggests, to name is on one level to animate, to construct a reality, then an examination of how this naming comes to be seems all the more pertinent.

Second to porousness, the transformation aspect of transdisciplinarity as applied to improvisation is, for me, the idea that the improviser moves across a spectrum of relation to disciplinarity—at one moment aligning their activity with, playing with, drawing on, the forms or vernaculars of discipline, at another time disentangling from it. The idea affords for

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70 Basarab Nicolescu, Manifesto of Transdisciplinarity (Albany: State University of New York Press, 2002), 149.
71 Basarab Nicolescu, Manifesto of Transdisciplinarity, 149 (emphasis mine).
72 As Osborne writes in ‘Problematising Disciplinarity’: “The reduction of transdisciplinarity to ‘fuzziness’ of disciplinary boundaries is a serious intellectual collapse” (15). He goes on to tout that the “dissolution of disciplinary frameworks” is tantamount to a “re-disciplinarization via the new ‘discipline’ of a methodologically standardized transdisciplinarity” (12). In this sense, transdisciplinarity should not profess a-disciplinarity.
73 Nicolescu, Manifesto of Transdisciplinarity, 149.
76 Stacy Alaimo, Exposed: Environmental Politics and Pleasures in Posthuman Times, 2016, 185. This emphasis on the entanglement between the individual and the geo-bio-political is also, I feel, connected to the idea of understanding disciplinary axiologies in relation to privilege-structures; that is, as political, as well as aesthetic, value-systems.
77 Nicolescu, Manifesto of Transdisciplinarity, 149.
79 Chen also highlights the issue of “politically dominant” hierarchies of Animacy, “potentially affected and shaped by the spread of Christian cosmologies, capitalism and the colonial orders of things”.
80 MacDonald and Wilson, The Art of Becoming, 46.
exploration of the non-sonic. This might allow, as Torrence suggests, for the musician to individual performing events as singularities in and of themselves.81

is located in what amounts to a topographically diverse supradisciplinary field. Returning 82  The latter of these points is something Ciciliani highlights as a key component of shifting hierarchies of disciplinarity, but which also emphasise the singularity of the disciplinary transgression and transformation, which afford for an individual to inhabit transdisciplinarity, to advocate for the creation of performance contexts which afford for transdisciplinary audiences or publics. As previously articulated, the presence of disciplinarity in context and framing comes into constellation with modality and axiology in processes of naming. It seems important then, for an improviser who wants to inhabit transdisciplinarity, to advocate for the creation of performance contexts which afford for discipline, in a rigidly defined sense, or entirely amorphously other to discipline. In fact, it suggests that at any one moment, the improviser will be in a given proximity to disciplinarity. The important idea here is twofold, firstly that this state is only ever temporary, that any naming which might be ascribed can only be considered a point in a continuum of impermanent states—essentially it requires a reconsidering of the naming of improvisers towards the idea of context-dependent singularities, as previously discussed. Secondly, the idea of transformation comprises an understanding of individual “starting points” which may include a particular history with discipline, but it demands in effect that individuals be allowed to choose whether these histories are placed at the forefront of their expressivity.

In order for this transdisciplinary improvising singularity-entity to come into being, however, what is required is not just the ingesting by an individual improviser of the ideas of transdisciplinarity outlined by the paragraphs above, but also the generation of contexts which allow for the transdisciplinary approach, this being predicated on the generation of transdisciplinary audiences or publics. As previously articulated, the presence of disciplinarity in context and framing comes into constellation with modality and axiology in processes of naming. It seems important then, for an improviser who wants to inhabit transdisciplinarity, to advocate for the creation of performance contexts which afford for disciplinary transgression and transformation, which afford for an individual to inhabit shifting hierarchies of disciplinarity, but which also emphasise the singularity of the individual and of temporal-situational context; to advocate for an approach to practice which is not held to fixed axiological notions of aesthetics, ethics, and embodiment vocabularies, but rather is located in what amounts to a topographically diverse supradisciplinary field. Returning to Burt, this feels like it would require a foregrounding, in the minds of both practitioners and audiences, of the conception not just of individuals as improvising singularities, but of individual performing events as singularities in and of themselves.81

How to go about this? I cannot, of course, speak for all practitioners, but returning to the model I proposed for processes of naming (see fig.1) I would like to suggest that it be approached holistically from several different directions. I feel that one answer lies in continuing the existing practices of what might be considered disciplinary subversion: antagonising the formalisms of delineated disciplines, in particular their modal hierarchies, to question them. In ‘musical’ contexts, I think much of this work lies in the re-evaluation of the relationship between improvisers and instruments as interrelated and porous bodies, as co-improvising entities rather than tools, in the foregrounding of physicality,82 and in the exploration of the non-sonic. This might allow, as Torrence suggests, for the musician to “take on a different understanding and relation to the instrument and therefore a different relation to the body”, a relation which ‘calls for new ways of making and doing, in other words, a new kind of artistic practice’.83 In contexts aligned with ‘dance’, the subversion of somatocentric and ocularcentric performance84 seems imperative, as is the need to demand the inclusion of diverse bodies—and subsequently, diverse ways of embodying—in dance settings, to combat the trap that Steve Paxton describes regarding the dancer as a “generic body type”.85 These subversions reveal, practically and performatively, elements of systems which once illuminated can be subject to further critique and comment, representing very practical conduits for change.

Another answer undoubtedly lies in verbal and textual critique itself, in discursive arenas of the academy and culture at large. I feel an interrogation of pervading axiologies of discipline is paramount: to question politically, as well as aesthetically (and really these cannot be made entirely distinct), why we afford value to particular forms of embodiment, particular bodies, and particular notions of skill; to challenge any nominal universality of aesthetic preferences, and to recognise in global context how these preferences are constructed in relation to hegemonic power-structures and the insidious properties of whiteness. The practice of improvisation itself can be an effective vessel for this critique, but I would suggest that for its efficacy to come to the fore, a shift in focus is required in improvisation pedagogy, away from the pursuit of replication of aesthetic forms and embodiments sanctioned by existing disciplinary systems, towards a stronger emphasis on the essential emergent properties of improvisation itself. I would highlight presence and ephemerality as key properties, as well as what I have proposed is the agency to be found in improvisation pedagogy, away from the pursuit of replication of aesthetic forms and embodiments sanctioned by existing disciplinary systems, towards a stronger emphasis on the essential emergent properties of improvisation itself. I would highlight presence and ephemerality as key properties, as well as what I have proposed is the agency to be found in the singularity of individual and temporal-situational contexts. This, to my mind, would represent a radical step towards reassessing the dominance of existing value-systems. It

81 Torrence moves towards this idea, albeit in relation to ‘works’, when discussing the positioning of works across Kirby’s spectrum of theatricality in Percussion Theatre. Perhaps it also aligns with what Ciciliani refers to as an “individualised patchwork of discursive islands”, when discussing the polythetic, multimerial nature of contemporary composers’ practices with regards to discourse. See: Marko Ciciliani, ‘Music in the Expanded Field: On Recent Approaches to Interdisciplinary Composition’, in Darmstädter Beiträge Zur Neue Musik, ed. Michael Rebbahn and Thomas Schäfer (Mainz: Schott, 2017), 23–35.

82 The latter of these points is something Ciciliani highlights as a key component of Music in the Expanded Field, which he implies represents to some degree a transdisciplinary approach.

83 Torrence, Percussion Theatre.


seems pertinent also to interrogate the disciplinary language in text we use to describe expanded practices, in the way we describe the relationships between practices, and in how we describe ourselves as practitioners. To assess—even as we attempt redefinitions and radical reimaginings—whether these might in fact be complicit in maintaining a fixedness in our understanding of disciplinary identities.

How to reframe performing contexts to afford for transdisciplinarity is a more complex issue; one for which I have no concrete solution, though I think the path forward might emerge from engaging in the methods outlined above. Supradisciplinary initiatives such as those I have mentioned—the Weekend of Improvisation in Glasgow, the METRIC Conference, the Interdisciplinary Improvisation Research Group—are undoubtedly important meeting places for practitioners seeking to expand into a transdisciplinary field, so long as they balance the coming together of diverse practitioners with a necessary critique of the language and embodiments of discipline, the value-systems derived from discipline, and whether these themselves are valuable, applicable, or even relevant in whatever new and singular contexts might be generated through improvised practice.

The joy I find in improvisation is the creation and dissipation of worlds in an instant; in the fluid unravelling, reconstituting, exploration and explosion of in-the-moment logics, connections, narratives, and relationships. My practice must account for disciplinarity as a component of its parameters, but one which can also be moved through, moved around, transformed or made irrelevant as the improvising context shifts and evolves. What feels inherent to me in free improvisation is the limitless opportunity for transformation, which does not preclude the possibility that certain forms or certain ideas might coalesce into distinct disciplinary being and be brought forward into focus (even if only for a moment), but neither does it suggest that this must always be the case. No matter how much I might find it a personal frustration, I cannot for a second dismiss the possibility of being named at any time as a disciplinary entity. What I feel is paramount however is to advocate that in participating in, and researching improvisation, we undertake a reconsideration of the fixedness of any disciplinary identities, to create contexts which might afford for the foregrounding of porousness and transformation; towards democratisation and inclusivity, towards new locations of value, towards radical practices of self-expression.
Abstract

In an attempt to understand how this project operated as a collaboration entangled within the material contingencies of violins and media technologies, we have collectively reflected on the project’s making process. We have included in this article key points that stood out to us, and discuss them theoretically in relation to other practitioners. We consider the violin as an instrument wrapped up in a long history of virtuosity, and wonder how that history points towards contemporary playing assumptions. We then discuss ways to break from such standardised and ingrained approaches, proposing as one possible way to move the body in alternative relations to the instrument. Having multiple instrumentalists touch one another’s instruments especially allows for this. Such a non-standard playing approach furthermore allows the violin’s agency to influence, a topic which we expand when we discuss getting together to collaborate. The multifaceted nature of collaboration allows for many occurrences and creative becomings, but we discuss here how working through ideas in the studio with the materials allowed for unforeseen dimensions of the piece to emerge. This leads to a final discussion of how recording influenced the creative process and final performance. We hope that this article will be useful to other artistic practitioners that desire the intrigue, flexibility, and positive communication that is possible when a collaboration is open and reflexive to the situational, social, and material.

Overview

The piece *Imitate Elegance Expertly* was created over the course of November 2018 to December 2019 as part of the *Mixed Currents* research project. Multiple laboratory sessions distributed across that year allowed for experimental exploration of the violin, virtuosity, beauty, and identity. These investigations were formed into a roughly twenty-minute performance that was presented publicly three times, as of this writing. These concerts were, respectively, in Huddersfield’s Phipps Hall; at the Royal Conservatoire Antwerp, as part of the conference *Collaborations Are More Refreshing than New Socks*; and finally, at the Q02 art space in Brussels. The devising process was a multilayered dialogue between four people, three violins, three bows, and a myriad of other recording technologies, locations, and ideas. From the outset, the project aimed to investigate collaborative methods that relied on regular discussion, exchange, and active doing. It aimed to explore how ingrained notions of the violin changed when used beyond sounding purposes, and how the violinist’s identities—Irine, Dejana, and Linda being virtuosic and trained violinists—could be stretched, augmented, and recontextualized to create new forms of meaning. The personal and specific identities of each performer, rather than be hidden or backgrounded, were emphasised as integral for our collaborative process and the resulting piece.

Of primary concern for the project was to question of how possible relationships could unfold between the performers’ bodies, the instruments, the performance space, and technological mediation. How could these factors be considered as agents, and operate beyond deemed customs or sedimented roles? We were interested in how audio and video recording could be reintegrated into the process, such that recordings taken over the course of laboratory sessions could influence action later on, thus forming underpinning threads across the project. We were entangling ourselves with ingrained histories and associations—the violins being imbued with established performance practices and associations—but we wanted to look at them afresh, to approach the instruments as material objects. Recasting the instruments as objects allowed us to experiment with performance practice as embodied and embedded within the material world. Through this object-oriented gaze we considered the violins beyond their sounding capacity; as artefacts. Violin traditions, along with the violin performers’ stage presence and violin repertoire, seeped into the process by way of the materials and personnel involved. By toying with the violinists’ stage persona—whereby the violins were prized as visual items alongside their sounding capacities—an attempt was made to liberate the performers from ingrained violinistic movement and thinking. Through this practitioner undoing, the performers’ bodies became not only ‘doers’, the manipulators of this instrument into sounding, but also instruments themselves, receptive to the influences of non-human agents.

This object focus arose in tandem with an emphasis on visuality, as explored through video recordings over the course of the laboratory sessions. The camera was used to frame...
the motion of bodies and objects. Some of these videos, both transformed and uncut, were reincorporated into the creative process to influence further layers of performing. The live-performance shows this accumulative process, as it includes video projection of prerecorded materials. Because the performers were captured in these videos, in concert the live musicians performed alongside their alter egos, compressing temporality and the spaces inhabited across the project into the presence of the concert experience. The piece gradually emerged as devised movements, conceptual ideas, and audio/video recordings accumulated. In this way, the piece in its late stage was immersed within the artefacts of its creation. Embodied memories of movement experiments from early lab sessions returned, and video recordings were brought back to be performed alongside. Multiple temporalities coexisted in the final work, but also earlier actions directly informed later performance. Video recording factored into the process monumentally, both because of the camera’s frame, and because it created digitally exact reproductions of performances.

During this project, how we went about collaborating was centralized. In the ‘approaches to composer-performer collaboration’ model proposed by Jennifer Torrence,2 we would place our collaboration somewhere between the performers as advisers and as devisers. This is because the primary work methodology occurred in group workshops, and because all parties were contributing creative decisions. Indeed, the piece could not be performed by any other musicians, not just because the know-how to perform the piece arose over extensive time spent together, but also because the piece’s projected video element contains images of Irine, Linda, and Dejana. This collaborative approach differs substantially from the other end of Torrence’s spectrum, whereby a performer interprets a score prepared independently by a composer. As a result of this close collaboration, much of the creative process was open, improvisatory, and reflexive to contingency. Although Colin frequently developed plans and notations before workshops, these were quite loose and allowed for creative decision making and experimental exploration in the studio. As the piece gradually formed to be repeatable, many aspects were left open. In final rehearsal sessions, details about movements, event order, and sounds were collectively discussed and decided. Although we maintained fairly standardised roles as ‘composer’ and ‘performers’, despite discussion of Colin getting onstage for the live-performances, the laboratory sessions were open structured and cooperative explorations of ideas. Typically, Colin arrived with some prompts to try out, from which experimental and problem solving commenced. The prompts were vague enough that improvisation, dialogue, and experimentation could happen fluidly and reflexively. This flexible approach allowed for the non-human objects and technologies to have agency. The physical materials and electronic media thus factored into the development and creative collaborative making of this piece.

Virtuosity: underneath and beyond

The violin has its secrets: it has at one and the same time a soul and a mind. It is a poet whose enigmatic nature may only be divined by the elect. It is an instrument whose voice, since first it came into being, has stirred the heart-strings of the human race; and the lofty raptures which it has called forth have done their part, with other branches of the art of music, to raise the soul of man to the highest summits of the ideal.

Eugène Ysaÿe

The Romantic narrative of the violin as an object of beauty, magic and with powers to evoke high intensity emotions, and a violinist as a persona possessing a mystical kind of instinct, have played a significant role in the formation of a well-functioning myth. But that story would not have much traction without a whole scaffolding of social history of the instrument dating back to its appearance at royal courts in Europe in the 16th century. The violin gained significance not only for the musical and social functions it could fulfill—its portability turned it into dance music’s most suitable companion—but also for its economic importance supported by an infrastructure around the production and trade of the instrument. Despite violins and violinists being used in negotiating peace treaties, for example to end the Italian war of 1536–1538,4 or to demonstrate royal superiority, wealth and magnificence, as seen at the French court of Louis XIV5, the instrument became one of the most democratic and widely used, and gained much of its aesthetic currency for Western art music composition in the Baroque period.6 It is thanks to the Italian violinist Arcangelo Corelli, Giuseppe Torelli and Antonio Vivaldi—the forefathers of the concerto form—who laid the foundations of virtuoso soloist repertory for many generations of violinists.7

Niccolo Paganini (1782–1840), perhaps the human synonym of Romantic violin virtuosity, reinterpreted the rich Italian tradition for the socio-economic context of his time. Since the appearance of Paganini, violin repertory and instrumental education have been trying to account for the kind of virtuosity understood as a display of great technical skill, speed, spectacle and bravado. A widely contested and convoluted notion—regarded as

5  The Italian War of 1536–38 saw King Francis I of France and Charles V, Holy Roman Emperor and King of Spain fighting over Northern Italian territories, the Duchy of Milan being the most fought over. The hatred between the two monarchs was so stark that they refused to sit in one room and talk to one another, forcing Pope Paul III (in power from 1534–39) to assume the role of a mediator in the Truce of Nice, which was signed on June 18, 1538. The papal records show that in order to appease the kings he brought with him violinists from Milan, trombonists from Bologna, and trumpet, drum, and bombard players from Genoa. David Dodge Boyden, History of Violin Playing From Its Origins to 1761: And Its Relationship to the Violin and Violin Music (Oxford: Oxford University Press, 1960), 26; Wikipedia, “Italian War of 1536–38”, last modified August 3, 2023, https://en.wikipedia.org/wiki/Italian_War_of_1536–38.
6  Les Vingt-Quatre Violons du Roi was the first permanent five-part string orchestra, established at the court of Louis XIII in 1626. Gaining international fame during Louis XIII’s reign, the orchestra grew in size, quality, as well as courtly and political importance under Louis XIV’s rule, particularly with the employment of Jean Baptiste Lully as the court’s primary composer. Louis XIV’s affluence and generous support for the arts, and passion for ballet and opera performances, gave stable employment to a large number of musicians. Ultimately, his artistic investments were done to demonstrate and display his own wealth and magnificence. Manfred F. Bukofzer, Music in the Baroque Era From Monteverdi to Bach (London: J.M. Dent & Sons LTD, 1948).
7  Bukofzer, Music in the Baroque Era, 52-4, 219-35.
8  Bukofzer, Music in the Baroque Era, 219-35.
Paul Craenen, performer’s body. The virtuoso body served the composition, accepting the subjugation mediated by a score and rearticulated as a type of power play and imposition on the performer’s body. The virtuoso body served the composition, accepting the subjugation of its singularity and expansion of possibilities to an external force of a composer. But the body is central to any music performance. Behind every development in an instrument’s design and every virtuosic technical challenge written down in a score stands a human exploration of untrodden paths and a push for more. The ever growing and stretching practice of sound, challenging performers’ identity, skillset, and education, brought performance to a junction, where everything can become an instrument. Virtuosity and experimentation need further negotiating.

The understanding of virtuosity has evolved in line with the developments in contemporary experimental practices. The transdisciplinary approaches to artistic practices and progressively prominent use of technologies presented a growing need for expansion of skills and knowledge and ultimately—a new understanding of virtuosity. For the contemporary experimental artist mastering the violin is no longer enough—that is, about feeling at home in approaching one’s own body, the surrounding objects, the technology, and the performance space with equal seriousness, curiosity and dedication to find expressive potential and meaning—something that we attempted in *Imitate Elegance Expertly*.

**Bodies as instruments and instruments as bodies**

From the outset, the *Mixed Currents* project focused on researching new perspectives for violin performance practice. We wanted the project to be explorative, collaborative, and question hierarchical interrelationships. We chose to explore the violins and violin practice through the physicality of performative acts. Prompts, ideas, and flexible notations were presented at the outset of work sessions, to then be tested and experimented with physically. This embodied situatedness coalesced with improvisation, noisy soundworlds, and human bodies alongside non-human objects in space. Considering the violins not as instruments for executing prescribed directions but rather as entities existing physically allowed us to reconsider how the human body interacts with the instrument. Although throughout its long history the violin has been held and played in various positions relative to the body,8 the modern violin, as designed to be held and played under a person’s neck, is ripe with potential sounds, actions, and artistic creativity when it is dislodged from this presupposed embodied technique. As such, we were keen to explore what corporeal activities could arise when the performers moved differently with their instruments, and how these gestures could in fact become musical material in the creation of the piece. With this reorientation of the violin physically came an alternative focusing on the instrument’s use. The violin departed from being an instrument to be controlled, to instead be an instrument that influenced the performer’s bodies. Sound production, as the standard purpose of a violin’s use, frequently became subordinate to visual movement.

During this process of deconstructing standardized violin performance practice we investigated how the instrument could be interfered with by more than just a solo player. The idea of multiple performers on the same instrument is not a foreign one. Multiple players on a piano even in more standard western classical music is common to the point of being a sub-genre. For example, Eleana Rykova’s “100% Mind Uploading” (2015) sees three performers playing on the inside of a grand piano. MoNo Guitar duo often includes four hand playing, and the band Walk off the Earth in 2012 released a video cover of Gotye’s “Somebody that I used to Know,” wherein all five band members played one guitar. Multiple players on bowed stringed instruments is perhaps less represented, although not unexplored. In the documentary “The Trout, Music Film” from 1969, Zubin Mehta approaches Itzhak Perlman and says “Let’s make our Mendelssohn” shortly before they start playing the piece. Perlman executes actions of the left hand, while Mehta provides the actions of the bow, the right hand. This was done as a fun activity between colleagues, away from audiences’ eyes and ears, only becoming available for a viewer as a backstage anecdote in a documentary. A public two person performance on a single violin occurs in Kate Soper’s *Cipher* (2011) for soprano and violin. In approximately the middle of the piece the singer approaches the violinist with a seemingly casual interaction of fixing the mute on the bridge. As the singer remains close to the violinist, their adjusted position and pose suggesting that more interaction will occur, text from Freud’s “The Interpretation of Dreams” is spoken by the singer: “The dream is not comparable to the irregular sound of a musical instrument, which, instead of being played by the hand of a musician, is struck by some external force.”


10 Jaime de Fer in his *Epitome Musciale* from 1556 gives one of the earliest descriptions (in the period when the violin got distinguished from the Viol): “The Italians call it the violin da braccia, or violone because it is supported on the arm, some use scars, cords, or other things” [Philbert Jazme de Fer, *Epitome musical des tons, sons d’accords, es sons humains, flutes d’Allemain, flutes à souf brace, viole, & violons* (Lyons: Michel du Bois, 1556), 62-63]. Although this is hardly conclusive evidence of the specific violin hold, the indication that it is supported on the arm is less likely to be related to the modern violin hold. In the long period that followed examples from treaties, texts, and method books on violin playing suggested different violin hold and placement. What can be understood from these writings is the shift from “chin-off” to “chin-on” hold, though always with alterations depending on the author’s views and stands. In the 1600’s Prinner was the only example that strongly advocated for only chin-on hold, while somewhat later Playford and Unterricht suggested “breast a little below the shoulder”. Although by the end of the 18th century the “chin-on” violin hold becamefavoured, there continued to be still discussions on how and where the chin should be placed. Richard Gwilt gives a comprehensive starting overview concerning the “chin-off—chin-on” transition in his essay “Holding the Violin, Part I” and “Holding the Violin, Part II” (http://www.baroque-violin.info/essays.htm). As a response to increasing technical demands that needed a freer left hand, in the early 19th century (around 1820) Louis Spohr designed the first chin rest to accommodate a better, more comfortable violin hold, that allows the left hand to be more independent and mobile. There is no exact evidence and records of the invention of the shoulder rest. The first mention of shoulder rest appears in Carl Flesch’s *The Art of Violin Playing* in its revised edition from 1930. A story told among some musicians suggests that Rudolf Kolisch, the leader of Kolisch Quartet and the Pro Arte Quartet, may have designed the first shoulder rest after being wounded in WWI. This shifting trajectory of placement and violin hold can be further supported with iconographic evidence from respected periods.

longer interactive passage\(^\text{12}\) and its energetic explosion in both sounding and gesture between the two performers and the instrument, the question is spoken “Are there then dreams other than wish-dreams or are there not but wish-dreams?” Suggestive of “external force” in text and action at the beginning of the passage, this moment is perhaps a return to the deeply embedded continuous questioning of the relation between instrument and musician.

In *Pas de Deux* (2014/2015) for violinist and performer, Tyler Futrell also explores actions and movements of the violinist. In the opening four bars of the piece, the performer’s first action is to move the violinist’s left hand, which is holding the violin, from its resting position beside the body into a playing position (holding the violin on the left shoulder). The performer proceeds to move the violin performer’s head into this habitual position, slightly tilted and resting on the chin rest. The next actions of the performer are to release and then reposition the left hand, followed by the exploration of the fingers and their movement. Upon this action, the performer then engages the right hand and the bow. From here on, although the interacting performer who moves and alters the violin playing performer greatly influences the sounding outcome, the exploration and movements are those more commonly used in violin playing. All gestural aspects of the piece are directed to trigger sound out of the violin, or rather sound out of the body of the instrument. This latter aspect is perhaps a more important understanding of the role of the violin, as throughout the piece it is as if the non-violin playing performer is learning how to become the body of the violin, and finally in the last section of the piece, takes the violin’s place. The violin playing performer continues their actions, but instead of bowing the violin, bows the other performer’s body. The manner of playing this new corporeal instrument is legno tratto,\(^\text{13}\) that, although not uncommon for violin music written from the mid-20th century, suggests in this situation care for the instrument itself.\(^\text{14}\) Samuel Cedillo, in his piece *Estudios de Contrapunto 1* (2015/16), introduces a second performer, who joins the main performer with additional bows to play on the same instrument.

Although these examples present multiple players on a single violin, it is an instrument predominantly played by a single performer. The departing idea for *Imitate Elegance Expertly* was not to create a piece for any three performers, but a piece for three violinists. Yet what developed through our laboratory session and collaborative practice, between four performers and four instruments/objects while wondering how multiple performers may play the same instrument, was a gesture-based theatre-charged music piece. Our inquiry directed us to explore bodies and their relation to the violin in ways that would enable us to use the messy entanglements of bodies with objects to create a trio-performer, navigating closer to contact improvisation practices than to musical performance. The performance practice we were exploring included complex physical negotiations, wherein the violinists as delicate and small personal belongings and the bows as light and long sticks enable us to use the messy entanglements of bodies with objects to create a trio-performer, ignites action. Furthermore, their presence influenced the perception of gesture and action not in the sense of what violinists/performers can do to the violin, but what happens to gesture and movement when the instrument, and not the body of the performer, ignites action.

It would be impossible, however, to imagine that actions and interactions between two entities, let alone six, would result in no sound produced. Even a deliberate avoidance of any sound would create a context in which the sounds around the instrument could be perceived as the sounding response of the instrument. The actions explored in *Imitate Elegance Expertly* were, likewise, two-fold: on one plane it was about the movement, but then there was still the second plane—the sound.

The alternative practices with the violins were in three possible combinations of bodies with their instruments: solo, duo, and trio. Although different quantities of violins relative to performers were used during rehearsals, the violinists remained holding their violins and bows throughout the final performance. A performer relinquishing their violin was decided against because it would require extra movement to do so, would jeopardize the violin’s safety (especially when in unfamiliar spaces and without excessive planning), and, frankly, did not seem a necessary artistic choice.

One solo activity which differed significantly from the standard way of positioning the violin was used in performance. This was done by Dejana only and can be seen in the following rehearsal video 1. It can furthermore be described as follows:

- Holding the violin by its neck. The arm folded in the elbow to the performer’s left side with the hand holding the violin in the mid-chest area, parallel to the ground. The other hand holds the bow, and the entire arm swings in larger circular motions in front of the performer’s body. Interspersed throughout this motion, the bow comes into contact with the violin’s strings, at which point the performer rapidly and robotically bows the instrument. Although the off-instrument circular motion was always done with the full

\(^{12}\) A second much shorter passage, where the singer retrieves the violin, happens a little after the third quarter of the piece.

\(^{13}\) A horizontal bowing with the right hand, but instead of using the hair of the bow, the bow is rotated 180 degrees such that only the wood of the bow is used.

\(^{14}\) The contact of the hair of the bow with the skin can have damaging consequences on the hair. The natural grease of the skin is not a suitable substance, as its transfer to the bow-hair makes it oily. Thus, the bow-hair is less likely to grip and create friction when in contact with the string, resulting in poorer control for sound production.
circle ratio, its speed spanned between slow to very fast. This action alone demanded adjustment of movement (which will be mentioned later in the text), but in combination with the motions when in contact with the strings (which included additional horizontal and lateral movements), the freeze-change action asked for further adjustments to bowl, wrist actions and thumb-rotation control. The off-instrument full arm circular motion could be seen as an extended “circular bowing” technique. In one of the instances, when the cut from the circular arm movement to the instrument being bowed, the rapid change is to this exact bowing technique, giving an expected sound result.

The duo activities were performed by Linda and Irine. This duo arose because Dejana was not able to attend a rehearsal, so we decided to try out duos rather than trios. This practical situation reslutantly impacted the piece directly, as a section of the piece divided the ensemble into Linda and Irine performing these duos while Dejana played solo.16 Video of the duos as removed from the entire piece can be watched in video 2 below. Additionally, these actions can be described as follows.

- Standing back to back with arms outstretched, and one’s violin grasped by its neck. This time the grip cannot change, so any stopping is fixed when the pose is initially arrived at. The strings are facing outward from one’s body and rotated slightly towards one’s back, such that the other performer can place their bow onto its strings. The other hand, holding one’s own bow, is curved behind one’s body to contact the other performer’s bow. Since it is difficult to see the other performer’s violin, much of the interest in performing this movement is the negotiation of coming into contact with the other’s bow and violin. The playing motion of this awkward pose has both movement of one’s bow and one’s violin.

- Standing and facing one another holding one’s violin to the other performer’s neck. Fingers remain on the violin’s neck and are free to stop down on the strings. With one’s other hand holding the bow, play upon the other performer’s violin that is held to one’s own neck. A joint instrument is formed whereby one is only in partial control of their own instrument and the other’s instrument, creating many possibilities for duo communication through improvisation.

- Standing facing each other and holding one’s violin close to one’s own body such that its strings face the other performer. One’s bow is wrapped around the other performer’s violin to play the strings of their instrument.

Finally, the single trio activity done in the performance was what we refer to as ‘dancing’. This consisted of the performers standing in a triangular shape facing inward with each performer moving their violins and bows around their body. Each performer could contact another performer’s instrument with their bow, typically to produce quiet and brief sounds.

15 Even, uninterrupted lateral motions of the bow along the strings resulting in circular bowing, with possible wide sound timbre ranging from flautando to (various) overt-pressured sound.
16 See from 14’50” onwards of the video of the Antwerp performance.
These varied ways of using the violin outside of its ordinary function allowed for the instrument to act as an agent. Rather than just being a tool for the performer to control, through the instrument’s (mis)use it fed back to the performers in ways not possible when held at a performer’s neck. When the instrument was held airborne, without the support of a performer’s shoulder to take pressure, its lightweight nature meant it could easily be pushed when a bow was rubbed against it. Achieving loud dynamics would require significant reciprocal force from another player. Resultantly, dynamics often remained quiet, and negotiations of pressure factored into the duo and trio actions. Furthermore, without the instruments secured under a performer’s chin the violins required firm grasping. This differs substantially from the ordinary use of the instrument; when held under the chin a performer’s fingers can move freely over a violin’s fingerboard. Typically the violins were grasped by their necks, resulting in a set block chord quadruple stops. These could sound fully, be dampened, or occasionally receive half-pressure, as long as the security of the instrument was not compromised by this action. This resulted in unpredictable chord content, and prolonged, static, and atonal harmonies. In some poses, fingers could be wiggled slightly or even raised, but with the requirement to hold the instrument the performer was faced with minimised fingerboard mobility.

The bow became particularly noticeable as a lengthy implement. In ordinary violin playing the bow occasionally causes problems due to its length, notably in small rooms or when a low hanging overhead microphone is in place. During its use in our non-standard violin playing, the bow required lots of attention in its navigation. During Dejana’s solo action, for example, the bow would easily whack the floor when spun in a circle. This factor required Dejana change the shape of her motion, creating an outwardly turned angular contour when at the lower points of her arm’s circling. During the duos and trios, especially when moving between positions, the bow’s length encouraged it to be thread amidst appendages. Its length meant it could easily run into or jab another body or object, so the performers had to attentively manoeuvre it.

Through our breaking with standard modes of using violins, the instruments’ fragility, lightness, and small shape influenced bodily actions and sounds. The bows length became more apparent, requiring precise movements as to not unintentionally hit things. Mentioned examples speak to the air of altered relationship in regard to gesture and action and reaction with our instruments and bodies—and a shift of perception of who is the object and who the “manipulating entity”. For the violin trained performers, the arrival point of exploration was as if there had been an exchange of roles, and that the instruments, the “objects”, began assuming roles of active live performers. As such, the violin acted as a contributing agent in the making of performance. Its physical and material qualities influenced the performers to actions they otherwise would not have taken. Through treatment in non-standardized ways—beyond intended functionality—alternative becomings-with emerged.

In collaborative work we learn from each other by teaching what we know; we engage in mutual appropriation.17

A curiosity to explore collaboration as a creative approach was at the heart of developing this piece. Collaboration is something we hear often about—it is a fashionable word that promises to secure arts funding applications with a morally appropriate, politically correct and a democratic, non-hierarchical swing to it.18 It is also one of the most intimate relationships that can be developed and experienced in a creative practice: a continuous dialogue that takes unexpected forms and that would never occur in solitary. It is a dynamic and a fruitful exchange of ideas, perspectives and opinions, an immense challenge to one’s ego and a patient service to the common cause. The mythology of collaborative processes19 is closely intertwined with the history of Western Classical Music and wider discourses of performance and composition practices. Most recently, collaboration as a discursive object has received a vivid interest from the research community20 which shows that although there are some general similarities that most collaborative practices share, each and every one of those relationships is solely unique and operates in an idiosyncratic way.

Collaboration and experimental processuality of compositional undertaking has been practiced throughout the history of Western instrumental music, which in modernist literature lead to the creation of pieces such as Bela Bartok’s Sonata for Solo Violin (1944, written in collaboration with the violinist Yehudi Menuhin), Luigi Nono’s La Lontananza Nostalgica Utopica Futura (1988, with Gidon Kremer), or Hilda Paredes’ Señales (2012, with Irvine Arditti). Collaborations between composers and performers to a large degree have shaped the history of Western music and recently became a topic for eager attention and conversation within contemporary cross-disciplinary experimental communities.21

Some recent alternative collaborative methods are being attempted within the New Discipline practice.22 With technologies easily and cheaply available, boundaries between ‘low’ and ‘high’ art seemingly non-existent, performers’ bodies integral and visible on stage, and the spectacle as pervasive element to live performance, the creative process has potential to include numerous traditions, activities, and knowledge. To deal with such excess and

superabundance, practitioners of the New Discipline get together, along with their materials, to make. Problem solving, learning, and trial and error are done when everyone is in the same rehearsal space. The ensemble Bastard Assignments, a group who can generally be considered as New Discipline artists, provide a good example of this approach. As a quartet of composer-performers their sessions typically comprise of long afternoons gathered together, wherein they exchange directorial roles, test ideas, discuss, eat lunch, learn new software, and so forth. Even though they create pieces that retain individual member’s authorship - whereby an individual takes on the role of director or aetum to create a specific piece - their process is cumulative and situated in co-productivity. Furthermore, it relies little on speculation, an issue when preconceived notation is then executed. Ideas can be tested in laboratory sessions without much prior time spent. Thus things are less invested in, and can be discarded or changed without much emotional fatigue. In this sense, conceptual labour is not overly precious, and how something may manifest in actuality is closer attained. Through direct contact with the materiality of performance, as done in togetherness with all members of a collaboration, the creative process benefits.

Such a collaborative process sounds appealing. In practice, though, it involves many complex layers of interpersonal interaction, decision making, and organisational navigation. Concepts or ideas don’t always come, uncertainties arise, and navigating such a non-standardised method can take extra time and not always be productive. Our own project had its share of these drawbacks, but ultimately the approach’s flexibility and situatedness opened the possibility for us to explore with, learn from, and react to the violins and technologies brought. The rehearsals were always flexible, and thus capable of allowing the unexpected in. By letting go of ideas as a product of an individual achievement and viewing them as a way of expanding the material, we were able to bypass any major clashes of personalities and egos. The time between rehearsals was treated as an opportunity to reflect on and develop material. As such, we easily accommodated the unknown, and were responsive to the material objects we experimented with. Maintaining a degree of openness meant the collaboration could unfold fluidly as the project progressed, and not be hampered by preset conditions.

One of the first sessions exemplifies how this flexible approach would unfold for much of the rest of the project. Colin had prepared a few prompts to try out, and all these were to be video recorded (see fig. 1). Partly these tasks were for the purpose of collecting video footage for future modification, but also they were to try techniques for possible inclusion in the performance. From this initial session much of the material was kept, both in the projected video and in the performer’s motions. We will discuss how one specific prompt was collaboratively explored and executed during this initial recording session, and how the instruction’s openness allowed for responsiveness to the tools we were working with.

Direction A, as observable in figure 1, asked each violinist to be filmed directly staring into the camera. The idea was that someone else would gradually pass the violin in front of their face, as if the violin were disassociated from its conventional playing position to avoid such. Although Colin had tested this movement beforehand on his own, enough to create a rough video demonstrating the concept, when we all arrived into the rehearsal room and started trying it out, unforeseen aspects arose. These issues, and the subsequent solutions to them, became focal points for the aesthetic and artistic focus during the session. One of the most consequential realisations was that if a single assistant moved the violin their hands or other body parts would involuntarily enter the camera’s frame. This was undesirable, as we wanted to create an effect that the violin was disembodied, floating on its own. To solve this, simply, two assistants would stand on either side of the frame and pass the violin to each other. This solution respectfully introduced an unforeseen quality to the gesture; at the point when the violin exchanged from the hands of one assistant to the other a clear change in the violin’s motion would occur. This, we realized, was an important detail worth focusing on, as it could be modified to provide interesting variations. It was also the most crucial moment of interaction, as dropping the violin was not desirable, and to avoid such, the two assistants needed to verbally communicate with one another, as well as negotiate the pass through their tactile hold on the instrument. As such, how the violin passed hands gained major focus during this activity, even more so than the facial expression of the performer who was in frame. We experimented with speeds of the violin moving and how long the pass would last for, all while trying to avoid fingers entering the frame. Furthermore, as we experimented with passing the violin across the frame in different directions (left-right, right-left, top-down, bottom-up), gravity and how to hold the violin further influenced its movement (see video 3).

Thus, unexpected practicalities for performing this activity became incredibly important for the aesthetic quality of executing the task. Since the prompt was quite vague from the outset, the material qualities of the violin and video camera highly impacted the act. With our approach of getting together to try things out directly with the materials, we situated ourselves within the actualities of forming this performance. Although the
Collaboration as Contingent on Material Encounters

Synchronously (fig 2-3). They perform from the same indications, but, because these are quite broad prompts that can be interpreted differently, each performer’s individual playing style and artistic voice is emphasised. Because they are playing the same material simultaneously, differences in approach are quite obvious. Furthermore, each player responds to one another. The notation intentionally allows each performer to improvise, and, as such, interpersonal communication and the coordination of progression through the sections is founded on attentiveness to one another. This emphasises the performers as laden with personal identities, in an attempt to further combine the highly personal video footage with the performer’s live selves.

Furthermore, within two sections wherein the performers walk angularly around the stage (5’55–6’55 and 17’22”–18’00”) the same instruction is given to each performer. Because these sections involve full body motion, their individual physicality dominates. Each performer’s approach to walking is highlighted. This is not to say that this section’s

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Individuality within Collective

As the collaboration was reliant on our individual interests, practices, and aesthetics, the piece gradually foregrounded each performer’s identity. The video recordings contained faces of Irine, Linda and Dejana, meaning that these personalities and individualities became important subjects to the final performance. No other performers could present this piece, as images of the performers were embedded in the piece’s materiality. Although, following the same instructions, the actions would inevitably be performed differently by each performer (see the walking scene), the given openness and flexibility of the instructions invited each performer to interpret and approach movement in a way that reflected individuality. This unity of activity, variable per performer, formed an underpinning thread of this piece.

A central section of the piece highlights this well (see 10’08”–14’52” of Antwerp performance). In this section all three performers move through the same instructions synchronously (fig 2-3). They perform from the same indications, but, because these are quite broad prompts that can be interpreted differently, each performer’s individual playing style and artistic voice is emphasised. Because they are playing the same material simultaneously, differences in approach are quite obvious. Furthermore, each player responds to one another. The notation intentionally allows each performer to improvise, and, as such, interpersonal communication and the coordination of progression through the sections is founded on attentiveness to one another. This emphasises the performers as laden with personal identities, in an attempt to further combine the highly personal video footage with the performer’s live selves.

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Footage from initial recording session showing violins being passed in front of each performer.

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Figure 2-3: pages 5 and 6 of the score. Each box shows a type of activity that each violinist performs together.

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25 Torrence, ‘Rethinking the Performer: Towards a Devising Performance Practice’.
main focus is on each individual, separately moving performer, as they negotiate a shared space and distance between one another. Often, indeed, there are moments of confrontation, when someone suddenly changes their path, interfering with another’s course. Such an inter-relational dimension was more apparent in smaller performance spaces: with little space to manoeuvre everyone had to be more attentive in order to avoid bumping into each other. Larger venues lessened this aspect to instead highlight each performer as their own self, walking independently. The Antwerp Conservatoire’s Witte Zaal was the largest space performed in, resulting in that performance separating out each performer as individual the most. Such an effect on the piece was expected, and was simply another influence from material factors. The variety caused by the differing room sizes instilled new life into the piece, giving vitality to the collaboration and artistic practice. In this sense, the variability designed into the piece, i.e. that each performer had liberty within unity, also allowed for material contingencies to be impactful and influential during performance. Openness relinquished any attempt at complete control, and, as such, the materials involved in the process and the individualities of each performer were given space to contribute.

The decision making implemented in the creative process of the piece was intimately connected with the use of audio and video technology. The choreography of the piece and the hierarchy of our decision making developed in a close dialogue with the technology, and in many aspects, was led by it. Therefore, we argue that the role of technology here is instrumental to our collaborative process—a statement that we will explore in the following section.

Recording Influence

Another object, perhaps at first unassuming and the “fourth” instrument that became a contributing agent for the performance, was the video. The presence of the video, and it simultaneously being material, instrument, and performer, can easily result in highlighting its potential as a stand-alone medium. As such, it evokes questions to which extent it is a necessity, and how it can be utilized, integrated and merged into work to become an integral element. In recent work by Miika Hyytiäinen, “Impossibilities of...” (2019/2020), for violin and video, the video functions as a score but also as a co-performer and instrument—defining the outcome of the piece and more importantly, in the context of an instrument-object-performer relation, defining the human-performer’s actions and their shaping of the resulting form of the piece, both visual and sounding. A similar example can be seen in Johannes Kreidler’s work “BOW” (2020) for violin, audio and video playback. Firstly the idea itself is driven by the capturing of the gestures of the player. However, the way of playing the instrument underwent alterations for the material required for the video, as to achieve the optimal motion-tracking results. Video as an “object” is influenced by the gestures of a performer while also influencing the gestures of the performer (as well in the interpretation of the live solo violin material), becoming through this process both an instrument on its own and a co-performer. Finally, performer and video are equally decisive agents for the overall form of the piece, tying firmly the structure and the two entities belonging exclusively to each other. In *Imitate Elegance Expertly*, the footage and all editing thereof appear as a fixed medium in the final performance. The sound, although Colin triggered it on multiple occasions, was not live processed, therefore also represents a fixed entity. Considering the source for material used for both these fixities, the new area of interaction arose for our work as a whole. At this point, a manifest presence of our virtual selves awarded the video as the integral fourth instrument and performer. As “fixed” as they were, they carried a remouldable meaning. They allowed for the interactions that became a continuous conversation between the virtual and real self—in both physical gesture and thought. We engaged and explored these elements in depth during our rehearsals, to shape and decide how to move, and how and what kind of sound could be produced. The sound in the video was derived from recordings made during our laboratory sessions, mixing between improvised and fixed notated material. Elements of this then processed material further ‘demanded’ response from the real-life violins. Violins, but not necessarily the performer. Of course, it was us, the three violinists, that would play. Still, in the overall meaning of the work, these moments were more the conversation between the violin and the video, the two “objects”, only facilitated through the human body, us as performers. In this respect, it would be difficult to imagine this piece without the video, as well as imagining this video as an independent work.

The piece developed through a close dialogue between the different media of expression: audio and video digital technology, theatrical movement, moving performers, violin as an object and the surrounding space. The pre-recorded alter egos of the violinists projected on the screen introduced an additional dimension to the physical presence of the performers on stage. The graphic notation served as a map of the broadly choreographed movements and was created in an intimate duo partnership with the projected virtual images, which were primarily pre-recorded and developed further outside of the rehearsal space.

The interaction and influence of the recorded material were not used just as a fixed form. Instead, it became a feedback loop in the development of the performance as a whole. This can be demonstrated through two specific sections. The very opening of the piece is an audio-video recording, with particular framing and placements of the three violin performers, playing on their instruments composed musical material. The drone-like sound builds up from an initial double-stop, B₃–A₄ (see figure 4). The pulsation of sound in space becomes amplified by the spatial displacement of the performers in the video. It initiates the play of perceiving, perhaps at first more psychologically as it is two-channel audio. The sound...
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**Conclusion**

*Imitate Elegance Expertly* happened when we considered how human bodies and non-human objects act primarily as agents instead of further enacting their sedimented roles. These agents happened to be violinists, violins and bows, but their mission and dynamic of interaction was not concerned with the tradition from which they all stem. It is not to say that tradition wasn’t lurking from every corner. It would be impossible not to consider what this piece means or does at the level of its engagement with all kinds of points of reference, like violinist stage presence or classical violin repertoire’s material density. However, toying with the idea of a stage persona that holds a violin, yet never really plays it in a conventional way, producing scarce instrumental content alongside choreographed movements, allowed us to liberate ourselves for a moment from thinking like the violinists we became. Walking the line of an experimental approach, we questioned what virtuosity could be in 21st century performance, putting our bodies cautiously against a mirror of the Romantic tropes of virtuosity as dexterity, speed, and bravura. We discovered, however, that handling violins in a choreographic way poses difficulties that can not be disregarded amidst other considerations. The economic and emotional value of the instrument for a performer, its object value, is undeniable and needed to be approached as the middle ground between relaxing into it, and finding ways around our anxieties of breaking the instrument. In the end every human-object interaction can be reshaped, yet at least for us, it did come heavy with meaning that was at times hard to forget. Our collaborative approach allowed everyone to weave their specificity and identify into the fabric of the piece, and distributed creativity allowed us to feel invested and connected to the project in ways that the strict interpretative process possibly cannot.

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26 Performances took place on November 2nd, 2019 at Phipps, Huddersfield (UK), December 3rd, 2019 at DeSingel, Antwerp (Belgium), and December 6th, 2019 at Q2, Brussels (Belgium).
The Tuning Fork in My Life

Hakan Ulus

The Aestheticization of the Object

Acoustic objects need people to breathe life into them. They are ascribed meaning and require connotation. The initial purpose of their creation forms their material consistency. An object whose initial purpose is per se musical—such as instruments which historically grew over hundreds of years, or newly invented instruments, for example, those of Harry Partch—is constructed such that its material consistency serves its initial purpose. For an object whose initial purpose is not inherently musical, particularly objects from everyday life, which are nowadays widely used by composers in percussion music writing, the issue becomes more complex. In such cases, one has to move away from the object’s initial purpose, scrutinize it and strive for its redefinition: one may speak of misuse; however, this term seems problematic as I will demonstrate later. By doing so, an artistic void opens up. The musical potentiality of the object needs to be evaluated; this can be done substantially through compositional practice. If the potential of an object proves to be rich, it enables a manifold creative approach: the resulting void gets artistically filled. But what an object ‘means’ is not clarified at this stage. The process of its aestheticization, which goes beyond a mere acoustical level of the material, is required; the object’s aesthetic potential unfolds in a compositional context. It is in this way how the content and substance (Gehalt) of an object can be fathomed.

The Object as a Ding

Let us start by defining what preconditions an object needs to be considered a musical entity, a living object. I want to answer this question by introducing a three-phase revaluation plan that the tuning fork will have to pass through to become musically meaningful. The creation of an aesthetic surplus is a condition needed to step-by-step enhance an object’s status towards that of an aesthetic object, allowing for it to then evoke an aesthetic experience—i.e. its aestheticization. An aesthetic surplus arises when a new perspective is added to an object/subject/matter whose aesthetic value was not previously fathomed sufficiently or was not even associated with. It is this process of aestheticization which is investigated here.

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The Object as a Ding

Heidegger’s terminology is predestined as a starting point. In his text Der Ursprung des Kunstaerkes (1935/36, The Origin of the Work of Art) he proposes to call an object which is approached in a purely material way ‘Ding’ (thing). The ‘Dingein’ (being of the Ding) also highlights its ontological aspect. It is an object that, at the first stage, is ultimately reduced to its physical properties, thus in a certain sense scientifically understood, no more and no less. A highly complex process with interdependences between several sociological, art historical, aesthetic and philosophical aspects takes place until the thing is seen as a work of art. There are principally two different areas in which a change can be made for the purpose of redefining the thing. The first one is related to the Ding itself—it’s property, consistency, material, refinement and the craft put into it—the second to the perspective and perception of the object through the viewer or the listener. For the latter, Lacanian psychoanalysis, or even standard works of German idealism, like Arthur Schopenhauer’s Die Welt als Wille und Vorstellung (1851, The World as Will and Representation), can be given consideration. I focus on this aspect in the third phase. The mentioned first change in perspective regarding the object’s properties is more important at this juncture.

What is a tuning fork? What are its material implications? Grove Music Online defines it as “a metal device (occasionally with resonator) for establishing pitch.” Thereby, it addresses the material and utilitarian function of the fork at once. In distinction to other extramusical everyday objects, the tuning fork’s essence includes its connection to music. So,

3 Rainer Maria Rilke, Über Kunst, in: Schriften zur Literatur und Kunst, author’s translation (Stuttgart: Reclam, 2009), 29.
The determination of the initial purpose of a thing lies in the intention of its production by the producing subject. The moment of its creation opens an aesthetic vacuum—a void—whose potential does not have to be fully revealed at the beginning of its existence. It is a ‘shrouded’ potential that turns out differently depending on the object; it has limits and is always tied to the level of creativity of the composer. Recognizing the potential of an object requires a multi-perspective consideration, which must be dialectical in order to be fruitful.

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10 Tuning forks are produced with a high level of accuracy and precision and a tolerance of only 0.01 Hz. cf. Wittner, accessed August 24, 2020, https://wittner-gmbh.de/wittner_stimmgabeln.html.

11 Alberto Posadas demonstrated in a lecture titled From exogenous models of composition to the instrument as a model itself how one can view everyday objects from a new perspective and explore their musical potential. Youtube, accessed October 22, 2020, https://www.youtube.com/watch?v=Rnswq4LlZLU.

12 See annotation 6, tuning fork, Grove Music Online.

13 Georg Wilhelm Friedrich Hegel, Ästhetik I/II, author’s translation (Stuttgart: Reclam, 2008), 394.

14 Die Phantasie ist immer schaffend.14

[G. W. F. Hegel]

Composing the Tuning Fork

In a second step, the object is raised into a higher dimension through validation of its musical potential. The most apparent to do so is putting its pure sound into a musical context, e.g. holding it on the bridge of a string instrument which functions as a resonator, as in Marc André’s piece iig (2008) for ensemble and electronics. It becomes musical material lead to a multiplicity of the potential of the initial object. It is the space between limitation on the one hand and multiplicity on the other that interests me artistically. The constraint forces me to get everything out of the tuning fork: to focus on the smallest fluctuations in sound, to enrich it with energy, and to push that energy to its extreme so that it may lead to an ‘implosion’ of the material (i.e. its energy is directed inwards and leads to a feedback, whereby the musical energy collapses; this resembles the comprehension of material in musique saturée, a style highly shaped by composer Raphaël Cendo).

The essential physical feature that I expect a tuning fork to have is a ball at its bottom and a length of 10.5 cm — this is for technical reasons to which I will respond to in phase two. For this reason, it has proven successful to use tuning forks of the German company Wittner. In its original condition, principally, three ways of sound production exist at which all have the same starting-point, namely, the striking of the fork:

1. Holding it “in the air its sound is faint and, for a short time, at least one high partial tone is clearly heard”;

2. Holding it with the bottom on a resonator (depending on the property of the material it may sound stronger or weaker) it sounds a very clear pitch with little overtone component;

3. Holding it on the head, the vibration penetrates the human body and lets ring the frequency.

All three types are common and produce the sound which one would expect from a tuning fork. But what can be done to break with expectations and to open up a new creative space? This opens out organically into the second phase of this line of thought.

Die Phantasie ist immer schaffend.14

[G. W. F. Hegel]
whose acoustic variability is per se limited due to its aforementioned properties. Integration and contextualization in a compositional context ascribe meaning and bindingness. Canadian composer Nicolas Bernier goes a step further in his sound installation series titled *frequencies (a)*. In each installation, he focuses on different aspects of the tuning fork’s sound properties. *Frequencies (a/continuum)*, for instance, prolongs the sound of the tuning fork electronically. *Frequencies (a/friction)* beating is the main compositional idea: a solenoid strikes a 480 Hz tuning fork whilst an oscillator which is connected to a loudspeaker produces a stable 476 Hz frequency. Bernier puts the tuning fork in the context of a sound experiment. The initial purpose of the tuning fork is therefore removed. When moving away from the initial purpose, one speaks of misuse. It is important to interpret this term adequately. Misuse in the sense of shifting the focus to the negation of the term is not expedient, as it implies a pejorative connotation and thus loses its neutrality. If the alienation is grasped constructively as an opening space, it is artistically productive and enables a multi-perspective approach. Putting the tuning fork in the context of misuse means two things: 1. it is not used anymore as an auxiliary item for tuning, i.e. pitch orientation for singers; 2. it breaks with expectations, i.e. it does not only produce the one sound we are accustomed to but a wide spectra of sounds. Consequently, its utilitarian function is questioned; the object is transcended and the foundation for a hybrid material laid. The tuning fork can gradually be removed from its pure sound by variation through physical movement, distortion and interpolation. If, after it has been struck, the bottom comes in contact with an elastic material such as a membrane of a percussion instrument (e.g. a bass drum), it produces vibratos of varying speeds by moving it up and down while maintaining continuous contact with the membrane. The point of contact with the membrane, the strength of striking, as well as the angle of the tuning fork are essential to the intensity and dynamic of the sound. The tuning fork becomes embodied by coming in contact with the human hand and using the bass drum’s corpus as a resonator to unfold its whole sound potential. The vibrato through movement can be further musicalized and varied, e.g. the rhythm of the vibrato can be composed, and the action combined with other tuning forks of various frequencies to produce interferences. A complex multi-dimensional sound with different layers and a virtual relief structure results from this approach. Many other constellations are possible. Hegel’s maxim about the imagination of an artist is relevant here:

> Indem nun aber das Kunstwerk aus dem Geiste entspringt, so bedarf es einer produzierenden subjektiven Tätigkeit, aus welcher es hervorgeht und als Produkt derselben für anderes, für die Anschauung und die Empfindung des Publikums ist. Diese Tätigkeit ist die Phantasie des Künstlers. 16

[Since the work of art arises out of the spirit, it requires a producing, subjective activity from which it arises and as a product of it for other things, for the view and perception of the audience. This activity is the artist’s imagination.]

By combining two objects whose initial purposes are not musical, in this case a tuning fork and a metal ruler (in my case a 40 cm metal ruler of the company Staedler), new possibilities arise. There must be a physical interface between the two so that they can constructively come in contact with each other.

The physical movements can be defined in detail by taking the direction of the movement (vertical or horizontal) and the angle at the interface into account. The following two sounds are characteristic:

1. A timbral glissando which occurs when the ball of the tuning fork slides slowly alongside the delimited middle part, whereby the tuning fork can be damped or struck to sound. In the former, the tuning fork functions as an activator; in the latter, sliding alongside the ruler adds a timbral shade to the tuning fork’s pure sound.

2. The same movement with a simultaneous tremolo, i.e. the tuning fork moves from left to right hitting the delimiting grooves while sliding on the metal ruler.

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15 An excellent example of this is the percussion music of Pierluigi Billone. In a yet unpublished paper titled *Arising Acts*, Billone shows how vital the hand and its physical movements are for his percussion music writing.

16 Hegel, Ästhetik I/II, author’s translation, 393.
The Tuning Fork in My Life

However, it is the synthesis of a sophisticated, historically evolved instrument with an object whose purpose does not lie in functioning as a musical instrument that I am interested in. In my case, this is the combination of the tuning fork with the piano. There is an abundance of compositions, the relevant piano repertoire, particularly after World War II, which experiment and explore the sound produced inside the grand piano. Nevertheless, preparations and sound production with tuning forks are quasi non-existent. This void in exploration was one of the main artistic stimuli for combining the fork with the piano—it fascinated me from the very beginning. A preparation inside the piano can look like this:

I used tuning fork techniques inside the piano in my piece A.Q.A.R. (2014) for ensemble and tape; however, Alaq I (2015) for piano solo—which is the first piece of my Alaq-Cycle (2015–2020) —employs for the first time a more advanced, varied and focused approach to tuning fork sounds that are used as musical material. My artistic engagement with tuning fork sounds found its first culmination in my quasi piano concerto, Tawāf (2016), for amplified piano, large ensemble and electronics, which in turn was the initial piece for a large set of polywork-cycles (the Alaq-Cycle, the Tawāf-Cycle, the Shrouded-Cloaked-Cycle, and the Bernhard-Cycle) as well as for the polywork-piece Hajj (2017–2020). I discovered plenty of possible sounds, and the potential is still not exhausted. Due to this abundance, I will only focus on three sound categories. The first two include two tuning forks with one of them fixed with the ball at its bottom between the strings; the relevant strings are damped with gum so that the string does not sound by itself at any time.

One of the most striking sounds is the bell-like sound which comes into being when the fixed tuning fork is hit at the top by another tuning fork. Depending on the position of the fixed tuning fork (partial) the pitch and timbre changes. The hammer of the key activates the string and at the same time brings the tuning fork to vibrate. The combination brings a highly complex sound into being. It can sound harsh (closer to the bridge) or mellow (closer to the damper) with many shades in between. The shorter the string, the higher and sharper the sound. By arranging more than one tuning fork in a row, the sound can be multiplied. My most recent piano piece Alaq III starts with such a sound (four tuning forks fixed on A3, B♭3, B3, and C4):

This sound is considered an Impulsklang according to Lachenmann’s description of sound categories, i.e. a sound that, after an impulse, fades away by itself without the performer having control of it anymore; thus it is close to the very nature of the piano sound. However, great pianists like András Schiff or Daniil Trifonov can evoke the impression of vibrato on the piano. This requires mastery of the instrument. The same applies to the tuning

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20 A more detailed categorization of the tuning fork sounds in Tawaf can also be found in Samuel Solis Serrano’s thesis. Serrano, Musical analysis of Hakan Ulus’s Tawaf.
fork's bell sound. As a variant of this sound, damping the fixed tuning fork creates a dry, percussive sound.

This sound can also be combined with an ‘ordinario’ sound played on the same note:

Here, the articulation is essential: playing staccato creates the feeling of activation of the more prolonged sounding tuning fork strike. The sounds blend very well. If one puts the two sound sources in a polyrhythmic relationship, the characteristic peculiarities of each can be perceived more consciously. This combination allows to compose much more amorphous sounds than the pure bell sound.

The second sound is close to the tremolo-glissando sound of the tuning fork and ruler combination. By holding the unfixed fork at a 90° angle inside the fixed one and moving it horizontally from left to right, resultantly hitting the fixed tuning fork (a fast movement creates a tremolo; a slower movement creates a perceivable rhythm), one can produce tremolos with different nuances.

From A.Q.A.R. to Alaq III an evolution of this sound took place: In A.Q.A.R. the compositional awareness of the subtle shades of this sound was not yet existent. It was a purely interpretative decision at which point on the tuning fork the tremolo should be performed. It was not until Alaq III that I integrated a simultaneous vertical movement, a motion which creates different nuances of sound. The notation of the example above (figure 10) defines the positions top-middle-bottom on the fork and illustrates the transitions between them graphically. The sound at the top is much sharper and more metallic, whereas the sound at the bottom is softer and more resonant. Moving between these positions creates subtle fluctuations in timbre. To perform this accurately is challenging, however, it is this tactile focus on the tuning fork that generates dense musical energy.

Moving the fixed tuning fork at the same time creates another layer of glissandos. Similar to the previous example, the combination of two physical movements results in a more complex sound. By composing several layers of individual physical actions, a genuine polyphonic process is created.

The third example involves the hand. The hand’s palm, as well as the nail, strikes against the fixed tuning fork:

The pianist comes into direct physical contact with the fixed tuning fork. The resulting sound is, in general, much more mellow due to the soft surface of the palm.

All three examples given here have in common that the physical movement of their production, i.e. they require striking, is very much linked to percussion playing. Another important element is the role of the pedal, which should not be undervalued here. It has direct impact on the nature of the musical material by allowing or stopping resonance, thus, affecting its spectra and percussive fraction. The following fourth example has a strong percussive component since it is very noisy:
The pianist executes a tremolo-glissando—similar to the physical movement shown in figure 4—with the ball at the bottom of the tuning fork on the string. By damping the string, the sound becomes dry. In this case, the tuning fork does not sound, but its ball functions as an activator.

The synthesis, which the tuning fork and the piano formed, disestablishes the utilitarian function of the tuning fork, puts it into a new context and transforms it into a hybrid: it is not a sound object anymore but an instrument. It becomes musically relevant and part of a complex sound producing action; therefore, the tuning fork is now musicalized. The tuning fork does not exist on its own any longer; rather, it only interfaces with the piano. They overcome the extreme discrepancy in size between each other, i.e. the small tuning fork, the tuning fork does not exist on its own any longer; rather, it only interfaces with the piano. The pianist executes a tremolo-glissando—similar to the physical movement shown in figure 4—with the ball at the bottom of the tuning fork on the string. By damping the string, the sound becomes dry. In this case, the tuning fork does not sound, but its ball functions as an activator.

The Aestheticization of the Musicalized Tuning Fork

Das erste Kunstwerk ist, als das unmittelbare, das abstrakte und einzelne.24
[The first work of art, as immediate, abstract, and individual.]

Now, after the tuning fork became musicalized, what does it need for a tuning fork to be viewed as more than a source of sound, as a source of aesthetical experience? What does it need to go beyond the mere physical aspect of sound towards a metaphysical level? First and foremost, the perceiving subject needs to be receptive to the aesthetic category of the musicalized tuning fork. The philosopher Zlavoj Žižek formulates felicitously:

The locus communis ‘You have to see it to believe it!’ should always be read together with its inversion: ‘You have to believe in it to see it!’ Though one may be tempted to oppose these perspectives—the dogmatism of blind faith versus an openness towards the unexpected—one should nevertheless insist on the truth contained in the second version: truth, as opposed to knowledge, is, like a Badiouian Event, something that only an engaged gaze, the gaze of a subject who ‘believes in it’ is able to see. Take the case of love: in love, only the lover sees in the object of love that X which is the cause of his love, the parallax-object; in this sense the structure of love is the same as that of the Badiouian Event, which also exists only for those who recognize themselves in it: there can be no Event for a non-engaged objective observer.25

Perspective is the keyword here. The Thomas Bernhard quote that precedes the text—everything depends on the perspective—is precisely about this. If one rejects per se an aesthetic category of a work of art, then they are unresponsive to its truth; an aesthetic experience remains closed to them. It requires the inner will to see the truth of a work of art; it can not be forced. The philosopher Wolfgang Welsch points out that a “reflektiertes ästhetisches Bewußtsein” (reflected aesthetic consciousness) leads to a “Selsibilitätspotential” (sensitivity potential). This Selsibilitätspotential inextricably links to the sensual. An aesthetic experience, initially, is a sensual one. Two levels of meaning of the word ‘aesthetic’ come together here:


[Part of the aesthetic is a tendency to reshape, exaggerate and refine the sensual. […] While I call the first element of meaning, which relates generally to the sensuous, the aesthetic element of meaning, I call this second element, which is added, the elevatoric element. It expresses a withdrawal, a distancing from the vulgar-sensual, the ascent to a higher form of the sensual. Only both elements together—the aesthetic and the elevatoric element—make up the full semantics of the meaning group of ‘aesthetic’ related to the sensual.]

In 2017, I visited the Archaeological Museum in the ancient city of Ephesus. There, one object caught my attention immediately. I stopped in front of it, frozen and struck by the	

24 Georg Wilhelm Friedrich Hegel, Phänomenologie des Geistes, author’s translation (Stuttgart: Reclam, 2020), 539.
26 Wolfgang Welsch, Ästhetisierungsprozesse – Phänomene, Unterscheidungen, Perspektiven, in Grenzgänge der Ästhetik, author’s translation (Stuttgart: Reclam, 2010), 58.
27 Welsch, Grenzgänge, 25.
It was fascinating to see how this artefact has been adored, how it became meaningful, how it was raised to something as holy as a goddess, thus, to a spiritual sphere. It was an Event, like the love-example mentioned by Žižek previously, that allowed me to see beyond the mere material and utilitarian aspect of the artefact, to see it as a source of aesthetic experience. The perceptive relationship between the viewer/listener and the work of art is a dynamical one. Adorno puts it as follows:

"[...]

Deine Erfahrung von Kunstwerken adäquat nur als lebendige sei, sagt mehr als etwas über die Beziehung von Betrachter und Betrachtetem, über psychologische Kathexis als Bedingung ästhetischer Wahrnehmung. Lebendig ist ästhetische Erfahrung vom Objekt her, in dem Augenblick, in dem die Kunstwerke unter ihrem Blick selbst lebendig werden. [...] Indem es spricht, wird es zu einem in sich Bewegten. [...]"

It was in direct contact with the work of art: it spoke to me and I spoke to it.

Even though, theoretically, every object can be at least examined for its aesthetic potential, not all objects have the potential to be aestheticized. There needs to be an inherent aesthetic potency; I saw its aesthetic category.

Aesthetic pleasures have physical conditions, they depend on the activity of the eye and the ear, of the memory and the other ideational functions of the brain. But we do not connect those pleasures with their seats except in physiological studies; the ideas with which aesthetic pleasures are associated are not the ideas of their bodily causes. [...] There is here, then, a very marked distinction between physical and aesthetic pleasure; the organs of the latter must be transparent, they must not intercept our attention, but carry it directly to some external object. The greater dignity and range of aesthetic pleasure is thus made very intelligible. The soul is glad, as it were, to forget its connexion with the body and to fancy that it can travel over the world with the liberty with which it changes the objects of its thought. The mind passes from China to Peru without any conscious change in the local tensions of the body. This illusion of disembodiment is very exhilarating, while immersion in the flesh and confinement to some organ gives a tone of grossness and selfishness to our consciousness.22

Tuning fork sounds inside the piano can be aesthetic in themselves, however, to create an aesthetic experience, they need to be composed; it is a piece that creates it. I, as a composer, see something in the tuning fork which is not apparent; I put musical energy into it and make it a new, transformed, hybrid object, more precisely, an instrument with unique and sophisticated sound qualities: my artistic engagement with it leads to its aestheticization. The compositional context elevates the sound from an absolute sound category to something more than that. Repeating this sound seven times is a ritualistic behaviour which I generally ascribe to my tuning fork sounds; for me, they are mystical. In Islamic tradition, seven is part and parcel of many rituals, e.g. the seven times counterclockwise circling of the Kaaba, called Tawāf. This binding compositional contextualization gives meaning to the tuning fork’s sound; its aestheticization
is consummated. The compositional act in which the works of art “synthesize irreconcilable, unidentical, aneinander sich reibende Momente; […]”34 [synthesize irreconcilable, unidentical moments that rub against each other] is the place of aestheticization.

In many ways, the tuning fork sounds link to the Qur’an recitation, which is an essential source of inspiration to my music. They have a strong vocal quality, even though this does not seem evident at first glance. By deconstructing the vocal tract, the different sounds evoke—in a context of a composition—various qualities of Qur’an recitation such as fragility, pureness, the tension of nasality, ornamental elements and vibratos. In many places, the pure or distorted tuning fork sound is prolonged after been struck; in figure 10, for instance, executing the tremolo with timbral fluctuations also produces a long-lasting sound which resembles electronically produced sounds. So, the tuning fork has an important symbolic character in my music. Its visual aspect is relevant, as well. When the listener not only hears but also sees how the sound is produced, he looks at the tuning fork differently. Aural and visual qualities become linked.

The fixed tuning forks rise up to the air as if columns in an architectural context, and thus create the visual aesthetics of the preparation inside the piano. As an aesthetic visual object, they exude their inner sound without even sounding. This is the “Aura”35 of the tuning fork and its sound, which is important in the process of their aestheticization: they emanate a magical power of beauty. What was before an auxiliary instrument for tuning, became now a musicalized object, an instrument, that contains magical powers to create music and to enchant. It is this change of perspective that raises the object to an aesthetic object. The technical implications outlined above and the three-phase process of the tuning fork’s aestheticization also raise questions about the role of the interpreter,36 who functions as a mediator between my compositional practice and the aesthetic experience of the tuning fork; it is the pianist who conveys the aesthetics of the tuning fork sounds to the listener. My piano music requires great sensitivity, precision and physical control from the interpreter.

Yumi Suehiro, the dedicatee of the Alaq-Cycle, describes her experience in preparing the piece as follows:

My experience through the Alaq-Cycle was quite interesting because [...] I had to internalize massive energy and control such delicate sounds with its highly demanding tuning folk technique. It was extremely demanding to play with standing, keeping certain posture, and make such delicate sounds. I spent a lot of tension and energy into my body and my mind.37 If the stop angle of a tuning fork is not accurate, there is a risk that it does not sound to its full potential. In that sense, the sound production is subject to fragility and fine motor skills. Linked to this, my piano music demands a high degree of virtuosity; I push the pianist to his/her extreme. The pianist needs to change positions inside the piano rapidly; she/he needs to rehearse a physical performance: this is the performative aspect. In this respect, the pianist resembles a percussionist (also in ways of sound production and the material itself) who needs to virtuosically change between his/her instrumental setup. Suehiro, who also has a background as a percussionist, compares piano technique to percussion technique:

In addition, from the technical aspect, because I have a background as a trained percussionist, I could come up with this idea; some technique (i.e. tremolo between tuning forks, hitting it by the other tuning fork) could be comparable to triangle technique which requires fine control of finger-tips’ muscle with slight wrist motion. But while performing, my brain function was always as a pianist which I found the most interesting.38

Starting as a “beginner at the tuning fork technique,”39 Suehiro had to discover the tuning fork and, in the act of interpretation, pass through the outlined process of its aestheticization. It is noteworthy, that Suehiro highlights the vocal quality of the pieces:

Whereas it [the piece] always contains cantabile which almost comparable to 19th century of piano repertoire (i.e. Chopin, Schumann) due to its rhythmic context especially at uncompleted measures. Also, microtonal glissandi imply melismatic/vocal phrasings. Therefore, my [performance] advice [to other pianists] would be the pianists need to

34 Adorno, Ästhetische Theorie, author’s translation, 263.
35 Walter Benjamin, Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit (Stuttgart: Reclam, 2011).
36 I wrote about the process of rehearsing complex music which can be taken as a general reference here. cf. Hakan Ulus, Erfahrungen, Realitäten, Visionen – Meine Probenerfahrungen und Vorschläge zur Verbesseung der Probenvorschriften komplexer Musik, in: Proben-Prozesse ed. by Wolfgang Gratzer (Freiburg: Rombach, 2019) 197-212.
37 Yumi Suehiro, the answers to the 5 questions, e-mail to the author, August 29, 2020.
38 Suehiro, answers.
39 Suehiro, answers.

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Figure 15: tuning fork preparation with seven tuning forks fixed inside the piano.
understand the lyrical pianistic/vocal like phrasings, and then apply them to the tuning fork technique.40

The link to Schumann is justified since he had always a big impact on me as a composer, and is close to my heart. Suehiro substantiates: “I was humming your phrases like Schumann in my brain.”41

Outlook into the Future

Denn das, was die Kunstwerke unterscheidet von allen anderen Dingen, ist der Umstand, daß sie gleichsam zukünftige Dinge sind, Dinge, deren Zeit noch nicht gekommen ist. Die Zukunft, aus der sie stammen, ist fern: [...]42

[Because what distinguishes works of art from all other things is the fact that they are future things, things whose time has not yet come. The future from which they come, is far away [...]]

(Rainer Maria Rilke)

My artistic engagement with the tuning fork has by no means been saturated yet. My next compositional project is to compose a large-scale piece for four subtly amplified pianos which are staged in a circle facing each other. With a duration of 30 to 45 minutes, it will be a monument and dedication to the tuning fork, and will be my biggest culmination of the tuning fork sound world. This project has haunted me already for more than four years—it waits for its realization, concretization and will come from my heart of hearts.

First, the tuning fork was an object, then became musicalized—coalesced with the piano—and finally aestheticized, but what is all of this ultimately about? It is about the poetic beauty, the aesthetic experience of, and my love for the tuning fork. It is about the tuning fork in my life.

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40 Suehiro, answers.
41 Yumi Suehiro, e-mail to the author, September 2, 2020.
42 Rainer Maria Rilke, “Kunstwerke,” in Schriften zur Literatur und Kunst, author’s translation (Stuttgart: Reclam, 2009), 85.
Devising Interaction and Improvisation in Motion Studies project

Cristina Fuentes Antoniazzi, Ilona Krawczyk, Solomiya Moroz, Colin Frank

Project Overview

During the Motion Studies research project, which happened throughout 2017–2019 at the University of Huddersfield, our group of four artist-researchers explored how space, objects, bodies, and each member’s prior practice influenced performance. Together we were two musicians, Colin Frank and Solomiya Moroz, and two actors, Cristina Fuentes Antoniazzi and Ilona Krawczyk. Due to the interdisciplinary nature of our collaboration, the process of devising performances employed a combination of strategies and exercises, which we describe in the following paragraphs. These strategies, although developed particularly for Motion Studies, draw from each artist-researchers’ background and practice, namely those of post-percussion performance, contemporary music composition, post-Grotowskian theatre, and contemplative theatre. The project consisted of multiple experimental laboratory sessions and culminated in three performances, respectively at the Audiovisual Body symposium in Huddersfield, the event Reverb hosted by The Arts Center at Edge Hill University in Ormskirk, and finally, the Moving the Musician concert held in St. Paul’s Hall in Huddersfield.

In post-Grotowskian theatre practice, laboratory sessions are not solely to train performers for theatre productions but also for long-term research into an actor’s craft, their performance form, as well as for investigating human expression and interactions. We took

devising as an approach; in our laboratory sessions, we aimed to develop our abilities, experiment with ideas, and search for expressive possibilities. The final product we arrived at was more a result of the process than a focal driving force. During our laboratory sessions, we focused on how we would respond, influence and react to each other’s sound and movement in space. Interactions between us were incited by exercises and prompts for improvisations that were brought by each of us. Although the project was initiated by Solomiya and Ilona, as the project progressed leadership and decision making changed between us during the sessions. Propositions and exercise-leadership changed persons, and creative suggestions and decisions were made by all. As such, creativity was distributed amongst us. With much discussion throughout sessions and the contributions of each practitioner’s creativity in action, the creative process was collaborative, in which we aimed to investigate how this interdisciplinary meeting would create new artistic processes.

These sessions were video and/or audio recorded, both for the purpose of documentation and for reintegration into the working process. In this latter application, the videos were reviewed during working sessions, so that we could look back upon ourselves. By reviewing an improvisation directly after its doing we could reflect upon it immediately, allowing our short-term memory to aid in re-witnessing our performance from another perspective. This process incited us to discuss, reflect, and make decisions about coming steps during sessions. In this way, we utilized the videos as an “epistemic object, new technique in-the-making”.

The process over the course of the lab sessions was one of gradually accumulating embodied actions and inter-relationships. As exercises and prompts were explored through improvisation during the sessions, certain movements and relationships were selected and remembered for subsequent performances. Memory was partially embedded in our corporeal bodies, leading to the creation of what Solomiya refers to as an ‘embodied score’. This physically remembered score was gradually constructed across the multiple sessions and was flexible as to its makeup. Rather than having fully set or reproducible moments, there were rather flexible yet recognisable features that allowed our performance to definitively recur without being entirely fixed. These moments can best be understood as ‘boundary objects’, what dance scholar Freya Vass-Rhee defines as “objects or concepts, which, although jointly deployed by members of a community, are utilised differently by different participants”.

Boundary objects are loose, yet they contain adequate detail to be recognised by multiple collaborators. In our open score work, the boundary objects were movements and sounds that could be easily recognised by each participant but were never fully fixed. Each individual interpreted them differently, and there was room for improvisation within them. Although referred to in a less technical manner as ‘moments of movement and sound’ during discussions, these will be referred to as ‘boundary objects’ in the context of this text. In

1 By post-Grotowskian lineage of theatre practice we denote the practitioners and companies whose artistic work has roots in, refers to or is inspired by Jerzy Grotowski. See James Slowiak, Jairo Cuesta, Jerzy Grotowski (London and New York: Routledge, 2007).


addition, the openness of the boundary objects allowed for instances of new improvisations to emerge within a collectively remembered framework. In this sense, these boundary objects contributed to the formation of an embodied score. Three main instances of repeatable movement and sound combinations emerged during the course of the lab sessions that became the boundary objects of our collective work. They can be understood as:

- **Linear movements**: straight-line walking movements divide the larger space as if into a grid. Rattles and woodblocks are used. Pairings of Colin-Cristina and Solomiya-Ilona are centralised (Excerpt 1).

- **Circular Movements**: Solomiya plays flute, Cristina and Ilona sing, and Colin plays the cymbal somewhere in the space. Slow rotational movements are done by an individual where they stand that are gradually expanded into movements encircling the space (Excerpt 2).

- **Alternating movements**: carried out in the pairs of Solomiya-Cristina and Ilona-Colin. Members alternate leadership roles, where sound leads movement or vice versa. Colin performs with drum and brush, and Solomiya with flute. Typically highly energetic (Excerpt 3).

These boundary objects arose in an entanglement with our different background training, with the exercises carried out in the laboratory sessions, with collaborative decision making, with spatial awareness, and with percussion objects.

### The Exercises

In the practice of post-Grotowskian theatre, exercises serve as starting points for devising a performance. There are no fixed recipes, repeated structures or exercises “locked in form”. After initially following guidelines, a performer develops and transforms an exercise creatively in the process of performance making. Primarily three exercises were used during the laboratory sessions that contributed to our embodied knowledge and the devising of an embodied score. These were:

- ‘Walk and stop’ — one of the exercises of post-Grotowskian companies that focuses on receiving impulses from partners and developing spatial awareness. Performers learn to be attentive and responsive towards each other’s actions on an instinctual, “animal-like level of perceptual/sensory awareness where the body ‘becomes all eyes’”.

  As an ensemble, everyone walks and/or stops together with as minimal a delay as possible. Altering between moving and pausing is initiated by any of the performers. Accompanying this aim of being together, is that everyone be distributed equally throughout the space. The exercise helps to develop performers’ spatial and interpersonal awareness.

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awareness. The times of stopping are moments of attentive suspension, an active awaiting for new impulses to pick up (see Excerpt 4).

Excerpt 4: Walk and Stop exercise

• ‘Motion’ exercise (following the dynamic)—an exercise from post-Grotowskian actor training. It aims to enhance the ensemble’s awareness of group dynamics and to awaken individuals’ creativity in developing physical actions. The exercise relies on movement improvisation to create a “living stream of impulses”. The group begins with stillness. A leader initiates the exercise by walking in a slow motion which gradually speeds up to reach a peak dynamic as a run. All the group follows the leader’s pace. After the peak moment, the group gradually slows down, coming back to stillness. The dynamic of the whole run depends on a leader. Similar to ‘walk and stop’ exercise, the group of actors should follow the initiated movement and its dynamic with an awareness of the space to avoid any time-laps in reacting to the leader’s impulses.

• ‘Duet conversation’ is an exercise from Social Presencing Theatre. In the exercise, performers learn to inhabit moments of stillness by consciously creating an interval in time and space between each movement. Hayashi, the developer of this technique, describes this exercise as a dynamic dialogue created as a result of repetitive cycles of movement and stillness based on observation, sensory awareness and doing without thinking. There is an emphasis on sharing long pauses between each movement. Consequently, by inhabiting these pauses the movements emerge from a sense of shared stillness. Once the interaction evolves and the performers feel more confident of their awareness of the shared space, they can shorten the intervals, and the movements begin to overlap. This exercise also affects the performers’ understanding of space as an active agent in the interactions. Therefore, through developing spatial awareness performers gain an embodied knowledge that enables them to relax in space.

Paper Methodology

Four primary research concerns emerged from the process of making *Motion Studies* that will be addressed by each of us independently. We choose to write about them individually because our separate areas of inquiry are aligned with our personal PhD research. These topics, with their respective author, are:

• Exterior and Interior Qualities of the Embodied Score: how the exterior and interior qualities of individual and group reflections and responses aided in composition of the embodied score of *Motion Studies* (Solomiya Moroz).

• Instruments as Objects: how the materials brought to rehearsals influenced motions and structural decisions (Colin Frank).

• Space Awareness: how becoming attuned to the performance space and noticing the space between performers informed the composition of movement (Cristina Fuentes Antoniazzi).

• Sound and Movement Integration: how the sound of voice and instruments influenced movement and vice versa in developing embodied score (Ilona Krawczyk).

Although these separate threads are written from our separate perspectives, we have been discussing and reflecting about the process together. To show this discussion, throughout our individual writing are interspersed reflections and responses from the other practitioners, outlined in coloured boxes to the side of the article. In this sense, the article reflects the collaborative process and the entire project, in that our individuality is maintained while cross-pollination between our ideas and practice occurs.

The Exterior and Interior Qualities of the Embodied Score (Solomiya)

An embodied score was developed over the course of the *Motion Studies* project which became a combination of repeatable instances of sound and movement emerging within an experimental framework of our lab sessions. For my definition of an embodied score, I draw on Ben Spatz’s *What a Body Can Do* (2015),9 where one treats technique that anyone’s body acquires as knowledge and practice as research that one engages with to gain insight into new

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embodied knowledge. In devising the embodied score of *Motion Studies*, we use both of these approaches—participants’ disciplinary techniques of their previous training and the new instances of embodied knowledge, i.e. the boundary objects developed in our lab-sessions. This makes the work possible for repeat performances in various venues without a musical score or theatrical dramaturgy. Here, I will consider the exterior and interior qualities of the embodied score which led to the formation of boundary objects; the exterior being responses aided by external tools such as video documentation, aspects of disciplinary training and transcription through musical notation; and the interior being a phenomenological reflection on oneself during a moment of improvisation in relation to the others.

**The Exterior**

In *Motion Studies*, the initial structure of the lab environment already assumed emphasis on the embodied research where the primary site of investigations are the bodies of performers, individually or together.10 This research took place through open improvisations as well as working in more detail on movement and sound, elements of which were captured through video documentation for further reflection and composition. As described above, the video itself became an embodiment of certain techniques and embodied moments, “an epistemic object, new technique in-the-making.”11 For us, it became an aid in remembering and learning new combinations of sound and movement. In our lab session recordings and performances, it is possible to observe technical aspects of exercises such as ‘Walk and stop’, ‘motion exercise in following each other’s dynamic’, and ‘duet conversation’ reflected in the new combinations between sound and movement referred to as boundary objects. More specifically, we have adapted the quality of sound following movement and movement following sound through the techniques of these initial exercises which had a strong emphasis on pairings and group dynamics. The musicians’ instrumental improvisations were initially inspired by the movement in pairs, however, as the melodic and textural materials of sounds were becoming sonically embodied into actors’ vocal responses some further devising of this response was needed to understand the interactions of movement and sound. To arrive at the sonic quality of some of the vocal characteristics of the boundary objects, such as ‘circular movements’, which contained stretched vocal sections with high leaps and ‘alternating movements’ as well as energetic melodic and textural bursts, I transcribed the sonic content of these boundary objects. This helped the theatre collaborators, Ilona and Cristina, in remembering the main features of the sonically embodied moments which occurred during improvisations, ensuring that these could recur with some variation in new lab sessions and performances. As exchanges through exercises and techniques of different disciplines started to spill into each other through interdisciplinary collaboration, we were creating new embodied techniques beyond the disciplinary boundaries of each other’s practice.


**The Interior**

Another tool that helped in devising our collective work became reflections on one’s own phenomenological presence during the improvisations in relation to the others. We arrived at this through discussions, where we recorded our affects and feelings and analysed the relationships between each other during the improvisation. This helped to discover which sensations and affects had potential to be explored further. In this way, we shared our reflections on each other’s actions within the group and how we perceived they were working and affecting our sound and movement. This tool was originally proposed by Ilona who has used similar techniques in reflection during lab-session in her previous work. The language concerning our personal multi-sensory experiences in relation to each other became more important here than discipline-specific language if it was a theatrical or a musical improvisation (Moroz, 2020).

As we started working with the interior and exterior qualities of the embodied score our responses became quickly entangled. Thinking in terms of Deleuze’s ‘packets of sensation’ as personal sensations in the moment of improvisation helps in understanding the entwined nature of our work:

Percepts aren’t perceptions. They’re packets of sensations and relations that live independently of whoever experiences them. Affects aren’t feelings, they are becomings that spill over beyond whoever lives through them (thereby becoming someone else) ... Affects, percepts, and concepts are three inseparable forces, running from art into philosophy and from philosophy into art.12

‘Packets of sensations’ are each participant’s phenomenological reaction to the boundary objects in the moment of improvisation, what they are and what they could be in the future presentations of this process-based work.13 The reflective part of these sensations became reactive in the moment of improvisation with no room for conceptual decisions. Thus,

the kinetic aspect of our responses drove the work further and became its own concept, supporting an open and process-based approach when it came to performances in new spaces.

Considering both the interior and exterior qualities of the embodied score helps in understanding how the flexible structure of Motion Studies evolves with each new performance. Through the embodied memory of our lab-sessions, we became carriers of the exterior and interior qualities of the boundary objects which guide our future decisions in the work, where ‘affects, percepts and concepts’ can flow in and out of each other if we are to present the work again.

**Instruments as Objects (Colin)**

**Objects as Agents**

Each laboratory session an assortment of small percussion items, wind instruments, and mallets were brought to the rehearsal space. These were distributed on the floor, differing in configuration per session, either centralised in the room or distributed to its sides. The items’ properties and their placement affected how we moved, interacted, and developed the piece. The objects can be considered as **actors**, in Bruno Latour’s understanding that nonhumans can be considered to form interactions. Their presence within the rehearsal space, coupled with their individual properties, led us to motions and choices we otherwise would not have made. By understanding that “musical practices are material; they unfold by way of material circumstances; objects, bodies, places, surfaces and boundaries all help to constitute human action and interaction in the context of musical events”, then the objects we used and space we inhabited influenced this piece’s making. But how specifically did the material items brought to the rehearsal room influence us? Argued here is that their tactile physical properties, their visual appearances, and their sounds informed our creative process. Both minutaie details and the macroscopic form were influenced by their agency.

**Tactile affordances**

Each of the items was intentionally designed to produce sound via some form of touch. Rubbing, scraping, striking, rattling, shaking, sliding, blowing—these actions could sound an object on its own or when in combination with other objects. Because our project focused on bodily movements—framed through physical theatre and music performance discourses—these objects as activatable through tactile means was fitting. The objects were easily incorporated amidst movement, and indeed their shapes, weights, sizes, and material makeup integrated with and influenced our bodies. How the objects could be moved, and the ways their properties resulted when moved, was ground for improvisation and experimentation during the artistic process. Discoveries from directly moving with an instrument were further extrapolated to performing when without that instrument. The instruments acted tactically upon a performer when in their hand, but also acted upon performers when they were not physically touching them. As such, our performance co-evolved with the instruments. We developed motions directly through the instruments and via observation of their actions.

**A good example of tactile and observation-based influence is found during the third alternating movements boundary object, when Ilona and I performed a duo principled upon exchange. As I moved with the handheld circular drum and horsehair shoe brush, Ilona moved without any implements. My motions were derived from the relatively heavy weight of the drum, and how I contacted the drum’s skin with the brush. I mainly held the drum in a single hand by the wooden cross-grip on its rear side, while holding the brush in my other hand. The drum’s size and weight encouraged cumbersome, sturdy movements, and its circularity allowed for rotational, smooth gestures. In contacting the drum’s skin with the brush, friction and pressure played into my motions, resulting in granular, gritty, and noisy sounds. While influencing my movements directly, these objects’ properties spilt into Ilona’s movements and vocalisations. She followed the articulate swishing sounds made from the drum with her voice, and took on similarly large, dramatic stances. As such, the material properties of the drum and brush partially constructed my movements and sounds through my tactile relationship to them, and they influenced Ilona indirectly, as she took on characteristics that arose from them. However, understanding this duo performance as entirely developed from the objects would be oversimplification. Rather, the physical objects were actors within a network of relationships. They were but one influence within an entanglement of bodies, space, and sound, all fluctuating within time. Ilona took gestures and sounds arisen in the drum-brush-me assemblage, but her vocalisations and rapid movements fed back. Without extra appendages, her motions were unrestrained. As such, her movements could be quicker than my own. In attempting to follow her motions, I attempted to augmented my motions to be agile and quick. The system was thus expanded outward to comprise a multitude of interactions between agents.

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Objects’ Visuality Influencing Spatial Decisions

Although the percussion items we used are intentionally designed and typically used for sounding purposes, their visible features informed our choices. In our merging of musical practice with physical theatre practice, intermixing both disciplines onstage, both the visual and the sonic were of equal importance. As such, sound and image existed in a bidirectional exchange; movements for the purpose of sound production entangled with movements intended to be seen.

For the first section of the piece, in the boundary object linear movements, we moved in straight lines. This choice arose from the shape of one of the instruments used in this section, namely the woodblock. We mimicked its rectangular prism shape by moving in a grid pattern through the space. We hoped a connection could be noticeable between our bodies moving in the space and the instruments being played. As such, an instrument’s visual property was extended to a spatial-structural dimension of the performance. Why did we base our ensemble movements on the woodblock’s visual characteristics, even when Solomiya and Ilona were using two seed pod rattles concurrently? Indeed, the rattles influenced Ilona and Solomiya’s movements through their tactile agency. The rattles’ bulbous and continually fluctuating shape led Ilona and Solomiya to eventually break from the linear shape to instead spin messily on the floor. That the woodblock was given initial precedence over the rattles only suggests that objects and practitioners are in constant interchange and negotiation. Objects influence choices simply by their being there, while at other times they present affordances that the practitioners may or may not take. The woodblock provided possibilities for our taking—without it present we would never have moved in a grid. The visual shape of the rattles could have just as easily influenced our group movement, resulting in an alternative performance. However, the shape of the woodblock was given precedence at that moment, and was resultantly developed into a boundary object structuring our performance.

The second boundary object, circular movements, was influenced by the round shape of the cymbal. In initial improvisation sessions, I explored the cymbal by spinning it on the ground (both with it resting flat on its dome and spun on its edges). These rotary movements were picked up by Ilona, Cristina, and Solomiya, resulting in their moving in large circles around the space and spinning in small circles in localised positions. Here, the sonic texture arose in conjunction with the cymbal’s overtones. Ilona and Cristina’s pitch content, and the flute playing of Solomiya, co-formed with the cymbal. Once again, the visual properties of an object informed bodily movements. A bidirectional interchange occurred; as our bodies moved in rotations, the cymbal was also spun. The instrument fed into the devising process; it acted agentially, contributing to the network. As such, decisions and doings emerged through our interactions with the objects we brought.

Agential Objects Conclusion

The creation of this piece predicated on our understanding of the objects as tactile, visual, and sonic influencers. Through our including them during rehearsals, we gradually built the piece collaboratively with them. The objects can be understood as having been active agents. They influenced our physical movements consequent from their tactile attributes, their soundings, and their visible features. As the piece emerged, entangled with the agency of the non-human world, the question remains as to why these objects and not others were chosen, and where the line exists between our capacity to decide and their ability to act. To better investigate these questions, other artistic research could consider the assemblage as wider, incorporating greater situational and historical factors. Future research could incorporate a greater quantity of actors and could go into more detail about their individual and unique properties. However, this project aimed to consider objects as agential within the devising process and provide specific examples of how the objects in Motion Studies acted. It considered how objects informed choices in an interdisciplinary devising process. With the sound and visuals of equivalent importance, due to our mixed backgrounds in physical training and music, the objects’ visual, tactile, and sonic characteristics were formative in the development of this performance.

Spatial Awareness in Motion Studies (Cristina)

In the following section I will examine how spatial awareness informs the composition of movement and sound in Motion Studies. The reflection will focus on the concept of ‘ma’ understood as an interval in time and space, as a way to practically embody spatial awareness on stage. I will first explain the technical and theoretical background from where I approach the notion of spatial awareness. Then, I will discuss the exercise “duet conversations”, introduced in the rehearsal process as a practical way to explore spatial awareness by inhabiting ‘ma’. Finally, I will track the possible traces that this exercise had in the devising process and in the Motion Studies performance.
Spatial awareness in performer training

My understating of spatial awareness in performance training is strongly influenced by two contemplative training techniques: Mudra Space Awareness16 and Social Presencing Theatre. At the same time, both of those forms are rooted in Chögyam Trungpa’s (Tibetan Buddhist Master) Teachings of Dharma Art17 which are based in Tibetan Buddhism, where awareness of space is a core teaching as it allows us to connect with a greater view that is not constricted by our thoughts and emotions.

As it has been explained thoroughly in previous sections of the article, Motion Studies is based on devised and structured improvisation. The piece was created based on the way we responded, influenced and reacted to each other’s sound and movement in space. Therefore, the ability to foster a receptive state from where to interact and improvise was a foundational skill that the performers had to have in order to participate in this endeavour. Thus, finding techniques to train our receptivity was a suitable approach. Accordingly, the notion of spatial awareness as a catalyst of mental openness was an appealing feature to explore in this context.

From a Buddhist perspective, space is the opposite of an empty void, as it is considered the element of creation, fertile and full of potential. Space is the ultimate container, from which form emerges and dissolves. Trungpa describes the state of space awareness as one in which “you are willing to play with the phenomena (...) the fickle quality of being willing to associate itself with something or other”.18 Therefore, interconnectivity is inherent to spatial awareness.

In the actor training field, Lee Worley states that being aware of space is essential for performers. In her analogy, performers are “like fish in the water, space is the element that we swim in”.19 She proposes that spatial awareness highlights the kinaesthetic experience of our bodies, providing a clear experience of our boundaries. Also, Worley suggests that being able to recognise space by abiding in ‘the gap’, understood as those moments of inaction that underlie and enable action to happen, can strengthen performers’ stage presence, as we swim in”.20 She proposes that spatial awareness highlights the kinaesthetic experience of our bodies, providing a clear experience of our boundaries. Also, Worley suggests that being able to recognise space by abiding in ‘the gap’, understood as those moments of inaction that underlie and enable action to happen, can strengthen performers’ stage presence, as it connects them with the rawness of the present moment. In that way, spatial awareness promotes in performers a state of alertness and open receptivity. According to Quinn, performers’ training in receptivity “readies audiences to feel the stillness that contextualizes motion and to hear the silence that contextualizes sound”.20 At the same time, this state of receptivity and openness acts as an antidote for being ‘caught in thoughts’ or self-consciousness on stage. In consequence, spatial awareness can enhance a performer’s ability to stay open to what is happening onstage and by being in tune with the potentiality of the unfolding present moment, respond to the external stimulus in an authentic way.

Duet conversation: A practical exploration of spatial awareness

In order to foster a practical exploration of space awareness in the rehearsal process of Motion Studies I presented an exercise from Social Presencing Theatre training called “duet conversations”. This exercise22 consists in establishing a physical dialogue in pairs, where movement and stillness alternate. The way to do so is by inhabiting long pauses of “ma”, intervals in time and space, where nothing happens between each movement.

According to Hayashi, who is the developer of Social Presencing Theatre, the experience of “ma” enables performers to integrate silence, space and not-knowing as part of their interactions. She states that “the concept of Ma is used to acknowledge the shared space, quality of relationship, resonance and connectivity”.22

However, the use of “ma” in performance practice can be traced to the XIV century, on Zeami’s work on Noh theatre.23 Zeami’s approach to actor training has influenced performer training ever since. Ma is defined as “an interval, a gap in space or time through which something can appear … an intersubjective occasion that provides an empty space and silent place to encounter the other”.24 According to Pilgrim25 the Chinese character that composes the written word ma symbolises the opening that let the light shine through. The ideogram ma is made by two elements: the first meaning gate or door (mon, ?) and the second one is sun (hi, i) or moon. Therefore, its Japanese kanji symbol ( い ) already denotes that sense of openness and potentiality. Ma can be understood as a ‘negative space’ which holds the stillness and emptiness between a unit of movement or sound. This negative space/time is presented by Hayashi as a ‘pregnant nothingness’.

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16 Mudra Space Awareness is a sequence of exercises developed by Chögyam Trungpa. The tibetan master developed psychophysical training based on his experience teaching and performing the classical Chakrasamvara dance of the Surmang monastery in Tibet in order to help Western performers develop authenticity. For more information see Lee Worley, Coming from Nothing: The Sacred Art of Acting (Boulder, CO: Turquoise Dragon Press, 2001).
17 Dharma Art is a series of Buddhist teachings presented by Chögyam Trungpa Rimpochhe about how meditation practice fostered a state of mind to tap into creativity. For more information see Chögyam Trungpa, The collected works of Chögyam Trungpa: Volume 7, (Boston & London: Shambhala, 2004); Chögyam Trungpa, 2008. True Perception (Boston: Shambhala, 2008); Fabrice Midal, Chögyam Trungpa, His Life And Vision, 1st ed. (Massachusetts: Shambhala Publications, 2004).
21 Duet conversation is described in detail in the first section of this article. For further details go to https://arwanahayashi.com/.
Tracing how spatial awareness informed the composition of movement and sound in Motion Studies.

The following section of the article focuses on tracing how spatial awareness informed the composition of movement and sound in Motion Studies. Here, I will explore the impact that “duet conversation” exercise and the principles of spatial awareness that it stands for, had in the rehearsal process and in Motion Studies performance.

Spatial awareness during rehearsals

During the rehearsal process, we used the “duet conversation” exercise, specifically the previously described phenomena of ‘ma’, provided us with tools to train a receptive state from where to interact and improvise. In other words, the focus of acknowledging no-action, expanded our interactive scope, enriching the ways that we as performers responded to each other in the rehearsal process.

Thus, the duet conversation exercise provided a technique to embody openness through abiding in spatial awareness. Understanding “ma” as a place of encounter, allowed us to notice how the interaction can emerge from the space. Consequently, we learned that by restraining ourselves from deliberately planning the movements and sounds, genuine encounters could emerge. In this way, this exercise provided a practical gateway towards openness from where our movements/sounds arose as a result of the interaction through the moment-to-moment experiences.

Another effect of this exercise in our rehearsal process that informed the composition of Motion Studies was that space becomes a collaborative agent in the making of a scene. Therefore, through developing spatial awareness, performers gain embodied knowledge that enables them to relax in and rely on space. Thus, as Quinn states, “Far from vacuous, the silence before sound is intense and expectant, accessible to the intuitive faculty but cognitively undecipherable.” Therefore, by noticing and abiding in the intervals between movements and sounds, a feeling of betweenness with each other and with the audience arose.

Colin: From the ‘duet conversation’ exercise I became more aware of the distances between myself and the other performer’s bodies. Even when someone moved behind me, out of my sight, I felt able to sense their physical presence. I became highly aware and felt present, feeling in what Csikszentmihalyi would call flow. Energy radiated off everyone’s bodies, and the negative space between us became alive as it changed size and shape amidst us. The space can be thought of as another contributing agent. The spatial gaps between us were not empty voids for us to fill, but contributed to how we perceived. Through our becoming aware of space, it then influenced our attention, movements, and creative choices.

Solomiya: The openness observed by engaging with spatial awareness provided an opportunity for the spontaneity and variation within the boundary objects to emerge. Trusting in the space and each other in the moments of improvisation allowed for interesting variations within boundary objects to shape the piece differently with each new presentation.

Spatial awareness during Motion Studies performance

The element of working with “ma” is observable in the recordings of Motion Studies performance. In the first minute of the interaction of the performance that took place at the University of Huddersfield in St Paul’s Hall we can watch how the performers inhabit long pauses between gestures and sounds. Using the technique of integrating pauses and silences at the beginning of the score enabled us to become attuned with the performance space and each other. In this way, each of us used these pauses to sense the qualities proscenium (size, resonance, light, smell, temperature) and the space between the performers, allowing us to calibrate the energy needed to perform in that particular venue. At the same time, we could tune-in socially, feeling and being aware of each other, which enabled us to develop a playful interaction afterwards.

In this way by deliberately abiding those gaps at the beginning of Motion Studies, was a way to enhance the performers’ state of receptivity, a crucial skill for performing this piece. As discussed previously in Solomiya’s reflection on boundary objects, Motion Studies is an embodied score composed of repeatable combinations of movement and sound, which are open to variation. As the piece progresses, the gaps between movements and sounds shorten, however, the sense of spatial awareness prevails. Maintaining spatial awareness while performing enabled us to notice the moment-to-moment experiences, acknowledging the resonance that our instruments and movements had in any particular moment. This acute receptive state nurtured the ‘boundary objects’ of the piece with the fickle quality of associative aliveness.

Sound and movement integration (Ilona)

Entering the collaborative work on Motion Studies, I was particularly interested in crossovers between alternative theatre as derived from post-Grotowskian lineage, which I am a practitioner of and contemporary classical music. Through my conversations with various artists-researchers in music and observations of their practice presented in Huddersfield,
I found it intriguing to discover a shared interest in embodiment and non-verbal utterances in these two disciplines of performing arts.

At the time of our lab sessions, I aimed to research the integration of movement with non-verbal expressions of voice and explore how the improvisation based on these elements can be applied to create an embodied score and devise a performance. In the initial lab sessions, which I discuss below, this inquiry shifted towards a group exploration of how movement and sound inform and inspire each other, contributing to the final outcome of our laboratory work.

In the first lab session, the ‘stop and walk’ exercise served as a springboard for further examination of the relationship between movement and voice. At first, Cristina and I explored ways of vocalising only while walking, gradually extending this pattern into more expressive movements. We then shifted to a sequence in which we explored how movement and vocalisation inspire one another, following four rules:

- Move without voice.
- Let movement inspire you to develop a vocal expression integrated with a repetitive motion.
- Move with a melody imagined only in your head, letting this thought guide and inspire the movement.
- Vocalise without movement.

In the course of the practice, these rules began to interweave and made the performers observe what attracts their attention and how this process inspires their embodied actions. First, Cristina and I worked together in the space with Solomiya and Colin observing. When they joined moving in the space with their instruments, the attention shifted towards partnering—picking up sounds and motion, giving each other impulses for further interactions. In the next step we decided to work in pairs, narrowing down attention to the contact with one partner and exploring how each other’s movement and sound produced through voice or instrument inspired one another. These very first interactions marked the linearity and circularity of movement in the space and set up some of the principles of ensemble work, which we utilised in further lab sessions when working with instruments as objects.

During the second lab session we applied our experience of movement inspiring sound through our embodiment to investigate how instruments—additional bodies and what Colin names as “agents”—change this interaction. Working with movement still played a central role. However, in this case we were interested in exploring different kinds of movements that emerged from or were needed to play these instruments. Therefore, the mechanics of instrument playing and the shape and quality of sound began to take over the inquiry, as described by Colin.

As motion was so prevalent in the sound making and devising process, we applied exercises such as ‘walk and stop’, ‘ma’ and ‘motion’ to awaken our attentiveness towards each other’s actions, build a common dynamic of expression and balance the space. These basic elements—space, movement, and sound became a base for composition of our bodies in the space, and enacting the embodied score from the boundary objects.

### Devising embodied score

Devising performance through physical and vocal improvisation with the support of video material is a procedure that I utilised before in other projects, particularly with insoundout collective. However, in Motion Studies we worked on a different dimension by notating the patterns of vocal and instrumental expressions emerged in improvisations and generating an embodied score based on them. The embodied score as discussed by Solomiya, became a point of reference for our mostly improvised performance, highlighting the interrelation between voice, instruments and movement. This strategy for devising performance contributed to my inquiry on embodying voice in the post-Grotowskian theatre practice, by eliminating its different approach to movement and voice in generating performance material.

In post-Grotowskian practice, while physical and vocal training both makes use of improvisation, the improvisation of movement continues into the generation of performance material, whereas the voice is first subjected to a musical or textual structure and only then to a search for the “line of life” in performance.

Meanwhile, in Motion Studies, similarly to my work with the insoundout collective, the improvisation on both movement and non-verbal utterances became a source of the final score of performance.

Interestingly, despite the differences of the artistic expertise and embodied techniques that as actors and musicians we possess, we managed to find a common language of expression and interactions. What I found particularly intriguing was how, through the exercises and musical attentiveness, we achieved a high level of sensitivity and responsiveness to the ensemble’s dynamic. While actors who enter the “theatre of musicality”—as the lineage of theatre derived from Grotowski is also called—train for weeks to reach such a level of listening, I expected that in the newly created interdisciplinary ensemble of Motion Studies, we would also need more time to embody such attentiveness.

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particularly in physical actions. Therefore, I was surprised how fast the understanding of these principles and responsiveness towards each other’s actions, whether vocal, instrumental or physical, developed.

Conclusion

The account of different perspectives on devising *Motion Studies* presented how collaboration between musicians and theatre practitioners could be formed by devising interaction and improvisation in a laboratory setting. In that we come from multiple backgrounds and disciplines, we influenced one another in crossing from sound into movement and vice versa. By taking up practices otherwise foreign to our ordinary practices we expanded our individual capacities and grew the project across disciplinary boundaries. In the writing of this article, wherein personal reflections were combined and juxtaposed, we became aware of the phenomenological differences between our personal experiences that occurred throughout this collaborative process. We observed similar elements as significant and artistically valuable, as expressed in the flexibility of the boundary objects, but looked and analysed them independently.

This research demonstrates rich possibilities for working with embodied memory in the creation of new work in a lab environment by using video documentation, devising methods and musical instruments. Future projects with embodied scores could include computer interactive environments, which would offer another layer of interaction between self, motion sonification and others.

As the objects brought to the laboratory sessions were active agents, our improvisations, devising, and the overall artistic process was influenced by these non-human items. As demonstrated in Colin’s examples of the woodblock and frame drum, our embodied movements were influenced by and entangled within a more than human assemblage. Why these objects were used and not others remains unanswered, however, future artistic research could consider the selection of objects, and further inquire into their specific influence.

We as performers realised how space can become an ally. By including the space as an agent, the field of interaction was broadened during the devising process and while performing. In this way, spatial awareness can be a handy technique to use for enhancing the receptive state of performers, connecting them to the present moment, and enabling a common language of expression among interdisciplinary groups. Considering the current situation of the pandemic, where most of the performances have been online, in future projects one could test the applicability of working with awareness of “ma” in an online format, where the performance space is not shared by the members. Additionally, on a social level, the *duet conversation* exercise might contribute with an embodied technique to better understand practices of social distancing.
Giving new life to ordinary and non-ordinary sound devices
The Museo del paesaggio sonoro in Riva presso Chieri and the Sinfonia del mondo by Domenico Torta

Cristina Ghirardini

Introduction

In 2011 the Museo del paesaggio sonoro (Soundscape Museum) was founded in Riva presso Chieri, a small town about 40 km from Torino, in Northern Italy. The Museum preserves a collection of musical instruments, bells, noise makers, hunting calls, toy instruments, and clay whistles which were collected by the local traditional musician, teacher and composer Domenico Torta. The new Museum is the result of a collaboration started in the late 2000s between Domenico Torta and a few students and PhD candidates at the University of Torino (myself among them), all pupils of Febo Guizzi, Professor of Ethnomusicology in Turin from 1999 until 2015 (when he passed away before his time).

The collection, however, has a longer history. Domenico Torta has always lived in Riva presso Chieri. He learned the local traditional music aurally from his family and from other musicians from Piedmont, but he also attended the Conservatory of Torino where he graduated in double bass in 1978. Both a performer and a composer, he became a teacher of music in local schools, and for all his career as a music teacher (he retired in 2019), he tried to transmit to his students both his academic and his traditional knowledge. He started collecting musical instruments and various sound devices for teaching purposes, and only later did he display his collection in various occasions. The collection shortly became a reference point both for his activity as a traditional musician, together with the local ensemble I Musicanti of Riva presso Chieri, and as a composer. In 2004 the encounter with Febo Guizzi encouraged him to start a new season of fieldwork research in collaboration with Guizzi’s students. Thanks to the town council and to some close friends of Torta’s, a provisional Museum was created in the highest floor of Palazzo Grosso (the town hall of Riva presso Chieri) in 2005. However, it was only in 2011 that, benefiting from the extraordinary resources that were granted to the town council by private and public sponsors in occasion of the 150th anniversary of the Unification of Italy, it was possible to create a new and partially interactive Museum, on a project by Domenico Torta and Guido Raschieri, one of Febo Guizzi’s students who dedicated an important part of his PhD dissertation to this experience.

This paper focuses on a piece for narrator, small orchestra and traditional musicians written in 2013 by Domenico Torta that is entitled Paesaggi sonori. Piccolo popolo fiorivi fiabile frideolo. Quattro brevissime favole musicali per voce recitante, campane tubolari, rastrelli, cucchiai, cintura, bottiglie percosse, bottiglie insufflate con la complicità di un’Orchestra d’Archi e un Quartetto di Legni, performed for the first time on 26 and 27 February 2015 at the Auditorium Piccolo Regio Puccini in Torino. This score was revised for a new performance scheduled on 22–23 April 2020 at the Teatro Regio in Torino which had to be cancelled because of the Covid-19 lockdown. The new version has a slightly different title, Racconti di paesaggi sonori (la musica è di tutti e si può fare con tutto), and has been heavily revised. The new score includes an additional section for the narrator since Domenico Torta himself was expected to perform this part in April 2020. This new section is optional because it relies on the exceptional experience of the composer, which cannot be easily replicated. The new score includes also an optional Interlude for 50 children-percussionists, which is the result of Torta’s school teaching of the last few years. Moreover, the conclusion of the new score engages the audience in playing a rhythmical accompaniment of Amilcare Ponchielli’s Danza delle ore with spoons. In the 2015 performance, each audience member received a couple of plastic spoons at the entrance to play the Danza delle ore as an encore. In the new performance this piece would have been the great collaborative Finale of the work.

In this paper I will focus on Torta’s recreation of the soundscape of Riva presso Chieri in the first part of his Racconti di paesaggi sonori, which he obtained using mainly non-conventional musical instruments reconstructed according to those preserved in the Museum. I will focus on the special relationship between language and music in Domenico Torta’s work, and on his creative use both of folk music (including imitations of natural sounds and of non-human beings) and of the conventions of Western art music. This paper will focus only on the first part of the score, the Sinfonia del mondo. This Symphony will be used

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1 https://museopaesaggiosonoro.org/, The catalogue of the museum is available here https://dati.museopaesaggiosonoro.org/. This paper is the result of years of conversation and exchange of ideas with Domenico Torta, an artist, an excellent ethnomusicologist sui generis and a wonderful friend. I would like to thank the editor of this issue, Colin Frank, for his careful reading and his relevant questions which helped me in finding the words to introduce a work which is quite far from the actual perspectives of New Music in Northern Europe.

2 https://fass15.scuole.it/domenicoortta

3 For example in 1982, when Febo Guizzi was the guest teacher at the Scuola Media “Oscar Levi” (Istituto Comprensivo Chieri I), the students wrote a script which they entitled ‘Il Pianeta dei pochi’. The scenario was inspired by the movie of the same name by Ennio Morricone. Later, in 1992, 1996, 1999, and 2005, the students of the Scuola Media “Oscar Levi” (Istituto Comprensivo Chieri I) were invited by Febo Guizzi to Elba where they created and performed the operatic version of the same title “Il Pianeta dei pochi” which he obtained using mainly non-conventional musical instruments reconstructed according to those preserved in the Museum.


5 Soundscape. From the little people of faint frivolous tales. Four very short musical tales for a speaker, tubular bells, rakes, spoons, belt, struck bottles, blown bottles, with the complicity of a string orchestra, and a woodwind quartet.

6 A short trailer has been obtained from the video recording of the 2015 performance https://www.youtube.com/watch?v=LAI4gsc3Yw0.


8 The complete title of the 2020 version is Racconti di paesaggi sonori (la musica è di tutti e si può fare con tutto). Piccolo popolo fiorivi fiabile frideolo. Quattro brevissime favole musicali per voce recitante, campane tubolari, rastrelli, cucchiai, cintura, bottiglie percosse, bottiglie insufflate... e la complicità di un’Orchestra d’Archi e un Quartetto di Legni e una spiritosa percussionista. Non si esclude, inoltre, la partecipazione straordinaria dei celeberrimi maestri Georges Bizet, Ludwig van Beethoven, Wolfgang Amadeus Mozart e, per finire, di Amilcare Ponchielli e del folclore pubblico in sud. In English: Soundscape stories (music is for everybody and can be played with everything). From the little people of faint frivolous tales. Four very short musical tales for a speaker, tubular bells, rakes, spoons, belt, struck bottles, blown bottles... and the complicity of a string orchestra, a woodwind quartet and a comedic percussionist. Moreover, the extraordinary participation of the world-famous masters Georges Bizet, Ludwig van Beethoven, Wolfgang Amadeus Mozart, and, to come to an end, Amilcare Ponchielli and the fabulous audience is not excluded.

9 In the 2015 performance the speaker was the Italian actor Rob Marchese.
Domenico Torta, the Museo del paesaggio sonoro and traditional music in Riva presso Chieri

Domenico Torta’s special sensibility for sound is rooted in his family. His mother, Giuseppina Tamagnone (Pina ‘d Tasché, 1925–2015) was a passionate folk singer and maker of toy instruments for children, and the two uncles of his mother, Giuseppe (1899–1989) and Ernesto Fasano (1904–1993), were deeply immersed in the traditional use of sound in Riva presso Chieri. As it was common in the local traditional culture, they were able to use almost everything to improvise a rhythmical accompaniment and were able to construct musical instruments and sound devices which were used in everyday life.

The Museo del paesaggio sonoro preserves many instruments built by Giuseppe and Ernesto Fasano, as well as other sound devices used by them. Some of their sound devices are rooted in ancient traditions, like noise makers that were used to stop the swarming of bees. Ernesto Fasano used to strike a scythe (fig. 1) but in the Museum also a tin is preserved, used by Gabriele Pennazio for the same purpose. This practice in Italy has been documented at least since the years between I century B.C.E. and I century C.E., in the Georgics by Virgil and in De Rustica by Columella, and has been discussed until our age. It is Italo Sordi who has recognized that the act of making noise is not intended to have an effect on the bees, it is rather a performative act to declare publicly the appropriation of the swarm by a new owner.10 His brother Giuseppe Fasano is also the maker of one exemplar of torototela preserved in the Museum, where the body of the instrument is obtained from a wooden shovel (fig. 2). The torototela is a musical bow or a stick zither (according to some variants in its structure it may correspond to one of these two different subdivisions of the materiality of the sound devices, whose performance technique is challenging even for the most skilled performer.

Giuseppe Fasano is also the maker of the froja, a wooden scraper which in southern Italy is called scetavajasse, i.e. the instrument to wake up female servants,12 and in northern Italy is documented only in Riva presso Chieri. It was used by Barba Pino (Uncle Pino, as Torta called him) to perform rhythmical accompaniment to dance music (fig. 4). But Barba Pino was also able to improvise rhythmical accompaniments with many kinds of tools, for example a broom: he used to scrape its broomstick on the surface of a box made of poplar, which had been previously sprinkled with ash. In this way, he intended to imitate the sound of the bass flugelhorn in the wind band performing for the dance (fig. 5). But he was also a maker and player of reedpipes, cog rattles, and bullroarers. In his performances, Giuseppe Fasano combined a clearly theatrical attitude with a sense of rhythm: despite the fact that he was a clever musician, for him the theatrical gesture itself was more important than music.

11 Angelo De Gubernatis, Storia comparata degli usi nuziali in Italia e presso i popoli indo-europei (Milano: Treves, 1869), 184-185.
12 It is made of a notched stick which is scraped with another stick. Normally the notched stick is provided with rattles. It is widely documented in the area of Naples and in Campania. Its playing technique is a parody of the violin’s and its name suggests a burlesque use, maybe to parody serenades. See Febo Guizzi, Gli strumenti della musica popolare italiana (Lucca: Lim, 2002), 43-45 and Paola Elisabetta Simeoni and Roberta Tucci, ed., La collezione degli strumenti musicali [del] Museo nazionale delle arti e tradizioni popolari (Roma: Libreria dello Stato, 1991), 113-114.
Music and language were deeply integrated in the traditional musical culture in Riva presso Chieri. Sound was generally connected to emotions, and music was perceived as a cultural construction, rooted in the linguistic thought, which could acquire different meanings according to the situation, and which could also be the object of imitation and of parody. This is true even if, both for Domenico and for the people from Riva presso Chieri, this relationship is mostly unconscious: what we now verbalize as a result of a research process carried out with Domenico Torta was implicitly shared by people (especially before WWII) and did not require any of our current explanations. Sound was also a powerful tool to define the sonic manifestation of disorder. The word *antimusica* can be performed together with music or as a kind of aggression to a musical practice; it can replace music, or it can be represented by a voluntarily distorted way of playing music. However, as we will see, in Domenico Torta’s *Sinfonia del mondo*, the chaotic experience of *antimusica* is also regenerative, containing in itself the seeds of a new beginning. In the Museo, as well as in Domenico Torta’s experience, the noise makers for the Holy Week (horns, cog rattles and other kinds of struck idiophones) are complementary to bells, since they were played to replace the sound signals of the bell tower from Holy Thursday to Holy Saturday, when bells were used to remain silent. Moreover, the series of bells of the bell tower, with its keyboard and the people sing (or say) the *Gloria*. In the past the ceremonies on Friday used to be announced playing cog rattles and other idiophones (for example, the name *trich trach* attributed to some noise makers of the Holy Week (a name documented also by Filippo Bonanni for the same instrument in 1722) or the expression in the dialect from Riva presso Chieri used to define the bullroarer: *vzon-vzon ch’a fa ra ros der tron* (*vzon-vzon* which makes the voice of the thunder).14

As we will see, a cultural awareness of music as a shared means to live together in a community—therefore having political implications—is at the basis also of Torta’s musical production. Music is traditionally perceived in Riva presso Chieri in a dichotomy between chaos and order. Chaos is represented, for example, by ritual noises made for the Holy Week, which were part of the paraliturgical celebrations of Holy Friday in the Catholic Church, banished in the 1960s by the Second Vatican Council. Order is represented by singing, by the melodies played by bells, or by the music for dance in various celebrations, among them the dance for the conscripts15 and for the feast of St. Alban. The aggressive implications of the ritual noises for the Holy Week and their complicated history have been reconstructed by Febo Guizzi, following a series of paintings of the mocking of Christ.16 He introduced the concept of *antimusica* to define the sonic manifestation of disorder. The word *antimusica* is used for a performative event which corresponds to a reversal of the dynamics inside a group of people, that is why it may be applied both to the ritual noises during the Holy Week and as a more generic form of aggression, like in *charivari*,17 sports events, and protest. It does not imply any specific idea of “noise”, but it is the result of performative acts which are considered dichotomous with the idea of musical orderliness. *Antimusica* can be performed together with music or as a kind of aggression to a musical practice; it can replace music, or it can be represented by a voluntarily distorted way of playing music. However, as we will see, in Domenico Torta’s *Sinfonia del mondo*, the chaotic experience of *antimusica* is also regenerative, containing in itself the seeds of a new beginning. In the Museo, as well as in Domenico Torta’s experience, the noise makers for the Holy Week (horns, cog rattles and other kinds of struck idiophones) are complementary to bells, since they were played to replace the sound signals of the bell tower from Holy Thursday to Holy Saturday, when bells used to remain silent. Moreover, the series of bells of the bell tower, with its keyboard and

14 The same can be said for the areas of Italy where studies on similar sound devices have been carried out, see for example Vincenzo La Vena’s research in Calabria: Vincenzo La Vena, *Strumenti giocattolo e strumenti da suono a Terranova da Sibari* (Soveria Mannelli: Rubbettino, 1996).
15 In his recent publication entitled *Il trombante. Musica - Musiche - Musicant*, with an introduction by Guido Raschieri, (Riva presso Chieri: EdiTo, 2020), Domenico Torta has not only reconstructed the traditional contrapuntal techniques to improvise dance in small ensembles of woodwinds and brass instruments, but he has also described the various occasions for dance in Riva presso Chieri and other towns of Piedmont.
18 According to the Catholic liturgy, during the Holy Week bells are played until the paraliturgical celebrations of the Holy Friday, then they remain silent for the whole Friday. They are allowed to play again from Saturday, when the priest and the people sing (or say) the Gloria. In the past the ceremonies on Friday used to be announced playing cog rattles and other idiophones, as well as horns. In some Italian villages these instruments are still played during the liturgical and paraliturgical celebrations of the Holy Friday.
the complicated way to play bells through the technique of pulling ropes both by the hands and the feet, is not only the instrument to play a shared code to send messages to people—for example the sequences of sounds to announce the death of a man or of a woman—but is the basic tool to play short melodies, and to play dance tunes.

Both music and antimusica in Domenico Torta’s perspective rely on the awareness of the emotional power of sound. He often uses the word “ancestral” to define sound devices which might be found almost everywhere in the world, and which are largely documented in Riva presso Chieri and whose sound has a strong emotional impact. Ancestral sound devices for Domenico Torta are mainly idiophones, friction drums, the torototela, bullroarers, whistles, reeds, horns, and conches; that is sonic devices which are extremely basic in structure, extremely widespread and often used in similar situations by different cultures. Among the “ancestral” sound devices, the Museum preserves a series of hunting calls, many of them are also used in Racconti di paesaggi sonori. Even if the practice of hunting is now considered an unnecessary and almost sport activity, Gabriele Pennazio (a former hunter from Riva presso Chieri) explained that before WWII it was an important means to earn one’s livelihood and be in balance with the ecosystem of the countryside of Riva presso Chieri. Behind the construction of hunting calls—it was common for hunters to make their own instruments by themselves—there is a practice of listening to the sounds of birds, a deep knowledge of their behaviour in the local environment and a technical and acoustical awareness of the potentiality of different sound devices, mainly friction idiophones, edge-instruments, and reeds. Gabriele Pennazio, for example, used different calls (made of a bone or brass whistle with an air reservoir made of a leather bag full of horsehair) to imitate the sound of the quail depending on the distance of the possible prey from the hunter.19

**Racconti di paesaggi sonori**

The Racconti di paesaggi sonori20 requires a string orchestra with a wind section and a percussionist, and a series of traditional musicians capable to use the sound devices that Domenico Torta asks for. At the moment, only the Musicanti di Riva presso Chieri are capable to do that, thanks to their long musical experience with Domenico and thanks to their common traditional background in music. In the 2020 performance they would have been joined by a group of 50 children, the pupils of Domenico Torta: some of them, hopefully, will be able to take the place of the Musicanti in the future.

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19 Cristina Ghirardini, “Variabilità morfologica, temporalità umana e uso del suono al Museo del paesaggio sonoro di Riva presso Chieri”, 404.
20 The score has never been published. Thanks to Domenico Torta, I have had access to the first draft, which was employed for the 2015 performance, and to a series of additional parts that Torta wrote as revisions to his first project for a performance with his students on 19 and 20 November 2017 and for the 2020 performance which was cancelled. A definite version of the score does not exists yet, and its various parts are scattered in Torta’s computer.

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In the 2020 version, the score is divided into eight parts (the Interlude is optional), both music and the spoken parts are by Domenico Torta:

- **La sinfonia del mondo**
  - Prologo
  - Ouverture (homage to Leone Sinigaglia)
  - I. L’umino e la vecchia torre [The little man and the old bell tower]
  - II. Le sei principesse [The six princesses]
  - III. I tre rastrelli musicanti [The three rake musicians]
  - Interlude (50 children percussionists ad libitum)
  - IV. E un palet! — Tik! e Tuk! [nonsense syllables representing rhythmical patterns]

La sinfonia del mondo (The symphony of the world) and Ouverture are completely instrumental, except for a short but significant introduction of the narrator that divides the Sinfonia del mondo in different parts. The Ouverture is a homage to Leone Sinigaglia (1868–1944), a composer and researcher of the folk songs of Piedmont, who transcribed many folk songs in a series of pieces for voice and piano, and it is played by the orchestra. In this piece Torta quotes some of Sinigaglia’s melodies in a Pastorale played by the strings and woodwinds, together with the percussionist playing tubular bells. At the beginning the Musicanti imitate the sounds of birds with hunting calls and whistles, later they interrupt Sinigaglia’s “pastoral” tunes with the imitation of “rural sounds: bleating, bellowing, cowbells”.21 The Sinfonia del mondo instead is played only by the Musicanti di Riva presso Chieri. Here the dawn of life is evoked through the sounds of the human and non-human activities of a rural place, in an indefinite time which might always be possible. It appears to be pre-modern, according to the purely acoustic performance of the whole Symphony, and thanks to a tradition of shared gestures which allows the actual performers to repeat the same gestures that thousands of people have done for hundreds if not for thousands of years to activate the same sound devices. Even if the score is based on the music experience that the composer had in Riva presso Chieri, this town is mentioned only in the composer’s Introduzione to the score and is never mentioned by the narrator during performance. The Prologo is entirely spoken and it is a message from the author to the members of the orchestra. It is almost an apology, explaining to the members of the orchestra why he felt the need to dedicate a work to a series of common objects and working tools, which, in the land from where the author comes from, often assume a ludic and musical role, replacing the real musical instruments which do not exist there. This happens especially in parts III and IV, where common tools and objects are used to play music, both traditional dance tunes and excerpts from pieces by Beethoven, Bizet, and Mozart. Parts I to IV are tales for narrator and performers. The first one deals with the death of the bell-ringer, the last of a genealogy of bell-ringers who have shaped the local soundscape with their signals and their tunes from the bell tower and the necessity to find a new one. The second is the tale of a King and his six daughters: an evil sorcerer wanted to marry one of the girls, but the King refused, so

21 In Italian “suoni agresti: belati, muggiti, campanacci”, the translation into English is mine.
the sorcerer transformed the king into a bell tower and the six daughters into six bells. The tale deals with the characters and sound of the six girls/bells: Coscienza (Consciousness), Scadenza (Deadline), Partenza (Departure), Invasdenza (Inquisitiveness), Intelligenza (Intelligence), Urgenza (Urgency). In this tale, the six bells of the real bell tower of Riva presso Chieri are personified, while in the next tale, three rakes meet a group of musical instruments and start playing a rhythmical accompaniment to a dance in order to be acknowledge as musicians. The fourth tale is a consequence of the third: after the rakes, different objects, like whips, spoons, glasses, saws, tools for work, belts, crockery, and bottles, want to be considered musical instruments and to play with the orchestra. The story told by the narrator in tales III and IV is very simple: some musicians arrive in a village and are hosted by some local people. The travellers’ musical instruments are stored in a room with other tools and everyday objects. The musical instruments start recalling their travels and while the musical instruments fall asleep, the tools decide to leave their lives and become musicians. The conversation of the musical instruments is played by the string section with pizzicato and short melodic patterns. The rakes’ “chattering” is obtained by beating the handles with the beaters or passing the beater through the “comb” of the rake. The accomplished involvement of tools in music is obtained by joining the tools and the orchestra in a mutual engagement. This is realized first by allowing rakes and spoons to play the rhythmical accompaniment to dance tunes or well-known pieces of classical music. Secondly, it is obtained through the implicit interaction of language. Whips for instance are used to play a very theatrical rhythmical accompaniment to a dance tune by the orchestra, together with the idiophone commonly called “whip” and played by the percussionist. The use of the glass harmonica by various 18th and 19th century composers, which are quoted in Torta’s score, legitimates the entry of tuned bottles to play melodies both by blowing them and by striking them with beaters. Sometimes in part IV the Musicianti and the percussionist exchange their parts: this requires a great musical versatility and sense of irony from the percussionist of the orchestra. That’s why in the subtitle of the 2020 score he is mentioned as a “comic” percussionist.22

Parts III and IV contain several quotations from composers of the past, in a mutual engagement of traditional and classical music. The respect for tradition is intended as a conceptualization or in any kinds of abstraction which cannot live outside the spaces for artistic performance. His art is entirely grounded in a shared experience of sound and the theatrical potentialities of gesture. In his refusal of the avant-garde he can be considered at the crossroad of important Italian traditional musical routes: folk music, “classical” music, and the ingenious use of sound that hunters and other users of specific sound devices have in common with Foley artists.23 His music is deeply engaged with language: the sense commonly attributed to performance is reshaped in his scores, playing with names and with the sonority of words and of vocal utterances.

His music comes from an aesthetics of sound of everyday life and from a cultural and “musical” view of life. Torta’s Racconti di paesaggi sonori are probably an interesting counterpart to Giorgio Battistelli’s Experimentum Mundi (1981).24 In this piece Battistelli involved sixteen craftmen from his native town, Albano Laziale, in a performance with an

the parata degli oggetti (The objects’ parade) is a parade that the students perform while playing the recorder, the kazoo and the cog rattle while others strike the handle of brooms, a drum and some light wooden chairs. In the Passaggio di consegne (The handover) some of them accompany the orchestra by striking rhythmically the handle of a series of brooms according to a technique similar to the one used by the rakes in part III. In the third part, Scope alla ribalta (The curtain call of the brooms) some children continue to play a rhythmical pattern on the brooms, while others strike wooden chairs and a plastic tank. The most difficult rhythmical part of the Interlude is the brooms’ part, and, in order to make it more comprehensible for children, Torta has added into the traditional rhythmical notation a series of words divided into syllables. The pronunciation of these words helps to keep the right rhythmical pattern without the children needing to be very familiar with musical notation.

Racconti di paesaggi sonori is a very unusual score even in the actual Italian panorama of new music. As it is quite common in Italy, the link with a past tradition is of paramount importance for the composer’s creativity. In Torta’s case, however, it is the strict relationship with traditional music and the everyday use of sound in a rural community that allowed him to define a specific aesthetic of sound and of music, which is grounded on the acoustic experience. Until now Torta has never used electronic music. The bodily technique of playing musical instruments and the relational nature of music making, involving different performers as well as the audience, are the most important aspects of his creativity. Torta’s Racconti di paesaggi sonori are intended to tighten the relationship between humans and between humans and environment through the use of the body and of the human senses, relying on gesture, on musical forms and on a kind of musical notation which can be easily understood by everybody having a musical background. Torta is not interested in any conceptualizations or in any kinds of abstraction which cannot live outside the spaces for artistic performance. His art is extremely grounded in a shared experience of sound and the theatrical potentialities of gesture. In his refusal of the avant-garde he can be considered at the crossroad of important Italian traditional musical routes: folk music, “classical” music, and the ingenious use of sound that hunters and other users of specific sound devices have in common with Foley artists.23 His music is deeply engaged with language: the sense commonly attributed to performance is reshaped in his scores, playing with names and with the sonority of words and of vocal utterances.

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22 See footnote 8.
23 Many of the playing techniques employed here and in the Sinfonia del mondo have been also employed in a previous cd by Domenico Torta and the Musicianti di Riva presso Chieri: Sarei l’uss e buté fòra ‘gat! [Close the door and put outside the cat], FolkClub Ethnosound, 2007, also available on youtube: https://www.youtube.com/watch?v=cMgqAHp6ukU&list=OLAK5uy_2V4uQxScVoVM08j4AM9zB5yf5GsU&index=2.
24 The first performance of the Interlude took place in Chieri on 19 and 20 November 2017.

26 http://www.giorgiobattistelli.it/opere/teatro-musicale/experimentum-mundi/. See also Maria Carmela Ranieri, Dall’opus all’opera. Experimentum Mundi di Giorgio Battistelli (Roma: Aracne 2020). A performance of Experimentum Mundi can be watched here: https://www.youtube.com/watch?v=5j6fQ7q4Kw or https://www.raiplay.it/video/2016/05/EXPERIMENTUM-MUNDI/1c4ff01-c37e-42c7-4684a-044ab11df0a.html.
actor, a percussionist and a female choir. However Battistelli, relying on a strict relationship between the sounds of work and the sounds of music, never imagined to transform musically and theatrically the use of the tools by the craftsmen involved in the performance. Instead, he fully integrated the sounds and the time needed for the accomplishment of their manual activities on stage with the parts that he wrote for the percussionist, for the narrator and for the female voices, according to a libretto based on the Encyclopédie by Diderot and D’Alembert.

Torta instead loves to play with different senses of sound associated to different ways to manipulate objects for playing sound and music and he takes them to extremes, playing on dichotomies between sound and music, traditional music and art, music and antimusica, musicians and Musicanti, time and space. As we will see, especially in the Sinfonia del mondo the linearity of time is broken by his idea of the “ancestral” sounds, while Riva presso Chieri, the geographical pivot of his musical thinking, may become everywhere, a casual place where the dawn of life can be reconstructed through the mimesis of the sound of pre-modern life.

What Torta and Battistelli share, however, is a sense of gesture, a sense of form, and a sense of accomplishment of musical or non-musical actions which, using Giorgio Agamben’s words, are turned from their ordinary utilitarian purpose in order to become inoperative (inoperoso). And in this inoperativity relies the form-of-life of anybody involved in a process of potesis, whose aim is not work but happiness:

A living being can never be defined by its work but only by its inoperativity, which is to say, by the mode in which it maintains itself in relation with a pure potential in a work and constitutes itself as form-of-life, in which the words l’atto, and l’atto, life and form, private and public enter into a threshold of indifference and what is in question is no longer life or work but happiness. And the poet, the poet, the thinker—and in general, anyone who practices a potesis and an activity—are not the sovereign subjects of a creative operation and of a work. Rather, they are anonymous living beings who, by always rendering inoperative the works of language, of vision, of bodies, seek to have an experience of themselves and to constitute their life as form-of-life.27

The Racconti di paesaggi sonori are pivoted on bells. The two tales on the bells (I and II) are in fact the centre of the score, the Sinfonia del mondo and the Ouverture represent the transition from natural sounds to chaos and finally to music, and the last two tales fully integrate everyday objects and tools into the world of musical instrument. The juxtaposition of bells and other sound producing devices with their respective sound worlds and super natural or spiritual implications is in itself “ancestral” in Domenico Torta’s view. Torta developed it starting from his experience in Riva presso Chieri, but the potentialities of this germinal idea are not necessarily tied to a place or a time. Instead their strength lies in being out of place and out of time, always ready to come up and shape human and non-human relationships.

Steven Feld in fact wrote that it is the possible comparison between the role of the sound of bells in Europe and the role of the sound of birds in the Bosavi culture of Papua New Guinea that shaped his cosmopolitan view of jazz in Ghana, allowing the figure of the drummer and bells player Nii Otoo Annan to emerge:

Listening to all that ringing—near, far, above, below, in sight, out of sight, soft, loud, stationary, moving—powerfully brought back the space of the rainforest. And that’s when, in the immediate overlay of auditory recall, I began to wonder if bells might stand to a thousand years of European village acoustemologies as birds stand to thousands more in the New Guinea rainforest. That’s when I began to wonder if animal bells sonified the boundaries of common and private land, and with that, sonified histories of class, wealth, labor, and struggles over ownership. That’s when I began to wonder if there were pastoral parallels to what was so audible in the Bosavi rainforest, an acoustemological triangle linking sound to ecology and cosmology.

Those questions impelled me to ten years of listening and recording animal, church, festival, and carnival bells in villages, towns, and cities in Greece, Italy, France, Finland, Norway and Denmark. And what I’ve continued to hear is how time and space fuse as bell ring, patterns of immediate resonance simultaneously sounding a longue durée. Bells, like rainforest birds, resound simultaneously as natural historical clocks, as place makers of the ecosocial niches that define communities, and as spiritual beacons mediating heaven and earth.28

Aurality as a practice to shape thought as well as the adjective “aural” and the name “aurality” have gained special interest in recent years, especially in sound studies and in musical disciplines related to ecology, most which also aim to decolonise music research. Aurality is the title of a seminal book by Ana María Ochoa Gautier29 which aims at examining the “modes of audibility”30 of the human voice in various writing concerning the music of the natives in 19th century Colombia. Ochoa Gautier worked on different writings that originated in a cultural milieu shaped by colonial experience and where the voice itself could be an important embodied element to distinguish the human from the non-human (the screaming of the boyas, the boat rowers of the Magdalena Rivers, was considered hardly human) but also a means to achieve a national identity after the end of the Iberian domination, through pronunciation and orthography of language and the construction of a folklore.

29 Ana María Ochoa Gautier, Aurality. Listening & Knowledge in Nineteenth-Century Colombia (Durham and London: Duke University Press, 2014). Despite the fact that the book originated from a very different academic experience, the analysis of historical sources carried out by Ochoa Gautier has interesting aspects in common with the approach of historical sources promoted in the late 1980s and 1990s by a few Italian and European musicologists and ethnomusicologists. See for example Franco Alberto Gallo, ed., Musica e storia tra medio evo e età moderna (Bologna: Il Mulino, 1986) where in the Introduzione Gallo explains his notion of eventi sonori, proposing a new historical approach which should be interested not only in art music but in any kinds of “sonorous events”. See also Roberto Leydi, L'altra musica (Firenze and Milano: Giunti Ricordi, 1991).
30 Ochoa Gautier, Aurality, 20.
perspective on the modes of representation of the knowledge on sound and music through the ears and the playing techniques of local people. They are an alternative to the current idea of intangible heritage supported by the Unesco lists and a good example of collaboration with school children.

**La sinfonia del mondo**

The *Sinfonia del mondo* starts with a short speech by the narrator, who connects the origin of music from sound to the dawn of humanity, together with the appearance of some basic needs for humans: hunger and thirsty as well as the need for the sacred. According to the score, the spoken part has to be performed by an off-stage voice with a “biblical” tone. For Domenico Torta music is strictly related to a sense of the sacred, it is rooted in linguistic thought and it pervades everything in life (independently from any religions, even if Torta was grown up in a Catholic environment). Moreover music, according to Domenico Torta, can be played with any kind of musical instruments and sound devices and also by the voice, as *Racconti di paesaggi sonori* tries to demonstrate. Torta’s perspective highlights the very idea of sound as an ancestral element preceding music, common to different cultures, and connected to emotion. Moreover, he would like to stress the permeability of the borders between art music and folk music. He aims to overcome academic conventions of Western art music by stressing the technical and musical awareness of the performers of traditional music and of the users of sound devices, being musicians, hunters, bell ringers or even singers. As Torta likes to remark, the *Sinfonia del mondo* can be sung: it is not based on a melodic pattern, but it can be played with the voice.

In the 2015 score the text read by the narrator is divided into four parts. Three of them correspond to the first three *Paesaggi sonori* (Soundscape) represented by the *Sinfonia*. In the centre column of table 1 there is a transcription of the text, on the left the timing corresponding to the recording of the 2015 performance,31 and on the right the guidelines by Domenico Torta. The whole *Sinfonia* in the 2015 performance is played by the Musicanti di Riva presso Chieri, the Orchestra entering only for the fourth soundscape, which corresponds to the tuning of the Orchestra.

In the 2020 version, the role of the narrator is much more complicated. Soundscape D of the 2015 score corresponds to soundscape E in the new version (fig. 7), which includes two more soundscales, called D and D’. Two traditional songs accompanied respectively the first by a primitive form of polyphony, and the second by three *torototelas*, one *froja*, a cow horn and two idiophones made respectively with two halves of nut and with a couple of wooden pegs used to tie the sheaves of wheat.

For better clarity, here I will take into consideration the 2015 score of the *Sinfonia del mondo*, corresponding to the performance at the Piccolo Regio, which can be watched on the following page. The narrator’s part added in the 2020 score will be considered separately later.

In the 2015 score of *Paesaggi sonori* the four soundscape correspond to four parts inside the score. A, B and C are played with different sound devices and noise makers which Torta calls *toniche* (tonics). D is the *impronta* the “soundmark” of the orchestra tuning, which might appear separated to the preceding parts, however, as I will explain, an important link connects the orchestra’s tuning with the *antimusica* of the final part of soundscape C. The words *tonica* and *impronta* are the Italian translations of Murray Schafer’s *keynote sounds* and

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R. Murray Schafer, The Tuning of the World (New York: Knopf, 1977), in his Paesaggi sonori: impronta sonora. Conches and horns are among them. Finally the word impronta (soundmark) is used in the 2015 score for the tuning of the orchestra, while in the 2020 version it is used also to define the “ancestral” world evoked by the two songs sung by the narrator.

Unlike his previous works, where he made use of traditional staff notation, for each part of the Sinfonia del mondo, Domenico Torta has elaborated his own notation and has provided a Legenda, that is an explanation of his way of writing the music. Both in the 2015 score and in the 2020 score, the Legenda is missing for toniche B, simply because he did not have time to finish it before the performance, which (in both cases) was under his supervision, so it was not strictly required. For each part, a series of drawings represent the instruments required and their playing techniques.

The soundscape in part A is a sonic representation of the four elements: three are evident, water (sea and rain), fire and air (wind), while earth is implicit in the regenerative power of rain. They are obtained combining traditional sound devices for the theatre, like the wind machine, with other instruments or sound devices well known to Foley artists. Three rainsticks are used for the rain and a big sieve containing dried seeds of corn, which move while the sieve is rotated, provides the sound of the backwash. The thunders associated with rain are played with two different thunder sheets: according to Domenico Torta’s guidelines, one is made of polyester and the other with metal or other (unspecified) materials. It is the second sheet which will be shaken to obtain the stronger thunder associated with lightning; the lightning being notated with a special picture similar to an arrow. The cracking of the fire is obtained by rubbing a large sheet of paper, sometimes combined with plastic glasses and bottles.

In his explanations of the instruments, Torta calls these sound devices with half-serious ironic names in Italian: the wind machine is called antimusica, the paper producing the sound of the fire is called pirofono, the rainstick is called brocheofono and the thunder sheet is the bronteofono (Fig. 8). The act of giving new pseudo-scientific names to these sound devices sounds ironic for people reading the score. However, it might have a more hidden purpose connected to the general statement of the score (whose title insists on the fact...
Effettistica A Toniche 1

Anemofono - Si tratta della macchina del vento (detta anche eolofono) già utilizzata da G. Rossini, R. Strauss, R. Wagner, O. Messiaen, M. Ravel, G. Puccini... un tamburo rivestito in tessuto che viene strofinato, quando l'apposita maniglia viene girata, contro aste di legno o cartone, produce un suono frusciante simile al vento. (fig.1)

Talassofono - Crivello - È possibile ottenere un ottimo effetto di risacca utilizzando un crivello da grano (Ø cm. 150 circa), contenente semi di granoturco ben essiccati. Per ottenere un suono prolungato si dovrà porre molta attenzione al quantitativo di semi impiegati perché mentre pochi non produrrebbero l’effetto desiderato, troppi renderebbero lo strumento addirittura afono. La tecnica esecutiva è simile a quella del Ocean Drum. (fig.2)

Pirofono - Il crepitio del fuoco è un effetto ben noto ai rumoristi che solitamente lo ottengono stroppicciando della carta. Si prepari la carta idonea allo scopo, quindi precedentemente testata, e si aggiungano bicchierini di plastica (come quelli bianchi da caffè) o/e bottiglie di plastica per poter aumentare l’effetto del crepitero. (fig.3)

Brocheofono - Si utilizzino 3 lunghi bastoni della pioggia (lung. cm.200 circa) ricavabili da tubi di plastica (come quelli utilizzati dagli idraulici del Ø cm.6,3 circa) contenenti piselli da seme ben essiccati. Gli esecutori (tre) dovranno disporsi in fila indiana (fronte all’orecchio degli idraulici del Ø di cm. 6,3 circa) contenenti piselli da seme ben essiccati. Per ottenerne un suono proteso si dovrà porre molta attenzione al quantitativo di semi impiegati perché mentre pochi non produrrebbero l’effetto desiderato, troppi renderebbero lungo il tempo lo strumento afono. La tecnica esecutiva è simile a quella del Ocean Drum. (fig.4) Vedi esempio seguente:

Bronteofono - La macchina del tuono (nota tanto ai rumoristi quanto ai percussionisti) consiste in una lastra rettangolare in rame, acciaio, latta o lamiera zincata sottile o di medio spessore e con dimensioni di cm.70 x 100 o 100 x 200. Si possono utilizzare con discreto successo anche lastre litografiche in alluminio anodizzato o di materiali plastici o sintetici come fogli (di diverso spessore) di poliestere. Risulta ottimo l’impiego di due lastre: una di maggiori dimensioni per il rombo del tuono e l’altra di minori dimensioni per le saette. (fig.5)

Figure 8: The musical instruments used for Toniche 1 in Racconti di paesaggi sonori by Domenico Torta (drawings by Domenico Torta).
### Legenda: Paesaggio sonoro A Toniche 1

- **anemofono**
  - 20" ca.
  
  = si dovrà sentire il sibilo del vento (per quanto possibile) nelle sue “svariate forme” - ciò sarà possibile imprimendo, con la maniglia, diverse velocità alla ruota.

- **talassofono**
  - 20" ca.

  = si dovrà sentire la risacca del mare (per quanto possibile) nelle sue “svariate forme” - ciò sarà possibile imprimendo diverse inclinazioni al crivello.

- **brocheofono**
  - 60" ca.

  = l’effetto della pioggia si ottiene inclinando lo strumento (lo “scrosciare” è provocato dalla caduta dei piselli che sbattono contro gli ostacoli che incontrano sul loro percorso). NB.: Più si inclina il bastone maggiore sarà l’intensità dell’effetto e minore la durata.

Per evitare interruzioni di suono i tre esecutori dovranno imposte un ritmo ai loro movimenti, coordinandosi fra di loro. (Vedi esempio) Si tenga inoltre presente che per ottenere il crescendo degli ultimi 20" si dovrà accelerare gradatamente il tempo.

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**Figure 10:** The Legend of Toniche 1 in Racconti di paesaggi sonori by Domenico Torta.

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= stropicciare la carta con una e due mani - stropicciare il materiale plastico per aumentare qua e là il crepito cercando di creare un effetto quasi reale.

= saette - con una mano si azioni o si tenga e si azioni un foglio di poliestere (dimensioni cm.50/70 ca.). Scuotendo il foglio energicamente il suono risulterà secco ed incisivo.

= tuono - con l’altra mano si azioni o si tenga e si azioni una lastra metallica o di materiale sintetico (dimensioni cm.70/100 ca.). Scuotendo, più o meno velocemente, la lastra sarà possibile ottenere l’effetto del rombo del tuono, variandone l’intensità e la “tonalità” a piacere. Negli ultimi 20" si dovrà agire con entrambe le mani per ottenere l’effetto richiesto: tuono e saette in crescendo.

= dissolvenza sonora incrociata fra una “box” e l’altra: per evitare un intervento sonoro troppo didascalico.

= voce fuori campo del narratore.

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**Figures 11-15:** A few pages from the score of Toniche 1 in Racconti di paesaggi sonori by Domenico Torta.
Giving new life to ordinary and non-ordinary sound devices
the reed is obtained by squashing one of its ends and cutting its sides, in order to obtain two sharpened lamellae.

Domenico Torta has introduced a personal notation system for this part, combining musical figures with iconic signs, like a spiral to represent the long croaking of frogs in a pool, or dots of different sizes to represent the sound of cowbells and bells for other animals or falling birdseed (fig. 12–15). A white and a black dot represents the beginning and the end of the baby’s cry. As I wrote before, the explanation of Torta’s notation (Legenda toniche B) is still missing, however, the description of the instruments and of their playing techniques in the section entitled Strumentario minore is one of the most impressive parts of the score, since they contain various suggestions which pertain to the traditional making and playing of different sound devices. It is significant that many of them are instruments which were commonly made and played by children (figg. 16–19).

Two different friction drums are used for frogs and hens. The sound of hens is obtained with a small friction drum with cord: while a hand holds the body of the instrument, the other hands, with its thumb and forefinger, pulls the cord, which is internally fixed with a knot. The cord has to be tared and the body of the instrument may be made with a small cardboard glass for coffee. Instead the friction drum used for frogs is a rotating drum with a body made of a tin box. The continuous sound of the crocking frog in a pool is obtained by rotating the drum, instead the discontinuous crocking is obtained by holding the body of the instrument with one hand, keeping it steady, while the other rotates the stick: in this way the stretched string makes the skin vibrate. For a better result, the wooden stick must be wet.

The sound of some birds can be obtained with hunting calls combining blowing with the utterance of syllables. In the case of the hand-made ribbon reed (fig. 20), used as a call little owls, the air stream must be accompanied by the onomatopoetic syllables “quiu!” and “sutuquiù”. The sound of the vessel duct fluit, used to mimic the turtle dove, should be shaped around the three syllable words “resistî!” (resist!) or “Roberto!” (sütuquìu”). The sound of the vessel duct fluct, used to mimic the turtle dove, should be shaped around the three syllable words “resistî!” (resist!) or “Roberto!” (sütuquìu”). The sound of some birds can be obtained with hunting calls combining blowing with the utterance of syllables. In the case of the hand-made ribbon reed (fig. 20), used as a call little owls, the air stream must be accompanied by the onomatopoetic syllables “quiu!” and “sutuquiù”. The sound of the vessel duct fluit, used to mimic the turtle dove, should be shaped around the three syllable words “resistî!” (resist!) or “Roberto!” (sütuquìu”).

Finally, for the plastic reed made from a drinking-straw that imitates a baby’s cry, not only is its construction carefully described, in order to let every performer make his/her own little reed, but also the playing technique is described, which involves two hands creating a kind of resonator, similar to the wah-wah technique of the mouth harmonica.

The relevant aspects of this part of the Sinfonia del mondo are not only the use of sound devices and playing techniques common to children33 (at least to people who were children until immediately after WWII and used to play with toys made by themselves34) to evoke the dawn of life, but the fact that the Sinfonia del mondo inverts the normal descent of ritual sound


34 Friction drums, whistles, bulboarers, hunting calls, etc. were ordinary toy instruments for people born before the 1960s. Before the 1960s it was not so common for ordinary people to buy toys for children and both adults and children made toys by themselves or used as toys some objects that they received from adults.

Il gracidare della rana si potrà ottenere con una differente tecnica esecutiva: mentre una mano manterrà immobile il barattolo l’altra farà roteare il bastoncino (sempre inumidito) su se stesso (utilizzando il tamburo a frizione in modo statico: senza effetto Doppler), l’attrito produrrà un suono singolo più o meno prolungato, simile ad un gracido (cré! créé! créèèe! oppure crè! crèà! crèàààà!). (fig. 3)

gufo - *flauto globulare* o ocarina di medio-grandi dimensioni. Insufflare omettendo il colpo di lingua: l’attacco poco definito del suono, il timbro nasale dello strumento, il suono grave e cupo produrranno il gufare dell’uccello notturno. Il canto del gufo corrisponde ad un suono soffiato e malinconico: l’inconfondibile “uuuuuu!” (fig. 5)

civetta - *ancia a mano* funziona con lo stesso principio del filo d’erba tenuto teso fra i pollici, mentre le mani, chiuse a coppa, permettono la modulazione timbrica. Qui il filo d’erba è sostituito da un elastico (un anello ricavato da una vecchia camera d’aria rossa di bicicletta) e le mani da due pezzettini di legno o da un tappo di sughero. (fig. 6) Insufflare energicamente per mettere in vibrazione l’ancia e pronunciare (silenziosamente senza far sentire il suono della voce) le seguenti onomatopee: “quiu!” e “sütuquìu!”

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**Strumentario minore: B Toniche 2**

Coro di *rane nello stagno* - *giocattolo sonoro*: (“ran-a ëd San Gioan”) - tamburo a frizione rotante di piccolissime dimensioni che riproduce il gracidare della ragnetta, o di piccole dimensioni che simula il gracidare delle rane in uno stagno (fig. 1). Qui, consistente in un barattolo di latta che l’esecutore (dopo averne inumidito, con dell’acqua, il manico di legno) farà roteare, producendo il classico effetto Doppler. Grazie a questo particolare effetto sonoro l’ascoltatore si troverà di fronte ad una sonorità che si avvicina molto a quella di un gruppo di rane che gracidano in uno stagno (crà! crà! crà! cràà! cràààà!...) (fig. 2).

**Grilli - richiamo ornitologico** - dispositivo a frizione consistente in una vite metallica inserita in un blocchetto di legno di noce. Il frinire (canto) del grillo si produrrà girando (avanti e indietro) nervosamente la vite ed esercitando una lieve pressione (sulla vite stessa) in direzione del blocchetto di legno o una lieve trazione in direzione della mano. (fig. 4)

**Gufo** - *flauto globulare* o ocarina di medio-grandi dimensioni. Insufflare omettendo il colpo di lingua: l’attacco poco definito del suono, il timbro nasale dello strumento, il suono grave e cupo produrranno il gufare dell’uccello notturno. Il canto del gufo corrisponde ad un suono soffiato e malinconico: l’inconfondibile “uuuuuu!” (fig. 5)

**Civetta** - *ancia a mano* funziona con lo stesso principio del filo d’erba tenuto teso fra i pollici, mentre le mani, chiuse a coppa, permettono la modulazione timbrica. Qui il filo d’erba è sostituito da un elastico (un anello ricavato da una vecchia camera d’aria rossa di bicicletta) e le mani da due pezzettini di legno o da un tappo di sughero. (fig. 6) Insufflare energicamente per mettere in vibrazione l’ancia e pronunciare (silenziosamente senza far sentire il suono della voce) le seguenti onomatopee: “quiu!” e “sütuquìu!”

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34 Friction drums, whistles, bulboarers, hunting calls, etc. were ordinary toy instruments for people born before the 1960s. Before the 1960s it was not so common for ordinary people to buy toys for children and both adults and children made toys by themselves or used as toys some objects that they received from adults.
usignolo - *fischietto ad acqua* - giocattolo sonoro a forma vascolare o zoo-morfa che, grazie al gorgoglìo dell’acqua contenuta al suo interno, può riprodurre un suono simile al gorgheggio melodioso caratterizzante il canto dell’usignolo. (fig.7)

tortora - *richiamo ornitologico* - (flauto globulare) - insufflando pronunciare (silenziosamente senza far sentire il suono della voce) : “turturù-u-u!”, opp. “resisti!” (opp.”Roberto!”), opp. Robèr/Robèr/Robèr/Robèr/… Questi tre sono i “versi” più comuni che caratterizzano e simulano meglio il canto della tortora del collare. (fig.8) cecucu - il verso del cecuco - simile a quello già descritto ed utilizzato per imitare il verso dei grilli. La vite molto più allentata ed il movimento meno nervoso e più ampio producono, per frizione, il trillo acuto, potente e variegato che caratterizza il canto dell’allodola. (fig.9)

alloiola - *richiamo ornitologico* - simile a quello già descritto ed utilizzato per imitare il verso dei grilli. La vite molto più allentata ed il movimento meno nervoso e più ampio producono, per frizione, il trillo acuto, potente e variegato che caratterizza il canto dell’alloiola. (fig.9)

tordo cesena - *richiamo ornitologico* munito di soffietto (sorta di mantice) a forma di sacchetto. Colpendo (in modo ritmico: due crome) con il fondo del sacchetto il palmo dell’altra mano aperta o una qualsiasi altra parte del corpo, si otterrà il classico verso roco e soffiato della cesena (cè-cèch!). (fig.10)

pavoncella - *richiamo ornitologico* - si tratta di un’ancia a nastro (un elastico largo e sottile (simile a quelli impiegati nella biancheria intima), fissato alle due estremità ed imprigionato in un piccolo cilindro di legno (tagliato a metà in senso longitudinale e tenuto insieme da due piccole sferre di legno). (fig.11) Per produrre il suono che caratterizza il verso della pavoncella insuffilare molto piano, simulando la pronuncia del suono onomatopeico: “più!”

martellatura della falce - *idifono a percussione* - incudinetto (il ferro che solitamente il falciatore pianta in terra) e martello. Impugnando in una mano il ferro e nell’altra il martello, percuotendo, si produrrà quel tintinnio ritmico, tipico della martellatura della falce. (fig.12)

campanacci per muche - *campanacci* di medie e grandi dimensioni ancorati a collari di cuoio. (fig.13)

campanacci per capre - *campanacci* di piccole dimensioni ancorati a collari di cuoio. (fig.14)

zoccoli di cavallo - (effettistica/umoristica) - *idifono a concussione* - strumento consistente in due semi-gusci di noce di cocco che, percuotendo la superficie di un asse di legno o sbattuti fra di loro, riproducono lo scalpitio degli zoccoli del cavallo. Il suono prodotto risulterà molto realistico soprattutto se si cercherà di riprodurre il suono delle andature, passo e trotto. (fig.15)

frusta - *frusta del cocchiere* - si tratta di una vera e propria frusta utilizzata dai cocchieri e non di quella altrettanto nota generalmente impiegata in orchestra dai percussionisti. (fig.16)

Sonaglieria - *collare per equini* con bubboli. (fig.17)
**gallina** - *(giocattolo sonoro)* piccolo tamburo a frizione a corda fissa che imita il verso della gallina. Un piccolo cilindro di cartoncino aperto da un’estremità e chiuso dall’altra da una membrana, nella quale, al centro, viene praticato un foro in cui passa un filo ritorto di cotone che viene annodato all’interno. *(fig.18)* La frizione sul filo (esercitata con i polpastrelli del pollice e dell’indice), precedentemente impeciato, trasmette le vibrazioni alla membrana ed il cilindro (fungendo da cassa armonica) amplifica il suono prodotto. Ottimi allo scopo sono quei bicchierini di carta utilizzati per il caffè. Facendo scorrere le dita sul filo si pensi al verso della gallina che si dovrà ottenere: “Coo-coo-coo-code!”

**becchime** - *(setaccio con semi di granoturco)*

L’esecutore preleverà, a più riprese, una manciata di grani che lascerà cadere gradatamente nel setaccio, simulando, così, il rumore del becchime dato (o lanciato) al pollame.

**vagito del neonato** - *(ancia doppia)* ricavata da una cannuccia di plastica per bibite. Tagliare una porzione di cannuccia (lung. 6/7 cm. ca.) appiattire la punta (per 2,5/3 cm. ca.), con le forbici eliminare i due bordi della parte appena appiattita, creando così due piccoli segmenti appuntiti che fungeranno da ancia doppia *(fig.19)*. Inserire l’ancia in bocca, evitando che le labbra siano a contatto con le due parti vibranti, e soffiare con la giusta forza per emettere il suono *(fig.20)*. Accostare le mani alle labbra, come farebbe un suonatore di armonica per produrre il classico effetto wa-wa (simile, anche, al caratteristico suono della tromba, prodotto dall’apposita sordina, nella musica jazz); si otterranno così due suoni: uno chiuso (u-) e l’altro aperto (-è) che simuleranno il vagito del neonato (uè!) *(fig.21 - 22).*

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*Figure 18: A call for turtle dove (Museo del paesaggio sonoro, Riva presso Chieri, photo by Ilario Meandri).*

*Figure 20: A ribbon reed (call for little owl, Museo del paesaggio sonoro, Riva presso Chieri, photo by Ilario Meandri).*

*Figure 21: A call for turtle dove (Museo del paesaggio sonoro, Riva presso Chieri, photo by Ilario Meandri).*

*Figure 22: A call for turtle dove (Museo del paesaggio sonoro, Riva presso Chieri, photo by Ilario Meandri).*
devices to a status of children toys. In fact these sound devices receive a new “ceremonial” role in the *Sinfonia del mondo*, and their playing technique, once common and well known by everybody, becomes the skill of some specialists, i.e. Domenico Torta and I Musicanti. Moreover, according to Domenico Torta’s idea that ancestral sounds are capable of persisting through time, thus breaking the linearity of history, although music always changes they re-emerge, with their emotional power.

This is even more true in part C, where instruments for signals are used. When asked to explain what he means when he says that “sound remains while music changes” Torta brings the example of the sound of a ferry boat: it is the same as the sound of a conch trumpet. Horns and conch trumpets, commonly used for signals all over Italy (and of course not only in Italy) because their morphology produces very loud sounds that can be heard at great distances, become instruments of chaotic situations, like the *antimusica* for soundscape C. The narrator at this point is very clear: hunger and thirst represent the basic needs for life, and in the text of the *Sinfonia del mondo* they represent basic dangers; the risk of falling into what Ernesto De Martino called the “crisis of presence”.\(^{35}\) So the instruments to send signals are involved in a disruptive and chaotic process culminating in the climax of *antimusica*, where chaos becomes a ritual response to the crisis of presence. *Antimusica* for Domenico Torta is an ancestral cry, full of pain and fear, however, it is exactly from that painful and chaotic situation that sound is capable to transform itself into music, whose advent is represented by the entrance of the orchestra.

Soundscape C starts exploring the signal instruments: a large horn opens the scene, first played in a long and steady sound and then with a didgeridoo technique. Other instruments for signals enter, like some reedpipes (horns played with a single reed), the shofar and conch trumpets. Gradually the *instruments de lénèbres*\(^{36}\) enter: they are the typical idiophones for the ritual noises of the Holy Week. A notation made of conventional and non-conventional signs gives the instruction for the various playing techniques and the time of entrance (figs. 23–24). According to the *Legenda* (figs. 25–27) the large horn playing alone at the beginning has immediately a sacred connotation: a long initial sound, according to Torta, represents the *Magna Mater* who calls everybody, while the sound produced with the didgeridoo technique represents the *Om*, a sound which can resonate together with the Universe itself. The chaos is only apparent, since in the score all the signal instruments have special instructions about the sounds to be produced and the respective timing, integrating the entry of wind instruments and idiophones. All the instruments for soundscape C are copies of instruments for the ritual noises of the Holy Week preserved in the Museo del paesaggio sonoro (fig. 28).

The tension is released after the announcement of the invention of the musical instruments by the narrator, the Musicanti leave the stage and the Orchestra enters. However, the

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\(^{36}\) The expression is used also by Claude Levi-Strauss, *Du miel au cendre* (Paris: Plon, 1966).
A version of this song by Domenico Torta and Valerio Chiovarelli accompanied by two tortotela can be found here at 1.02 https://www.youtube.com/watch?v=K_Mxv0yZ5c.

everybody is able to sing in the style prescribed by the score,38 moreover not everybody can find or make and is able to play the tortotela. La conta represents the early development of human life, of the life of the linguistic animal whose language, according to Giorgio Agamben, never coincides with his/her voice.39 What is important here is not the sung text, even if it is extremely located by the use of the dialect of Riva presso Chieri, but the “ancestral” quality of a dying language and of a traditional singing style. According to Domenico Torta the sung voice of La conta, in its restricted range and in its dualism between a free rhythm in the first piece and the more rhythmical, dance-like, movement in the second, can exist almost everywhere. If Racconti di paesiaggi sonori are performed by other people, this part might be replaced by something else, provided that it is characterized by the fact of being at the same time extremely contemporary in traditional music and archaic in its style.

For Domenico Torta ancestral instruments, that is sound devices which can be found almost everywhere for their structure and their acoustic properties, and an archaic use of the sung voice are the necessary technological tools to evoke the dawn of life. New Music, as

37 A version of this song by Domenico Torta and Valerio Chiovarelli accompanied by two tortotela can be found here at 1.02 https://www.youtube.com/watch?v=K_Mxv0yZ5c.

38 From an ethnomusicological point of view, the two pieces entitled La conta are an extremely interesting example of autotranscription by a traditional singer who is also familiar with staff notation. This aspect deserves a deeper consideration which is not possible here.

Giving new life to ordinary and non-ordinary sound devices

Figure 29: The impronta of the Orchestra in Racconti di paesaggi sonori by Domenico Torta (drawings by Domenico Torta).

Figure 30: Two wooden pegs used to tie the sheaves of wheat and employed as clappers (Museo del paesaggio sonoro, Riva presso Chieri, photo by Ilario Meandri).

Legenda:

Melos

Canto "liberio" di tipo "ancestrale" con melismi, portamenti e fioriture, esplorando i registri di petto, gola e naso.

Organum vocale

Forma primitiva di musica polifonica. Qui la "polifonia ancestrale" viene generata da due voci che si muovono a distanza di intervalli di 5ª, 4ª e 3ª rispetto al bordone, generando "accordi" di 5 e 3.

Bordone

Forma primitiva di musica polifonica. Questo "pedale" viene affidato ad un grande corno di bovino e, per le note lunghe si auspica l’impiego della “respirazione circolare”.

N.B.: Le sillabe tra parentesi, Es. (fi) (da) (on) (ve)…, presenti sui righe dell’organum e del bordone fanno riferimento al melos ed indicano il punto preciso i cui suoni debbono essere simultanei.

Figures 31-34: A few pages from the Legenda of the narrator’s part in Racconti di paesaggi sonori by Domenico Torta.
Legenda:

1° torototela

Suoni determinati - ottenuti suonando lo strumento con l’arco, (v. fig. ...)
N.B.: le note lunghe (il bordone) può essere arricchito a piacere sollecitando (con la mano sinistra), ad libitum, gli armonici di quinta e di ottava ricavandone un suono simile ad una canna di fumo che “ottavizza”.

2° torototela

Suono indeterminato - ottenuto con un plettro, sollecitando la corda (v. fig. ...)
N.B.: l’intonazione viene determinata dalla pressione esercitata sulla corda dalla mano sinistra.

3° torototela

Suono indeterminato - ottenuto dalla percussione del legno dell’archetto sulla vescica nel punto A (v. fig. ...)

Suono indeterminato - ottenuto dalla percussione del legno dell’archetto sulla tastiera nel punto B (v. fig. ...)

Suono indeterminato - ottenuto dalla percussione del “puntale” dello strumento sul pavimento (v. fig. ...)

“toch! ("il picchio") - suono ottenuto "picchiettando" un guscio contro l’altro

"ra-ga-ra-ga" ("le rane") - suono ottenuto dallo sfegamento dei due gusci di noce (v. fig. ...)

"ra-ga-ra-ga-ril!" ("le rane") - come il precedente

Cavigliatori o cavicchi di legno

Suono ottenuto percuotendo, alternatamente, l’uno contro l’altro i manici dei cavicchi (incrociando destro contro sinistro e sinistro contro destro) (v. fig. ...)

Suono ottenuto percuotendo fra di loro le punte dei cavicchi (v. fig. ...)

Corpo

Suono ottenuto - percuotendo le proprie spalle con i palmi delle mani

Suono "muto" - ottenuto strisciando i palmi delle mani sul torace all’alto verso il basso

Suono ottenuto - percuotendo, con i palmi delle mani, le gambe sopra le ginocchia

Froja

Come nel violino "arco in giù" - l’arco (la froja) partendo dal tallone si muove dall’alto in basso.

Come nel violino "arco in su" - l’arco (la froja) partendo dalla punta si muove dal basso in alto.

Lo scorrimento della parte dentellata della froja sul bastone produrrà un suono ripetuto.

Suono ottenuto percuotendo il bastone con la froja.

“Picchettato in su” - suono ottenuto percuotendo il bastone con la froja, avanzando nella stessa arcata (arco in su - "alla punta").
well as cinema, have got us used to electronic instruments, which are currently more often employed to evoke atmospheric events and environmental sounds. In Torta’s perspective live electronics lack the most important aspects which enable us to go back to the beginning of life: the presence of the body and gesture. The dawn of life can be evoked, in the Sinfonia del mondo, only by the relational nature of life and by going backwards in the gesture’s relationship with the things and their acoustic potentialities.

Soundscape as natura artificialis

Despite the use of the expression paesaggi sonori and of Murray Schafer’s terminology (toniche, segnali, impronte), Domenico Torta’s Racconti di paesaggi sonori do not have almost anything in common with the artistic practice resulting from the famous World Soundscape Project. Rather, it is a narration about an aural experience of life in Riva presso Chieri which does not make use of field recording. Instead it is based on the local knowledge of sound and on the playing techniques of various common sound sources. Making good use of an academic musical background, Torta has been able to produce an experience into a score, in a piece of writing which, in its turn, to be performed requires a familiarity with local aural musical knowledge.

In their reconstruction of “a world of things rendered in their acoustic forms”⁴⁰ Racconti di paesaggi sonori might be an indirect answer to Tim Ingold’s critique of the concept of soundscape. Tim Ingold argues that the current notion of soundscape “might lose touch with sound in just the same way that visual studies have lost touch with light”⁴¹ and risks to lose the multimodal perception which always characterizes our experience of the world through the senses. Moreover, it risks to “set up a rigid division between two worlds, of mind and matter”. Ingold insists that sound is “neither mental nor material, but a phenomenon of experience”,⁴² more specifically, he adds, “sound, I would argue, is not the object but the medium of our perception. It is what we hear in”.⁴³

The Sinfonia del mondo is a recreation of the dawn of life through the experience of sound that Domenico Torta had as a native of his cultural environment. His academic background has given him the necessary sense of distance to recognize in the traditional culture in Riva presso Chieri a deep sense of sound which could be used as a special point of view to create a new musical perspective. Theatre, word and music merge in his Racconti di paesaggi sonori, which in performance become an immersive experience for the audience.

By evoking the rural soundscape of Riva presso Chieri, the Sinfonia del mondo becomes an aural narration of an event which nobody could witness. In a certain sense it is a mythical reconstruction of the dawn of life, based on the idea that humans and non-humans are part of the same nature. The sound devices used to reconstruct it, as I have tried to demonstrate, are some of the most archaic sound devices, whose acoustic affect relies more on timbre than on other parameters. The hunting calls, friction drums, whistles, cog rattles, horns etc. used in the Sinfonia del mondo are found almost everywhere in the world. For thousands of years they have not necessarily been used for what we call “music”, since they generally had a more utilitarian purpose in other activities involving the use of sound. This characteristic gives them a more conservative status than the sound of the musical instruments for art music, having evolved across centuries and being subject to stylistic and esthetic variations. They survived through time and have constantly been reconstructed, serving as ritual sound tools, toy instruments, mimetic sound devices for utilitarian purposes (hunting) and for fiction (the theatre), which can be used as signals as well as for chaotic and aggressive sounds.

Rather than being made of fragments of field recordings, the soundscape of the Sinfonia del mondo is closer to the Italian tradition of the creation of a natura artificialis, an artificial nature. As Eugenio Battisti has demonstrated,⁴⁴ the history of the Italian garden has especially aimed to create natura artificialis. A place which must be lived according to a special cultural disposition in order not to misunderstand it, paying attention to its strong relationships with the environment in which it is created and with the people who live in this environment and contributed, more or less actively, more or less consciously, to its creation. Racconti di paesaggi sonori shares with the Italian garden the same relational nature: they have been conceived in a specific place and in a specific culture and, despite Torta’s effort to make the score understandable by everybody, it relies on a common awareness of the use of sound which is not the same everywhere. The relational connotation of Torta’s idea of paesaggio sonoro is enhanced by the Italian word paesaggio. Paesaggio means landscape, but both the words paesaggio and paesaggio sonoro lack the “scopic” component of the word which caught the attention of Tim Ingold,⁴⁵ instead they share the same root of the word paese (“village” or, in a broad sense, “country”). Paesaggio and paesaggio sonoro are more linked to a sense of place, than to a reproduction of a sight or of an acoustic impression. In fact, according to the art historian Eugenio Battisti:

Landscape […] does not describe the natural environment, but it gives an interpretation of it and a selection (which is parallel and angled even when the purpose is to give a scientific and documented record of nature).

It is made of a collection of elements, only a few of them, each time, acquire a special importance (trees, or towns, or mountains, or atmospheric conditions).⁴⁶

For Domenico Torta the result of a process of listening is narration, hence the structure of the Racconti di paesaggi sonori as a series of tales, merging music and theatre, past and present. The

⁴¹ Ingold, “Four objections to the concept of soundscape”.
⁴² Ingold, “Four objections to the concept of soundscape”, 137.
⁴³ Ingold, “Four objections to the concept of soundscape”, 138.
⁴⁵ Tim Ingold, “Four objections to the concept of soundscape”.
⁴⁶ Eugenio Battisti, “Il paesaggio. Composizione e storia di un ‘genere’” in Iconologia ed ecologia del giardino e del paesaggio (Firenze: Olschki, 2014), 51-69, the quotation, translated into English by myself, is from p. 51: “Il paesaggio […] non descrive l’ambiente naturale, ma ne dà una interpretazione e una scelta (parziale e angolata anche quando lo scopo è di dare una registrazione scientifica e documentata della natura); è costituito da un raggruppamento significativo di elementi, alcuni dei quali, di volta in volta, assumono una speciale importanza (alberi, o città, o montagne, o effetti atmosferici)”.

43  Ingold, “Four objections to the concept of soundscape”, 138.
42  Ingold, “Four objections to the concept of soundscape”, 137.
41  Ingold, “Four objections to the concept of soundscape”.
orality expressed in his *Racconti* is an act of freedom from the risk of standardization of life and music, which is always threatening our way of living. The first part of the *Introduzione* to the score of *Racconti di paesaggi sonori* contains a critique to modernity, it invites to take a step back from globalization which results in a lack of freedom and in a standardization of knowledge and of the means of artistic expression. Tradition and the awareness of the past in Torta’s perspective seem to provide a good way to escape from the danger of losing cultural diversity. Therefore it is by quoting Torta’s appraisal of the freedom of orality which opens the *Introduzione* that I would like to conclude this short presentation of the *Sinfonia del mondo*:

Being born in a small countryside village at the beginning of the second half of 1900 means having seen oxen and horses working in the fields, the last swallows, the last fishes in streams, having drunk the water from the well and having taken part in the winter evening parties in the cowshed.

A world inhabited by simple men: poor and miserable, farmers and weavers, who have been devoured by a pantagruelic globalization which, little by little has lead to the disappearance of “the last free man”.

That small group of people knew well the meaning and the strength of words: a gaze, a shaking of hands, a [physical] contact! Everything converged and passed through orality: the old rhymes used by our grandmothers to entertain and educate children, the folk tales, the legends, the songs and the tales of the old people describing the war with meticulous details which had escaped the careless gaze of hegemony.

Since from the “culture of diffused orality” of our ancestors we have plunged into the abyss of the actual “culture of image”, becoming more and more extraneous to the perception of the “form of the word”, I believe that it has never been more crucial to take a step back and to act immediately to recover “memory” and “narration”.

The narrating voice here represents “oralità” rather than “auralità” and the performer is asked to play the part of a “griot” rather than a “bard”. His/her voice, now austere, now persuasive will be able to take the audience by hand leading them to the “little people” of “faint frivolous tales”, accompanying them where everything is possible, where music is of everybody, where the blackthorn and the sloe can coexist without humiliating or deprecating each other. In this way the objects and tools for work, by sharing the stage with the instruments of the orchestra, will be able to give life to a saga full of surprises and of unexpected colours.

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47 “Nascere in un piccolo paese di campagna agli inizi della seconda metà del ’900, significa aver visto buoi e cavalli al lavoro nei campi, le ultime rondini, gli ultimi pesci nei ruscelli, avere ancora bevuto l’acqua al pozzo e preso parte alle veglie invernali nelle stalle. Un mondo popolato da uomini semplici: miserabili e miseri, contadini e tessitori, divorati poi da una pantagruelica globalizzazione che, a poco a poco, ha portato all’inesorabile scomparsa dell’”ultimo uomo libero”.

Quel piccolo popolo conosceva bene il significato e la forza della parola: uno sguardo, una stretta di mano, un contrasto! Tutto convergeva e passava attraverso l’oralità: le antiche filastrocche utilizzate dalle nonne per intrattenere ed acculturare i bambini, le favole, le leggende, i canzoni ed i racconti dei vecchi che descrivevano la guerra con meticolosi dettagli sfuggiti, peraltro, allo sguardo poco attento dell’egemonia.

Poiché dalla “cultura ad oralità diffusa” dei nostri nonni siamo vertiginosamente precipitati negli abissi dell’attuale “cultura dell’immagine”, allontanandoci sempre più dalla percezione della “forma della parola”, sono convinto che, mai come oggi, sia indispensabile uno sguardo a ritroso seguito da un repentino intervento per il recupero della “memoria” e della “narrazione”.

La voce recitante qui rappresenta l’”oralità” piuttosto che l’”auralità” ed all’interprete si richiede, quindi, di impersonare un “griot” piuttosto di un “auddo”. La sua voce, ora austera ora suadente, ora sovrapponendo la sua presenza dietro la griglia, condividendo la scena con gli strumenti dell’orchestra, saprà riportare il pubblico, prendendolo per mano, verso il “piccolo popolo” delle “fiorello fable frivole”, accompagnandolo là dove tutto è possibile, dove la musica è di tutti, dove “pruno e prugnolo” possono convivere senza umiliarsi o privarsi diocco. Così gli oggetti e gli attrezzi da lavoro, condividendo la scena con gli strumenti dell’orchestra, sapranno dar vita ad una saga ricca di sorpresa e di colori inaspettati”, the translation into English is mine.
The Tender Listener
Collaboration and Friendship as Compositional Methodology in *boundarymind*

**LINDA JANKOWSKA & KATHERINE YOUNG**

**About *boundarymind***

*Boundarymind* is an evening-length electroacoustic sound piece and aggregating multimedia installation that explores and transgresses the geographical, cultural, psychological, temporal, and musical boundaries that impact how we share ourselves with others.

Developed collaboratively over the course of eight years by Linda Jankowska and Katherine Young, the project also incorporates video projections by Kera Mackenzie and sculpture by Molly Roth Scranton. *Boundarymind*’s production partners are Experimental Sound Studio, 6018 North, RomanSusan and P.O.Box Collective in Chicago.

The complete work will premiere in Spring 2021 at 6018 North.

Two public performances will include original, collaboratively composed music presented within a multimedia environment. Throughout the performance space the artists will install talisman—ceramic pots, plastic toys, wooden spoons, pine straw, sugar packets, and other things—chosen for their personal significance and power to evoke memories of places from our childhoods. For Linda, the space is a cottage in rural Poland where she spent formative years. For Katie, it is her early childhood home in Mississippi. On a series of visits in 2015, the artists gathered objects and sound recordings from these places.

The public will also be invited to contribute objects and sounds to this project. The artists will host social recording events at 6018 North, as well as at RomanSusan and P.O.Box Collective. Amidst the Covid-19 pandemic, Jankowska and Young are planning a remote call for home recordings. They will incorporate the shared recordings into a second iteration of the installation, which they intend to present at ESS’s Audible Gallery in September 2021.

**The Tender Listener**

To generate this piece of writing, *boundarymind* creators Linda Jankowska and Katherine Young corresponded via email and google doc. Jankowska and Young used Olga Tokarczuk’s 2019 Nobel Prize Acceptance Speech, “The Tender Narrator,” as a shared point of reference to frame their written conversation. Below is the conversation, edited for clarity. The authors have retained the fragmented, back-and forth form of the correspondence and labeled the portions written by Jakowska (LJ) and Young (KY).

KY: First, I’d like to say a little about *boundarymind*, as an introduction to the project for those who will read this conversation later.

In *boundarymind*, objects, memories, personal histories, acts of tenderness and sharing, and experiences of (dis)location sonically constellate into expansive and layered musical/performative structures and works. Linda and I have built *boundarymind*’s world from objects collected from our childhood homes. In the making of the piece, we have shared stories of our pasts, and our families’ pasts, as we have explored the sound-making potential of these objects. We have found this artistic practice to be extremely rich, creating space for introspection, social connection, relationship formation, musical experimentation, and intense listening. Through *boundarymind*, Linda and I have formed a very deep collaborative relationship and personal friendship. We see this as one of the most important outcomes of the project, more important, in many respects than any one artistic object.

We want to ask as much of *boundarymind* as possible, and so, we intend to utilize (and already have utilized) this artistic practice to build other relationships and communities. Through a series of community sound-archiving events and calls for home recordings, we offer *boundarymind* to others who wish to explore how sounds store memories and shape our beings.

We also intend *boundarymind* as a space in which—together with our community of collaborators, production partners, audience members, friends, families, and colleagues—we can explore how, collectively, to build beautiful futures. In this ambition, we have been inspired by the writing, thinking, and spirit of Olga Tokarczuk, whose 2019 Nobel Prize acceptance speech, “The Tender Narrator”, beautifully articulates ideas we have discussed developing *boundarymind*. Tokarczuk aspires to make work that is “capacious
and transgressive,” a description that captures what we love best about her writing and music.

Speaking in 2019, before the Covid-19 pandemic, the related economic collapse, and the Black Lives Matter uprisings of summer 2020, Tokarczuk presciently stated:

The climate emergency and the political crisis in which we are now trying to find our way, and which we are anxious to oppose by saving the world, have not come out of nowhere. We often forget that they are not just the result of a twist of fate or destiny, but of some very specific moves and decisions—economic, social, and to do with world outlook (including religious ones). Greed, failure to respect nature, selfishness, lack of imagination, endless rivalry and lack of responsibility have reduced the world to the status of an object that can be cut into pieces, used up and destroyed.

That is why I believe we must tell stories as if the world were a living, single entity, constantly forming before our eyes, and as if we were a small and at the same time powerful part of it.2

Tokarczuk proposes that tenderness could be a radical orientation, creative methodology, and political-spiritual practice that our current emergencies and crises demand. In many ways, Tokarczuk’s tenderness intersects with adrienne maree brown’s concept of emergent strategy, which foregrounds collaboration and interdependence, articulates imagination as a “battleground” with life-and-death ramifications for oppressed peoples,3 and which she defines as, describing “ways for humans to practice complexity and grow the future through relatively simple interactions.”4 Or, moreover, coming from Margaret Wheatley and Grace Lee Boggs, she states, “relationships are everything.”5

For Tokarczuk, describing how she utilizes it in her writing:

Tenderness is the art of personifying, of sharing feelings, and thus endlessly discovering similarities.... Tenderness is the most modest form of love. It is the kind of love that does not appear in the scriptures or the gospels, no one swears by it, no one cites it. It has no special emblems or symbols, nor does it lead to crime, or prompt envy.

It appears wherever we take a close and careful look at another being, at something that is not our “self”.

Tenderness is spontaneous and disinterested; it goes far beyond empathetic fellow feeling. Instead it is the conscious, though perhaps slightly melancholy, common sharing of fate. Tenderness is the deep emotional concern about another being, its fragility, its unique nature, and its lack of immunity to suffering and the effects of time. Tenderness perceives the bonds that connect us, the similarities and sameness between us. It is a way of looking

Literature is built on tenderness toward any being other than ourselves.6 We also connect our practice—for more than a piece or a project, boundarymind is becoming a practice for us—to Pauline Oliveros’ life’s work. We particularly identify with Oliveros when she aligns her practice of Deep Listening to ethical action: “Listening is directing attention to what is heard, gathering meaning, interpreting and deciding on action. Quantum listening is listening to more than one reality simultaneously….How we listen creates our life.”7

Eight years ago, Linda and I embarked on a modest project—to make a new piece for solo violin. We quickly realized that we had a lot to learn about each other before we could truly create together. So, diligently and patiently, we have gotten to know each other. Our process of becoming friends became the structure of our project, which even as it has grown in collaborators, media, and years of germination, remains a humble endeavour. As we have listened together—to each other’s stories and the sounds of objects from our pasts—we have spent as much time talking about formative moments of our personal histories, what is going on in our present lives, and what we want to hear in our future.

LJ: Tokarczuk, in “The Tender Narrator,” says: “As a child…I believed that objects have their own problems and emotions, as well as a sort of social life, entirely comparable to our human one.”9 Growing up surrounded by an array of curious, found, antique, and handcrafted objects, such a thought never even crossed my mind. In 1985 my parents bought a piece of land, near the city where I was born, with a cottage built in the beginning of the 20th century, and we moved there shortly after my birth in pursuit of a peaceful and outdoorsy upbringing. Over the course of my early childhood my mother gradually decorated the house with various objects she bought at flea markets in villages nearby, or at Cepelia, a chain that sold handmade but mass-produced folk arts and crafts. Collections of mostly wooden or ceramic pots, plates, spoons, and coffee grinders hung around the cottage as decorations, giving the place a feel of a mini museum. I didn’t question either their purpose, nor ask how they found themselves in our space. There were so many of them that surely they could have had a social life of their own, talking to one another or dancing to the dim light of the fireplace, after we had gone to bed. But I never thought of such a possibility back then. Instead I imagined that maybe, somewhere in the house, I too could find a gateway to Narnia.

Many years later, by way of Munich and Manchester, where I studied classical violin playing, I found myself on a train platform at Ravenswood in Chicago about to meet you, Katie, for the first time, after corresponding over email for more than a year. Besides interest in contemporary and experimental music, what else could we have in common? I travelled

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2 Tokarczuk, 25.
4 brown, 20.
5 brown traces the lineage of her thinking through Octavia Butler, Margaret Wheatley, and Grace Lee Boggs.
6 Tokarczuk, 24-25.
8 Tokarczuk, 15.
with hidden nostalgia for my country and culture, and a sense of loss for a time and place that could no longer fit into my current lifestyle, yet where I felt perhaps more at ease. One tearful and vulnerable confession later, we found the reason to work together for as long as we have. It is through boundarymind that I have finally found that entrance to my Narnia, a biomythographic reworking of the magical world of objects that surrounded me as a child. At last I hear the objects speak. They hum, screech, gnarl, and whistle stories of extraordinary beauty and peculiarity. Old memories came back asking, “Is it all there was to it?” There is a great reward in listening so closely to what, in our immediate surroundings, we have taken for granted, to the past that we thought we had already reckoned with, and to the failing of our heart. Everything connected, orbiting, and even if temporarily out of obscurity, helps us to notice more clearly that around us there is always more than we could possibly perceive, and certainly enough to happily be.

KY: I have a terrible memory. At least, that’s what I tell myself. I am, therefore, repeatedly and profoundly drawn to individuals with capacious and detailed memories. Tokarczuk is one such person; you are another, Linda.

Tokarczuk begins “The Tender Narrator” with an anecdote describing a photograph of her mother by a radio. In this fragment of writing, she alchemically weaves together thoughts on sound, memory, personal objects, childhood, motherhood, imagination, and desire—all themes that circulate in boundarymind. She describes the radio as a cherished vessel through which she experimented with formative imaginings, personal mythologies, and desires for connection to the universe and new experiences:

This radio later became my great childhood companion; from it I learned of the existence of the cosmos. Turning an ebony knob shifted the delicate feelers of the antennae, and into their purview fell all kinds of different stations—Warsaw, London, Luxembourg and Paris. Sometimes, however, the sound would falter, as though between Prague and New York, or Moscow and Madrid, the antennae’s feelers stumbled onto black holes. Whenever that happened, it sent shivers down my spine. I believed that through this radio different solar systems and galaxies were speaking to me, crackling and warbling and sending me important information, and yet I was unable to decipher it.9

Perhaps her (perceived) inability to decipher the intergalactic secrets the radio sent her spurred her curiosity and need to learn, listen, remember, and write as a way to decipher. Working with you, Linda, for these many years on boundarymind I am certain I have learned to decipher the secrets the universe whispers to me a little better because I have learned to listen a little better—more tenderly, capaciously, articulately, vigorously, and imaginatively. Our project has offered me the opportunity to reflect on my past, but more significantly it has helped me practice listening better to my present as a way to imagine our future.

LJ: We used to have a few different types of pine, spruce and larch trees in our garden. My Mum let them grow into a small forest in front of the house. I loved their smell and prickly branches. It wasn’t until a 2017 hurricane obliterated these trees, leaving my heartbroken Mum to cut the entire forest out, that I picked the few remaining spruce cones from the ground and started plucking their scales close to my ear.

9 Tokarczuk, 1.
KY: One memory I can conjure of my childhood is spending hours outside collecting, arranging, sorting, and assembling pine cones, sticks, leaves, and dirt. Having moved away 25 years later, I visited my childhood home as research for boundarymind in 2016. I took a walk around the block and observed it from the street, and I was struck by the Mississippi pine cones. They are such sturdy pieces of architecture. Bringing one back to Chicago with me and taking it into the studio to listen with the help of a microphone, I was astounded by the bass resonances of its microtonal scale.

LJ: Remember October 2015, when we went together to the cottage in Psary Wielkie, the village where I grew up? We went for a field trip and first exploratory session with the objects I had identified as having a curious sounding potential. We sat in my former childhood bedroom and talked about the world from a child’s perspective. You mentioned how, in your memory, the street in front of your house seemed like a massive hill, but that when you visited as an adult, it was barely an incline. We agreed that the process of close-miking and amplifying microsounds could be a metaphor for getting-to-know the world from an inquisitive, child-like point of view. I remember such details of our conversations.

Tokarczuk’s poignant formulation of tenderness as “the art of personifying, of sharing feelings, and thus endlessly discovering similarities” deeply resonates with me. But to seek similarities and sameness of experiences is a rather common methodology for forging relationships and connections. Social media and modern communication technologies are giving us this incredible illusion of (or a potential for) connectedness with anyone in the world, whether we have met them or not. We perform this connectedness, isolated. Families, friends, lovers and strangers, typing on machines, sitting next to one another, exploring emojis to express themselves is the new way of making sense of our shared humanity. Tokarczuk’s tenderness, as an artistic methodology and concept-building tool, places opening-up to vulnerability, emotion, and memory ahead of any other concern. It is patient and slow, “spontaneous and disinterested”, reminding me of countless examples of your grace and empathy towards my numerous life crises over the recent years. Her tenderness erases subject-object dualism and dismantles any potential for hierarchy of authorship of ideas. Through “deep emotional concern about another being, its fragility, its unique nature, and its lack of immunity to suffering and the effects of time”, tenderness disables mechanisms of self-protection. It overshadows academic intellectualisation.

We perceive the vulnerability and emotion-driven reasoning of tenderness as a method to be in positions of strength. And yet, I can see how these characteristics could lead to dismissal and even mockery: tenderness as method could be disparaged as “feminine”. Unlike many of our (often male) composer peers and (almost exclusively male) canonized role models, we do not focus on the latest technology, nor do we use algorithms or calculations. As evidenced by the respect given to composers such as Brian Ferneyhough or Yannis Xenakis, our field has prioritized precise notation of musical / sonic complexity. In boundarymind, instead of producing a traditionally notated score, we have codified and committed the materials through our process of collaboratively generating text files and spreadsheets, a personal archive of recorded examples, and, most importantly, through creating and sharing the memories and personal histories that have led us to our materials.

KY: Absolutely. In addition to specific objects / products (i.e. exceptionally complexly notated scores, as one example) receiving prioritization within our field – and then the prestige, resources, and recognition that often follow – the objects that are prioritized are the manifestation, of course, of underlying aesthetic prioritizations. These are the aesthetics put forth by European and European-American men, for the most part.

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KY: 10 Tokarczuk, 24.
KY: 12 Tokarczuk, 24.
This type of criticism—that labels supposedly feminine aesthetics as defects—recalls something I recently read regarding Alice Coltrane’s critical reception:

When women instrumentalists have garnered attention for their talents in the male-dominated jazz world, their success has usually hinged on the supposedly male qualities of their playing; they are praised for their strong rhythm, big sound, and aggressive improvisations. Conversely, when a woman plays sensitively or with quiet dynamics, her musicianship tends to be dismissed for lack of sufficient masculine characteristics. This gendered mediation is evident everywhere in the assessment of Alice’s solo career.13

It is important to directly label Coltrane’s negative critical reception as gendered. Being able to unpack such criticisms is a necessary tool for female-identifying members of our field. As a personal example, early on in the development process of bounda mind we were working with embedding sensors in shoes to trigger electronic playback. The shoes themselves, thus, became a significant compositional parameter. A male teacher of mine advised me to be careful working so overtly with shoes because drawing attention to something like an article of clothing might lead people to dismiss the work and silo it into a category of “women’s music.” The implication was that “women’s music” is a lesser category and one that he was, with the best of intentions, trying to help me avoid. Unfortunately, his advice rattled me and temporarily undermined my creative confidence. If he had expressed his idea while invoking a feminist critique of the gendered perspective that would lead to such a dismissal, I would have been tipped off to the potential problem of reception, while not discouraged from pursuing my compositional interests.

Following that, if tender listening is not taken seriously, we obviously must ask whether those criticisms are meaningful, or if they are knee-jerk patriarchal dismissals.

LJ: Yes. Tokarczuk’s tenderness closely connects to a deep reservoir of second- and third-wave feminist thinking, including Ethics of Care, which emphasizes “interdependence, relationships, vulnerability, responsibility, and trust.”14 These theories understand the interconnectedness of everyone and everything in this world, a notion Tokarczuk also addresses in her lecture and in novels such as Flights. According to Ethics of Care scholar Virginia Held,15 this undeniable interdependence, mutual care, relational concern, and, we add, tenderness, are essential tools for the advancement of society. As we are now officially facing a climate breakdown, it is no longer possible to deny its connection to the patriarchal structures of oppression, domination, unbridled extraction, and a culture of discourse that delegitimizes the great majority of humans, as well as the planet itself. Therefore, Ethics of Care is a daily practice, rather than a fixed moral stance.16

There has certainly been more discussion about representational balance in programming works by composers in our field, thanks to initiatives such as GRID (Gender Relations in Darmstadt) in 2016. As Ashley Fure pointed out:

Viewed through simple statistics, female composers are by nature more professionally precarious than their male counterparts. We have less safety in numbers, less historical precedents, and less representation in positions of power. The vast majority of curators, teachers, ensemble directors, publishers, and critics making decisions that impact our professional trajectories are cis white males.17

Concurrently other festivals, such as, for example, the Huddersfield Contemporary Music Festival, signed a pledge to achieve a 50/50 programming balance by 2022. Such initiatives will certainly help to address some of the pertaining inequalities. But perhaps even more interestingly, as we hear more music by more different kinds of people, we may also start to gain a more nuanced view of the sonic and aesthetic perspectives and concerns that composers, performers, and sound artists of all genders are considering.

KY: I do want to make clear that although we reject facile, gendered, patriarchal criticisms of tenderness—supported by decades of feminist scholars and activists—we do not reject “critiques ... offered in the spirit of collective liberation.”18

For instance, it seems valid to ask if, as a method that claims any connection to radical politics, tenderness is only available to those in highly privileged positions. I wonder what these gentle approaches accomplish in the face of extreme poverty, climate change, fascism, and white supremacy? I accept and recursively engage with these criticisms, but I also believe that no single tactic or approach is going to solve our global crises, and that long-lasting change will require work in all arenas and at all strata of our existence.

One thinker I find helpful for how he foregrounds the imagination as a political space is Arjun Appadurai. Discussing digital archives in relation to diasporic, migrant communities, he insists that the work of the imagination is critical for exercising the capacity to aspire....[It] is not a privilege of elites, intellectuals and soi-disant Marxists, but is indeed being exercised by poor people, notably in the worldwide pursuit of their possibilities to migrate, whether to near or far locations. Denuding these proletarian projects of the dimension of fantasy, imagination and aspiration, reducing them to mere reflexes of the labor market or of some other institutional logic, does nothing for the poor other than to deny them the privilege of risk-taking.19

16 Furlan Štante, 656.
16 Furlan Štante, 656.
18 Brown, 5.
The Tender Listener

Or as, brown puts it,

We must imagine new worlds that transition ideologies and norms....This is a time-travel exercise of the heart. This is collaborative ideation—what are the ideas that will liberate us all? The more people that collaborate on the ideation, the more people will be served by the resulting world(s).20

`Boundarymind` has been a collective space for us to share our work of the imagination and develop our capacity to aspire. Now, our challenge is to humbly offer this practice-project-music-art-resource to anyone else who could make use of it.

LJ: Am I right to remember that the cassettes you chose to use in movement 1 of `boundarymind` have a connection to some gendered baggage for you, Katie? What do these represent for you, or to what memories do they connect you?

KY: Definitely. I had these cassettes of “Musical Masterworks and Stories of Geniuses” (or something like that) as a child, and I loved them. Although I felt no personal identification with these historic German men, I was enthralled by the biographies and stories of the creative eccentricities of Bach, Mozart, Beethoven and other “greats.” I certainly did not see myself as possessing any particular musical aptitude; I struggled along with piano lessons, loving moments and fearing many others.

It was only many, many years later that I remembered these cassettes and what they inspired and codified in me. They instilled a love of music and an appreciation of artistry and artists. They also reified notions that those artists were only white men, who often exhibited psychological instability and selfish anti-social behaviours. It took me a long time to unlearn these hegemonic ideas and to be able to imagine differently and more expansively who can be an artist and how one can be an artist.

20 brown, 19.

LJ: There are a few reasons why this particular flower is a part of my `boundarymind` instrument. The most obvious one is that dried flower bouquets and framed dried flower arrangements were an integral part of the decor of the cottage. The same bouquet of dried thistles in an orange vase survived intact in one of the bedrooms for a number of years. It has never been replaced. The flower patterns and decorations are very common among Eastern European cultures, perhaps representing rural life’s interconnected rapport with nature.

The other reason is somatic. They are simply incredibly interesting to touch! They are prickly, yet soft. They need to be treated with the right amount of pressure, so that they don’t hurt the one who touches, and so they respond with intricate sonorities. They are like sonic hedgehogs! Around 2013 I started improvising with materials I’ve never used before, like a prepared snare drum, various friction surfaces, microphones, and pedals. I was quite amazed that I was getting interesting enough results purely through focusing on tactility, touch, and somatic experiences of sound production. Over twenty years of violin playing didn’t open my ears quite as much as the art of touching objects in non-descript, non-informed ways.

A beginner’s mind attitude, when you flow with the notion of not knowing what you are doing, became a very useful practice when I started working on Hanna Hartman’s music in 2014. Meeting Hanna and learning her music provided me with a fascination for activating the childhood object as instruments in `boundarymind`. Hanna sensitised my listening and tactility, and—with the totality of her sound art and composition practice—showed
me that one can approach creating music without necessarily going back to school to get a composition degree. Thanks to the encouragement I got from her, I dared to take a creative turn in my musician’s life, from interpreter of new music to an integrated music creator.

In co-composing boundarymind you and I never directly discussed authorship, which I find particularly important to highlight, especially as we each label our primary musician identities differently. You are primarily an improviser and composer, I call myself a new music performer and violinist. In boundarymind it would never make sense to create production hierarchies and engage in a binary approach typical for notated music. The co-authorship perhaps most poignantly surfaces when we try to verbally describe what boundarymind is about, despite each of us only holding half of the knowledge. Despite traveling on this journey together and sharing an archive of files and documents, we each hold a somewhat different map of the piece. Layering these two maps underneath one another, spotting the discrepancies, and tenderly co-composing is perhaps the closest we will ever get to summarising our process in a sentence. It is only in academic presentations that I feel compelled to elaborate on the notion of co-authorship, to argue for a shift in perspective on what performers can do, with the hope that one presentation at a time, we will continue to contribute towards a more multidirectional approach to classical music education, job opportunities, and funding structures.

KY: I love that you’re playing thistles Hanna sent you! It illustrates so perfectly how sounding our boundarymind objects opens up the potential for us to inhabit a fluid past-present-future temporal-geography in which our ears are listening, in the case of your thistles, to the sounds of now-wherever-you-are; Berlin-2019, Poznan-2015, and Poznan-1989 all at the same time. As brown puts it, “here you are, in the cycle between the past and the future.”

For me, the cement in my set-up functions in an analogous way, charting this past-(present)-future cycle. When I try to conjure up memories of my childhood, our cement driveway is one of my most salient memories. I remember entertaining myself when I was supposed to be doing chores by raking the pine straw that I’d been asked to remove from the driveway into the geometric patterns of an imagined floor plan. I felt empowered producing the noisy overtones as the metal rake scraped the cement. Although the walls were made of air, I felt cozy and at home inhabiting the space I created for myself, with winding corridors, lots of windows, and oddly proportioned rooms. When I play the groove of the cement block with a small rake in Movement 2 of boundarymind, I attempt to conjure the realness of that imagined childhood structure. And of course, thanks to its ubiquity in American (sub-)urban planning, most any day, cement offers itself to me as a texture and substance through which to say, “Here you are, Katie, in the ‘cycle between the past and future.’” Do I accept this invitation? Not nearly often enough!

LJ: It dawns on me that in fact you do have a very tangible rapport with your objects, even with the way you use them performatively, and that the memories you have of interacting with them place boundarymind on a continuum of your life’s history, rather than, as it is in my case, on a separate, lane of imaginary what-ifs. None of the objects from my collection were toys, none of them I even held in my hands. They were just there— in the space of the cottage; inanimate, mute, austere and bizarre decorations. Like the eerie, antique brush for weaving, which I am now bowing. Or the clay pots, whose rims I am circling against with a single bow hair. Or the old manual coffee grinder, which, when it is connected to a delay pedal, creates stuttering loops. What if, as a child, I accidentally hit them, or brushed against them? But I didn’t. They were decorations on display, surrounding me. In my defence, they were hanging or placed too high for me to reach, and the musician in me wasn’t yet awake. The child accepted the materiality of the space as a given, as normalcy of a home. Years later, the musician visited the cottage with an altered sense of listening, and a gratitude for the atmosphere of the cottage, that many other spaces the musician had visited couldn’t live up to. The musician reimagined the existence of the space from the child’s nostalgic musings, that child still living inside the musician.

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KY: True, but the space that you, as a child, accepted as home was most certainly also infused with the kind of magic that children seem to bring to experiencing the world as “populated by animate things rather than passive objects.” 22 During the time of boundarymind, a lot has changed for each of us individually and, very palpably, in the world around us. One of the biggest changes for me during this period has been becoming a mother. This role was not one that I longed for or immediately felt at ease assuming, but it absolutely has expanded my capacities, even as it puts excruciating demands on my attention and time. As we have been turning imagined childhood memories into sounds, I have had the privilege of witnessing my child’s imagination develop. Observing this has added new layers of poignancy and meaning to our project of listening and collaborating through objects from our pasts in order to create shared meaning.

Every day I witness Julian, who is almost four, create meaning, joy, and a sense of well-being for himself by infusing his toys and the objects of the world around him with “their own problems and emotions, as well as a sort of social life, entirely comparable to our human one.” 23 He asks profound questions about why and how the world works (he once asked, “do you think there are two universes?”). He asks constantly about the thoughts of so-called inanimate objects, demanding that I imagine the world from another’s perspective: “What is [insert anything he’s curious about] saying?” Some of his recent favourites have been, “What are the ants saying?” “What is this corythosaurus [toy] saying?” “What is the basil plant saying?” “What are the tomato plants saying?” I often struggle to come up with a satisfying response. As I write this, I’m realizing, I can just reply, “Let’s listen a little more carefully. I’m sure they will tell us!”

I’m no expert in cognitive development, but from what I know, Julian is not exceptional—these are totally normal behaviours. These questions and considerations evidence with his developing sense of morality. There is an ethics that comes with the wonder-filled belief that anything could speak, have desires, have feelings. This ethics demands that we must be careful not to step on the ants or play too rough with the corythosaurus. We should wonder what the basil experiences when we pick it. We must be responsible and remember to water the tomatoes.

As political theorist Jane Bennet writes in Vibrant Matter, she intends “to think slowly an idea that runs fast through modern heads,” that “matter [is] passive stuff ... raw brute, or inert.” 24 For Bennett, her research is philosophical and political in its perspectives and intentions. Philosophically,

> The quarantines of matter and life encourage us to ignore the vitality of matter and the lively powers of material formations, such as the way omega-3 fatty acids can alter human moods or the way our trash is not ‘away’ in landfills but generating lively streams of chemicals and volatile winds of methane as we speak. 25

Furthermore, politically, she advocates for the vitality of matter because her “hunch is that the image of dead or thoroughly instrumentalized matter feeds human hubris and our death-destroying fantasies of conquest and consumption.”26

In contrast to the wood and ceramic of most of your boundarymind batterie, mine includes a lot of plastic toys. The mardi gras beads, transformer cars, and toy bus are stand-ins for the thousands of plastic toys that I came into contact with as a kid. Remember

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23 Tokarczuk, 15.
24 Bennett, vii.
25 Bennett, vii.
26 Bennett, xi.
Worries about the number of things we own are likely brought out by spending over forty years of their lives in scarcity and lack, due to the post-WWII communist People’s Republic of Poland (PRL), and they have a hard time discarding things. Sometimes it is hard to discard things because they are beautiful, precious and special things—antiques, art pieces, memorabilia, like my paternal grandmother’s alarm clock, which I am using as a part of my installation in movement 1 of boundarymind. Sometimes, however, it is because my parents still hold on to the worry of tough times in the past. Experiences inform our individual and collective psyche in numerous ways, and as an evolutionary species we will perhaps endlessly struggle with balancing our survival and protection with striving for enhancement of our condition, which isn’t necessarily contradictory, however, it depends on what you consider a necessary betterment of human existence.

In Mellor, a village near Manchester, an archaeologist uncovered British-Roman settlements, and reconstructed them. You can enter and crouch inside an Iron Age hut, made of pebbles and covered with hay, moss and branches, where our ancestors slept in the damp and cold on bare ground. We have always existed within the vortex of Earth’s forces, being a part of a larger interaction of matter, something that we have been trying to understand, conquer and dominate— to a very poor result!

Although my generation can no longer relate to such deep-rooted concerns of not being able to have enough clothes or plates, in our wasteful, single-use times, we need to keep worrying about matter, its surplus and purpose. Can we justify production and acquisition of all these things that we will undoubtedly have to leave behind one day, when our material bodies will wilt and perish? I started deeply worrying about what I am going to do with my parents’ stuff one day, after I had come across a Forbes article by Richard Eisenberg titled “Sorry, Nobody Wants Your Parents Stuff”. I went into a dark place and started imagining bonfires like in the TV series “Six Feet Under”.

To some extent boundarymind has been therapeutic because it allowed me to reckon with my nostalgia and directed me towards a process of letting go, of arranging my stories and memories around just a few significant things. I found another meaningful purpose for the objects, which eventually I will need to part way with. They have crossed the Atlantic, they are starring as dancers in a short film, they sing in our composition. Giving them a performance opportunity in boundarymind reminds me of the famous Song Dong installation Waste Not (2005), in which the author displayed collections of over 10,000 objects gathered by his mother, which informed his upbringing during the Cultural Revolution in China.

Art is a space of transformations, of healing and of exercising alternative perspectives. Perhaps it is the safest and most accessible place in which we can put different spins on reconciliation of our pains and worries? Although art reveals vulnerabilities, it also provides endless ways of reaffirming one’s agency. Entering into someone’s art zone, their relative reality, observing the tools they use to challenge or appease it, is a powerful and intimate encounter.

At some point during my recent years of new music performing, I became dissatisfied with the artist-audience divide, and wondered whether there was another way of interacting within the space of alternative possibilities together. I wanted to share not only the fruits of our efforts, but also the process itself, and work towards a living and malleable type of composing.

This is why we will create social archiving events, in which we invite the public to contribute sounds to our piece by setting up recording stations in a couple of art spaces around Chicago. By sharing our process of listening to the sounds of significant objects, we are hoping to invite a conversation and exchange of perspectives, and experiences. Does our process inspire others to reconsider what surrounds them, what they hold onto, how they interact with matter, and where do they store their memories?

**Conclusion**

From its beginning, boundarymind has spun out beyond the two of us. Spanning eight years, our transatlantic process required us to travel to work together, and a number of people supported and impacted the project along the way by offering housing, rehearsal space, encouragement, creative feedback, technical skills, physical materials, and other things. Their kindness and generosity stimulated and sustained our collaboration and became a part...
of the work’s methodology, and these “systems of mutual connections and influences” have shaped the piece, and we hope have allowed us to “create constellations capable of describing more, and in a more complex way, multi-dimensionally.”

We also brought on two sensitive and thoughtful collaborators—Kera Mackenzie and Molly Roth Scranton. Kera created the film mentioned above, in which these time traveling objects spin, jitter, and pop in and out of the frame. The third movement of the boundarymind performance features Kera’s film projected onto a sculptural weaving created by Molly, with a fixed media sound piece made of recordings of the objects diffused throughout the space. Then, we have our partnering organizations: 6018 North, Experimental Sound Studio, Roman Susan, and P.O.Box Collective. 6018 North, the planned site for the premiere installation / performance, is a large, old house that Tricia Van Eck has transformed into an exhibition, performance, and community gathering space. Under Van Eck’s curation, individual pieces of art embed themselves into the architecture and interior design of the building, as 6018 North becomes its own work of art. The building and works that were part of the show that was up during Summer 2019 are major characters in Kera’s video, which was partially shot on-site. Meanwhile, the efforts of Olivia Junell at ESS, in particular, have been formative to how boundarymind has evolved. All of these partnering organizations will be crucial to our community archiving efforts.

To honour the many participants in our process, we invited everyone to contribute to our performance/installation. We asked them to donate an object, which could be of any possible meaning to them—important, indifferent, emotional or inconsequential. Molly has woven together bow hair, pine straw, ex-boyfriend’s T-shirts, wedding rings from defunct marriages, floppy discs, and stuffed animal toys into a three-dimensional (or perhaps, if we are open to time travel, four-dimensional) sculpture that will hang in the middle of the performance space.

Symbols of the personal exchanges we have had during boundarymind’s germination find their way into boundarymind’s very fabric. Molly has designed the sculpture around the contributed objects, and we have designed performative choreography around the sculpture: at first the sculpture acts as a divide, with each of us on opposite ends of the room. Then, as the light bleeds through and scatters throughout the space, Kera’s projections transgress the boundary created by the weaving. Sounds will also be diffused throughout a 4-channel system in the room, activating all corners.

After this exquisite transgression of the piece’s artificial boundaries, we will come to the center of the room and stand back-to-back on either side of Molly’s sculpture to perform the last movement. Relying on proximity now to feel and hear each other’s most subtle movements and breaths, we will play an acoustic piece for violin and bassoon.
Tokarczuk the storyteller states, “The world is a fabric we weave daily on the great looms of information, discussions, films, books, gossip, little anecdotes…. When this story changes, so does the world. In this sense, the world is made of words.”31 We also make the world through sounds. As Oliveros reminds us, “What is heard is changed by listening and changes the listener.”32

We began our work—and consistently check-in—with what is close at hand and heart, our individual memories and relationship forged through acts of vulnerability, sharing, criticality, and imagination. We are inspired and emboldened by brown’s articulation and practice of emergent strategy as “ways for humans to practice being in right relationship to our home and each other, to practice complexity, and grow a compelling future together through relatively simple interactions.”33 We know there is always more we can do, so we accept the challenge put forth by brown’s emergent strategy to do as much good as we can through and within our work, so that “we intentionally change in ways that grow our capacity to embody the just and liberated worlds we long for.”34 For these reasons, we continue to work to listen “in as many ways possible simultaneously—changing and being changed by the listening.”35

31 Tokarczuk, 3.
32 Oliveros, 1.
33 brown, 24.
34 brown, 24.
35 Oliveros, 2.
Subverting by not subverting is an open proposition. It is a way we might reconsider the lens we use to look at free improvisation history and practice. This article is non-linear in form, which experiments with alternate ways of presenting and thinking about research. Through a collection of short articles, a larger picture is drawn about free improvisational practices and voices which are operating outside of the traditional radical representation of the canon. I look to further critical thinking about freely improvised art by noticing bias in our ‘normative’ Eurological perspective. We do this by uncovering the product of the subverting/subverted binary towards uncanning new histories and future traditions. As a jumping off point I ask us to move from independently considering bodies, objects, contexts, and spaces, to listen to them collectively with no distinct definable edges. By considering many agents at play in free improvisation practice, we look through a lens of drifting socio-political, experiential and individual freedoms. We consider how these factors are at once all at play and always in flux: in drift.

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Composition, Technology, and the Posthuman

ANDREW A. WATTS in discussions with STEFANO CORAZZA, CONSTANTIN BASICA, JULIE HERNDON, ANDREW BLANTON, and CAROLINE LOUISE MILLER

Introduction

In 2014 I moved to Palo Alto, California, a town many would consider to be in the epicentre of Silicon Valley, a global capital for high technology and innovation. Before moving to California, my work as a composer had included technology as an occasional added feature, but nothing more. I had not yet embraced it as vital to my topics of musical interest, central to my output, or necessary for my process. However, once in Palo Alto, I pondered how this new environment might impact my compositions. In the beginning, I felt the presence of tech, be it giant corporations or start-ups, to be an inescapable and dominant influence on the local culture. Over the following six years I sought to integrate, when appropriate, many of the tools and concepts that were being developed in this unique environment with my artistic voice in a genuine manner.

The works1 I composed during this period often seek expressivity through dialogues between humans and machines. I addressed themes of desemanticized communication and the physical limitations of both parties. The conflict between performative elements only a human can carry out, and those only a machine can execute, fascinate me and feed my artistic drive. Living in Silicon Valley and being surrounded by an innovation-obsessed culture inspired me to aim to express the qualities that make something artistically more human or less human. My music often turns toward mechanical precision and the implementation of electronic sound sources, and yet, I regularly have human performers imitate these inorganic entities. My own perspective on posthumanism wants to maintain the intimacy and immediacy that is inherent to the organic, corporeal human voice, while also obfuscating language’s meaning—the latter being a typical behaviour of machine-like systems.

What it means to be posthuman, a work for vocal sextet with electro-acoustic augmentation, was an opportunity to, in a singular effort, make musically manifest the disparities between the aforementioned entities. The composition focuses on novel augmentation of the body through ad hoc instrumental prototyping, an approach that was inspired by the DIY maker/builder culture common in the Bay Area.2 In What it means to be posthuman, synthesized speech is projected into the mouths of singers; their oral movements actively change the sound of a computer-generated voice in performance. Technologies that were purpose-built for this project strip the literal meaning from some selected texts, providing a space to bring sound-based nuance into a dialogue with non-semantic expression.

What it means to be posthuman explores how technology can utilize the human body as an acoustical space, with live performers modifying the playback environment while philosophizing on profound tenets of humanism. The work imagines a futuristic, hive-mind scenario with the singularity represented as a synthesized voice made manifest through cyberpunk-looking headsets. This synthesized speech of the imagined hive is given a physical host in the human performers. As such, a strange virtuosity is achieved: a hocket of “voiceless” vocal expressiveness across the group. Through my experience of writing What it means to be posthuman, questions arose regarding artistry, often concerning individual expression, and the expanse of industry, typically considering efficiency through mass uniformity. These questions coalesced into:

What if our physical bodies become nothing more than shells to host human made technologies?
Are technological advances reducing the qualities that make someone an individual?
Will the omnipresence of distributed intelligence lead to absolute homogeneity?

I realize such questions, henceforth identified as the “preliminary questions,” are not specific to our present time and place. Well before the invention of the integrated circuit, microprocessor, and other core developments that led to our Digital Age, philosophers Martin Heidegger (1889–1976) and Karl Jaspers (1883–1969) independently questioned the

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1 Documentation, audio and video content for these works is available at [www.andrewawatts.com](http://www.andrewawatts.com).
2 For example, the annual Maker Faire in San Mateo, California.

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ramifications of technology on society. Their works\(^4\) have proven to be highly influential, with some scholars\(^5\) linking particular concepts from Heidegger and Jaspers to current discussions on posthumanism and tech-centric culture. Heidegger and Jaspers may be viewed as major figures who provided the groundwork for future discussions on technology and the posthuman. It is important to note from these examples that the examination of technological integration in our lives has been ongoing for generations now. It is not a novel concept tied to a specific zeitgeist. Rather, I view the works of thinkers and creators from different eras, including our own, to contribute to a larger discussion on the ongoing relationship between humanity and technology, allowing for new facets of the evolving symbiosis to be uncovered.

Today, amidst the innovation-centric companies and institutes throughout the Bay Area,\(^6\) there are several artists and composers I have encountered who have one foot firmly placed in the implementation of cutting edge technologies and the other in principles of humanism. Within the artistic community in Silicon Valley, I am not the only one who has responded to these topics with compositions. What this article aims to highlight is several different perspectives from those living in the epicentre of tech today; addressing the zeitgeist, atmosphere, and impact of our Digital Age (and beyond) through their original works.

In early 2019, I started planning ways to interweave a collection of musical perspectives on these issues, along with my own composition What it means to be posthuman. This project became a curated concert series entitled “Technology and the Posthuman” hosted at three of the Bay Area’s institutions most closely tied to musical innovation: CCRMA\(^7\) (Stanford University), CNMAT\(^8\) (University of California, Berkeley), and C4NM\(^9\) (San Francisco). Accordingly, the composers featured in the series were based locally and would present their own perspectives on the concert theme through their original works. Constantin Basica’s Chatbots envisions a post-apocalyptic future in which the only remaining humans serve as voice donors for their overlords. Julie Herndon’s A Long Postlude expressively reimagines the 19th century Graham-Bell “photophone,” a device reflecting sunlight to wirelessly convey speech, by converting light bulbs into independent characters. Andrew Blanton’s MÖDULATOR explores iPhone/iPad improvisation by mixing one mode of human perception (sound/hearing) with another (touch/tactility). In doing so, he emphasises how devices can help us to better understand the way we perceive the world. Finally, Caroline Louise Miller’s Sound Masses for Dark Times orchestrates different tracks such that they sound together as a mass of industrial decay, resulting in the practices of mashup and remix.

The proposed structure for the concert series was informed by the Festival of the Impossible, a three-day exhibition that took place in San Francisco. According to their website, the 2019 edition of the festival was “a journey into the intimacy of Human-Machine, a concept which involves interaction through augmented experiences as well as enhanced human senses and deeper personal connections.”\(^10\) Stefano Corazza, the Creative Director and Founder of the Festival, was slated to give the pre-concert talk for “Technology and the Posthuman.” Given that his multidisciplinary artistic practice is well aligned with my series topics, his interview provides the jumping off point into the preliminary questions; questions “that evoke wonder and challenge our thinking about what could be possible as we move into the future.”\(^11\)

It is important to note that the aforementioned concerts, planned to take place at CCRMA, CNMAT, and C4NM, were scheduled for the spring of 2020. However, due to the COVID-19 shelter-in-place orders that were given throughout the San Francisco Bay Area the series has been postponed. In the meantime, each of the figures involved has kindly outlined their views on “Technology and the Posthuman” and discussed their practice through recorded interviews. The recording sessions were kept largely colloquial. Though the general topics were made clear in advance, the specifics, beyond the structural preliminary questions, were formed as impromptu conversations in the sessions. From a technical standpoint, each interview’s audio and video were recorded via Zoom.\(^12\) After the sessions, I excerpted and transcribed the most pertinent passages. Finally, these passages were then reviewed by the respective interviewees for accuracy.

In short, regardless of the effects of the COVID-19 pandemic on the concert series, this article will discuss these works from the past decade that confront Silicon Valley’s innovation-obsessed culture and the artistic ramifications of technological choices. Versions of each installation and composition are linked in the footnotes for each respective artist. Please refer to these hyperlinked videos to gain a fuller understanding of the discussed pieces.


\(^{6}\) The San Francisco Bay Area covers dozens of cities and towns beyond what is traditionally thought to be “Silicon Valley.” Nevertheless, within the scope of this article, the Bay Area as a whole is entangled with the presence of the tech industry.

\(^{7}\) Center for Computer Research in Music and Acoustics, 660 Lomita Court, Stanford, CA 94305.

\(^{8}\) Center for New Music and Audio Technologies, 1750 Arch Street, Berkeley, CA 94709.

\(^{9}\) Center for New Music, 55 Taylor Street, San Francisco, CA 94102.


\(^{11}\) “Human Machine, 2019.”

\(^{12}\) Zoom Video Communications (the American technology company specializing in videotelephony), not to be confused with Zoom Corporation (the Japanese audio company specializing in handheld recording devices).
Composition, Technology, and the Posthuman

Stefano Corazza — Festival of the Impossible

AW: What do the terms posthuman or posthumanism mean to you and, broadly speaking, how do they fit into your compositional work at large?

SC: I feel like our civilization is very egocentric in the sense that we believe that we are the ultimate result of natural selection, right? And evolution. But if you actually zoom out, you realize that the goal of natural selection and evolution is just intelligence. If you look back, we evolved from plants to animals to humans just in stages of higher consciousness and intelligence. If there was, in the future, a way to continue that progression that may not involve biological beings like we are, nature will be totally fine. The goal is not preserving humans, the goal is enhancing intelligence. And so, I'm fascinated by these leaps into the future in posthuman societies, like the one that I had my art installation Ractive in The Festival of the Impossible last year.

[Fast] forward 1000 to 2000 years [...] maybe there will be still some anthropomorphic being out there, but they may not be biological at all. They may be Android [...] maybe humanoid in the way they look because they initially originated as companions of humans, but then they take their own route to evolution. It's fascinating to me to imagine what that could be. I find myself trying to brainstorm what a society based on telepathy will be, because these machines will be able to wirelessly share feelings, thoughts, [and] experiences with each other. Like what we dream, in telepathy. [What] kind of world would it look like? Would people still go around, or [would] androids go around, or will it be all one synchronized brain? Right? It's a fun exploration to try to imagine the future, and then I like to put that in art form, and then put it in front of people and see how they react to that new reality.

AW: Do you believe there's a point in time when our physical bodies become nothing more than a shell to host our technologies?

SC: Yeah, absolutely. And then we can go even further where [at] some point we don't need the body anymore, right? The biological body is a phenomenon in terms of the capacity to store energy, utilize energy... [it's] very energy efficient. But it's very prone to diseases, and we are witnessing one pretty major now [with COVID-19]. All [these] problems don't exist for electro-mechanical bodies. I think there's still a current massive advantage because we're not even close in robotics to where the human body is. But I think at some point we will cross that threshold.

AW: Will distributed intelligence lead to absolute homogeneity?

SC: The main difference, if you think about the intelligence of a human being and how he evolves and the presence of a computer that is connected to the Internet or to other beings, is if those two had the same exact capacity to learn (if they were completely equivalent, like in terms of neural network structure, and how they can learn, how fast they can learn), the first one, the human, is basically learning through the five senses. It can touch a finite number of things, can smell, things, can see things, right? But the machine, connected to the internet, has the whole world of data available. That is [a] massive differentiation where if at some point intelligence evolves to a level that the machine is as intelligent as the human, by having access to all of the word through this interconnected brain, then it's going to be orders of magnitude ahead... over us.

I think the bigger [hurtle] for that is to be able to connect all the data of the world in a way that can be fed into this intelligence. The connected intelligence is definitely a great concept. Anyone connected to that [will] be able to leverage it. It's similar to what we are doing today with Alexa15 if you want. Right? If Alexa was the only interface that we connect to, and then that had all the world's [knowledge], that will be this concept of

14 Documentation for Stefano Corazza's works is available at www.stefanocorazza.org.
15 Alexa is a virtual assistant AI technology developed by Amazon.com.
AW: Could you describe your process creating [Ractive]?

SC: For Ractive, I sent an email to a lot of my artistic friends and I said, “okay, if you were in a room by yourself in front of an android from [the year] 3282 and you have three minutes, what would you ask that person?” People gave all kinds of answers, but ultimately, they were all super intrigued and there were really deep questions. And for me, I have an amazing curiosity about the future. And so, I wanted to offer that experience to a bunch of people. And seeing the response that [my friends] gave, it felt like I latched on to something that was very powerful and very emotional.

And so, I decided [to] try to make [the hypothetical android encounter] as realistic as possible. We [then] figured out that the only way to make AI be emotional is it needs to be driven by a real human. Therefore, we hired stand-up comedians—people who [perform] all the time. We figured out how to drive the character from backstage in real time. And we figured out also to make the experience immersive so people were wearing this head tracker so that they can go in and they feel like they are in the environment. All these pieces were just to augment the power of the emotional connection with the android. Blade Runner is one of my favourite movies... and that idea of the connection between the android, the machine, and the human is super powerful to me. I just tried to make [Ractive] as realistic as possible. And about 80% of people thought [the android depicted in Ractive] was AI.

I think that the performers we had were phenomenal. They were even able to do the right intonation, so it looked like a very boring machine as opposed to a human. And people completely bought into that. The vast majority of people thought that was AI. Even family members of mine came to me and said, “What technology is that? It’s amazing. She knew my name.” I’m like, “of course, because I told her.” But yeah, that was my process: start from a basic idea, test [to see] if that generates any kind of deep emotional connection, if that’s the case, try to make it as true to the idea as possible.

AW: Two things come to mind as you were describing that. The first is the Turing test, because, as people are experiencing Ractive, they’re thinking that it’s an AI, but it is actually not an AI. It’s a weird spin on that [saying]: “art imitating life imitating art.” Well, this is like humans imitating robots that are then actually humans. We are used to the gaps in the technology, right? We are used to text-to-speech sounding a certain way that is distanced from how we would naturally speak. [The android] is imitating that gap, which may not actually be the case anymore.

SC: It’s gone full circle... and then half of a circle.

Constantin Basica — CHATBOTS

AW: I feel like I’ve witnessed multiple takes on posthumanism within your work. In your composition [Knot an Opera!], the section directly after the Chatbots section you’ve even labelled “posthuman”. And the plot, which we’ll get to in further detail, is definitely a world after humanity. But there are plenty of other works [of yours] that I could point

16 The Turing test, named after computer science pioneer Alan Turing, is a test of a machine’s ability to exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human.


18 Documentation for Constantin Basica’s works is available at www.constantinbasica.com.
to that take more of a [perspective that] technology is an extension of human expression. So, I think you have a foot in both definitions.

CB: Yeah. I grew up with science fiction movies, electronic music, and things related to technology. I think more recently, as in 15 years ago or so, I’ve started really engaging more with technology in my own work. It’s been an exciting path to work with different emerging technologies, but also older technologies, and finding ways of making sense of them in just working with technology for creative work. So yeah, that’s a good point about that specific point in the opera that actually does use the word “posthuman”. It’s something that I find very interesting. To think about: What is the future? How will all this influence the way we live?

AW: Are technological advances reducing what makes someone an individual?

CB: I think it does reduce [individualism] a little bit, but it also enhances it a lot. I’m thinking of things like Web 2.0, where everyone has a thing to say on the internet, but it’s all part of this huge machine that everyone has access to it. It’s a matter of how we use technology: whether it makes us more able to express things as individuals, or whether it flattens everyone in a way, and makes everything more homogeneous. For me, for sure, I think it enhances individuality. I mean, technology definitely gave me a lot of ways of expressing things. [For instance], when I got my first computer, that’s when I actually started composing, like properly, because I had this software that I could suddenly write music. [I then] started doing my own personal CDs, and doing music and sharing with friends. And I shared [my music] with my piano teacher who said, “Well, why don’t you study composition?” And I was like, “What is composition?” So […] technology and homogeneity] could go both ways… I think it depends on each person.

AW: Could you briefly explain the context that Chatbots was written for?

CB: So Chatbots appears towards the end of [my] opera [Knot an Opera!] after a lot of sketches that are, let’s say, quite comedic, and [Chatbots] catches on to what I would say is more serious or…

AW: Sombre?

CB: Yeah, exactly. It’s very sombre and tries to put everything into balance with what happened before by making this giant leap into something that’s dark about the future of humanity. But at the same time, it’s still a little bit comedic because the point of it is that in the future humans have been turned into slaves by this very primitive technology that is chatbots. It is something that’s supposed to be the beginning of artificial intelligence, but never actually reaches intelligence because it’s just learning from what we speak and what we say, but never actually developing intelligence.

[My brother] writes poetry that is very sombre and apocalyptic sometimes. So, I asked him to send me selections of his poetry. [When] I started going through it I chose some of the lyrics that I found that could work for this idea to translate it by using technology that is on a similar level as [internet] chatbots. So, online translation tools and the whole idea for this sketch came from doing internet searches to come up with inspiration for the piece. [Along the way], I encountered this very funny and dark conversation between two chatbots. They even have 3D shaped persons and they seem like they’re interacting. It’s really disturbing to watch and to listen. I’m not even sure that [the conversation text] could even be something that was created by someone [intuitively] and not an actual conversation between [two legitimate chatbots]. But regardless, it’s very entertaining and disturbing to watch.

So, I wanted to do something in that vein and use my brother’s poetry, but I wanted to translate it with generic tools because I knew that [the software] won’t be able to translate it perfectly. I knew there was going to be some degree of error in it, and I wanted to play with that error; to portray this idea that [modern AI] is an imperfect tool that won’t actually display the intelligence that we’re hoping for in an intelligent artificial being.

**Julie Herndon — A Long Postlude**

![Figure 4: A performance of A Long Postlude at CCRMA Stage, Stanford University.](https://vimeo.com/260497057)
Julie Herndon is currently a Hume Fellow pursuing a doctorate at Stanford University. Her work explores the body's relationship to the self, to performance, and to tools like musical instruments and personal technologies. Her electroacoustic work has been described as “blended to inhabit a surprisingly expressive space” (San Francisco Classical Voice). Based in Oakland, California, Julie (henceforth abbreviated as “JH”) spoke with me on March 27, 2020. Below are excerpts from the recorded interview.

AW: What do the terms posthuman or posthumanism mean to you and, broadly speaking, how do they fit into your compositional work at large?

JH: I define posthuman and posthumanism as an idealized world that inherently emphasizes technology in the way that we use it now, but is also reminiscent of this almost rationalist renaissance of...

AW: The Age of Enlightenment?

JH: Yes. It is, to me, a second wave of that, using technology as its primary tool. [...] I see it as an interesting language and, by an interesting language, I mean an interesting paradigm that makes the body optional in a lot of ways. That’s how I understand it. And at times the body does feel optional. But in my own work, when I compose, the way things feel physically and the way that music is experienced is more phenomenological than technological. What’s interesting to me is the memory, the individualism, the physicality of things. And so, [posthumanism] is not a paradigm I am inherently attracted to, though it is something that I am interested in thinking about.

AW: Will we reach a point in time when our physical bodies become nothing more than a shell to host our technologies. Are we already there? Have we passed this point? Is it on the horizon?

JH: This question reminds me of the Catholic Church way back in the day. During the time of Palestrina, the Catholic Church was saying something like, “We need to be spiritual. We can’t promote anything except spirituality. And a sensory pleasure like polyphony is distracting everyone from what’s really important.” And then Palestrina wrote this really beautiful, intelligible polyphonic piece (Missa Papae Marcelli) that probably influenced the Council of Trent not to condemn polyphony after all. It’s probably just a legend, but I guess in every time there’s some kind of movement saying, “Hey, bodies are less than our minds. Bodies are less than our spirits. Bodies are less than our souls.”

I also think it’s interesting personality-wise. Bell invented the phone. He was in this patent war with Edison, who also did the phone, and somehow Bell got the patent in right before Edison. But he didn’t want to be just “the phone guy”. He wanted this other feather in his cap. He wanted that next innovation and that next great thing. And he thought, “The photophone is it. This is so cool. This is my thing.” He even wanted to name his daughter “Photophone.” He was so into this idea, but it obviously ended up not working.

But there’s the fervour of “How can we use technology? And what we can do with it?” Sometimes you end up doing something that’s a lot easier to do in another way. So, bodies aren’t just being hosted by this other thing; there’s biofeedback (for one), and things influence each other [...] Our bodies aren’t possessed. Our minds are just the co-host. Our minds aren’t being hosted by our bodies. [So] I buck against that line of thinking because it creates a dualism that is very Cartesian in a way that I don’t think is accurate. We’re so entangled that [...] I don’t think there will be a point in time when physical bodies only become a shell. And if there is, it will be a different life entirely.

AW: The period that you referenced in your work A Long Postlude with Alexander Graham Bell is The Age of Electricity. This is the first time in human history where you could communicate almost instantaneously across the whole world, effectively utilizing a technology to extend our voices much further than otherwise humanly possible. As such, would you point to this as proto-posthumanism? That’s a lot to get out as a term “proto-posthumanism.” But the notion of humanism was well established. Then of course you had The Age of Enlightenment that we already talked about. Posthumanism wasn’t really a philosophical thing yet, but in a way, this is like a prototype for the posthuman concept, right? You’re using technology to extend the capabilities of human functions.

JH: Yeah, I think there are a lot of similarities between that time and the present because there were so many new technologies. Electricity was a new technology and it was also exploring ways that it could be used, and some of them are duds and some of them are not. [For instance], we use light to send data through fibreoptic cables now. So, we’re using light to communicate. Bell was thinking of light-based communication then (with the photophone), but it didn’t really work in his conception because you have to be within eye-shot of the person. It basically used flashes and mirrors; it didn’t go through a cable. But Bell was onto something, thinking “Oh, light! We could use light to do stuff (other than just see).” It was prophetic in a way, and that’s why I think it was interesting.

I also think it’s interesting personality-wise. Bell invented the phone. He was in this patent war with Edison, who also did the phone, and somehow Bell got the patent in right before Edison. But he didn’t want to be just “the phone guy”. He wanted this other feather in his cap. He wanted that next innovation and that next great thing. And he thought, “The photophone is it. This is so cool. This is my thing.” He even wanted to name his daughter “Photophone.” He was so into this idea, but it obviously ended up not working.

Sometimes you end up doing something that’s a lot easier to do in another way. So,
Composition, Technology, and the Posthuman

The photophone is a little bit of a warning in the rush to capitalize on everything a technology can do. You can end up short circuiting an existing technology or an existing method that is actually more suited for your needs. So, I guess that’s one parallel.

I do think it is proto-posthumanism, but I also think that religion, in a way, is proto-posthumanism too. Catholicism, like I was talking about [pre-Council of Trent], was the big thing. Their whole idea was that our bodies are just here to support our souls. And that our souls are the most important thing. And our souls are going into this afterlife. Maybe a monastic life of cultivating the soul at the sacrifice of the body is similar to what you described in one of those screen-fitted pod capsule hotels.

AW: That’s a good point. I honestly had not thought of posthumanism in the sort of religious terms that you’re bringing out, with the exception of maybe cults. There is sometimes this cult presence to technology, especially with new technologies where people proclaim: “it’s the future, and we should all adopt it.” A lot of what you’re saying—connecting traits of well-established world religions to notions of posthumanism—is really fascinating. Is there an imagined nostalgia for the novel expressivity in this lost technology (the photophone)?

JH: There’s maybe a real nostalgia, because it seems really quaint and I like it. [Those technologies are] not cutting edge now, they seem like a “crazy idea,” but they have been endeared by time. Bell was really trying something different.

AW: Is the use of lights styled after old incandescent bulbs in A Long Postlude beyond a technical decision (i.e. the ability to fade the light intensity smoothly)? Is this an aesthetic statement, a yearning for a step back to the buzzing warmth of analog in an increasingly cold digital world?

JH: There are two parts to that.

The first part of the answer is about the Edison bulbs. You can’t dim and brighten LEDs in the same way that you can an incandescent bulb. The light just works differently. The piece started with an interest in dimming and brightening incandescent bulbs. That also became the topic of the piece because it is now a remnant of a specific time where the Edison bulb was a new thing. I don’t know if it is yearning, but I do think they are nostalgic and carry a little bit of time with them. It’s not just the effect of the light, but it is also a little bit of a story when using it.

The second part of the answer is that using that sort of technology is a choice and I’m able to make that choice because other light sources exist. There are fluorescent bulbs, LEDs, incandescent, even different coloured candles—there are so many different ways to light things. Using this method is a choice because there are other choices, which is what I think is interesting about relating it to posthumanism, embodiment, and our identities. We’re able to think about how we’re using our physical identities because we almost are having this option of not needing to use them in a way. So, the same kind of stepping away, in order to have this range of options to look through, kind of comes into play.

AW: Last question. How do you perceive the juxtaposition between the prophetic nature of the Latter-day Saints General Assembly text27 and the innovation-centric Graham Bell text28 you draw upon for A Long Postlude?

JH: The relationship between the Latter-day Saints prophecy and the Alexander Graham Bell prophecy is that they’re both reaching for something outside of themselves using light. For the LDS prophecy, Dieter Uchtdorf is using light to symbolize enlightenment, for lack of a better word, spiritual enlightenment. And Bell is using the light to try to communicate. They’re both taking this material and stretching it, in two different directions, but also in the same direction. They’re both saying, “light has this capacity, what else can we do with it?”

Andrew Blanton — MØDULATOR

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25 Before the interview formally began there was a brief discussion about recent instances of individuals living an almost entirely internet-mediated lifestyle.

26 Edison Bulbs refer to any lights modeled to look like the wound filament bulbs made popular by Edison Electric Light Company at the turn of the 20th century.


Andrew Blanton is currently Assistant Professor of Digital Media Art at San José State University in the CADRE media lab. His work is fundamentally interdisciplinary, combining classical percussion, new media art, and creative coding to create real-time sonic and visual instruments. Based in Berkeley, California, Andrew (henceforth abbreviated as “AB”) spoke with me on April 14, 2020. Below are excerpts from the recorded interview.

AW: [What do] the terms posthuman or posthumanism mean to you? And broadly speaking, how do they fit in your compositional work at large?

AB: [Our] relationship to technology is complicated by our own understandings of ourselves. [A lot] of times, I think it’s hard to place ourselves outside of the understanding of our relationship to technology. By that I mean, how do we begin to see our relationship to technology objectively? I’m really interested in how technology can hold bias, and how we can engineer and design-in bias that we might not be aware of.

From this subtle perspective, we start to remove ourselves from this perspective of being inside of the technology, but rather [...] as observers of the technology in the space. The idea though, is to [...] take this meta level approach and understand the bigger pictures of what we’re working with, as far as technology goes. How [can] we interact with technology as a species? And then, how [does] technology impact the greater ecology that we live within? [...] We have to acknowledge technology and its impact on our environment as well.

AW: [People] take one of two approaches [to posthumanism]. There’s the approach that you’ve taken, which is that posthumanism is about this extension of capabilities and our relationship with technology; drawing from this long lineage that posthumanism is just extending. And then the other approach is definitely more doom and gloom, a literal relationship with technology; drawing from this long lineage that posthumanism is just extending.

AB: [When] we think about our digital devices, you and I now are talking as avatars over this communication line, which is essentially taking our ideas and thoughts and words, and translating those into electrical signals that are digitized, that are then sent over this massive infrastructure, that is then coming out the other side for us to interpret each other. This is all happening in real time, simultaneously, as we talk to each other. [With the] augmentation of our bodies, we’re sort of speaking as avatars in this third space already.

That fits into the transhumanist discourse but does not really get to the point of posthumanism. I think the discourse surrounding technology as an extension of the human body is really important in the McLuhan sense (think the ‘Gadget Lover’). But from the feminist perspective, posthumanism, at least in looking at A Cyborg Manifesto and as a riff on that idea, the later The Xenofeminist Manifesto,52 somehow dethrones humans as a superior species to all others. Like while we believe we are the dominant species on the planet, we could not exist without the rest of the natural world. And technology also ties us to the natural world through the exploitation of resources. For instance, the mining of minerals that have developed on the geological scale for use in an iPhone that is designed to last only two years is very problematic.

Posthumanism needs to be tied into how we as humans use technology, but it needs to be from a designed perspective, at least with the understanding that we are a part of a working ecology and dependent on resources that have taken billions of years to come into their current form. Pushing McLuhan beyond the technology as an extension of our bodies, I think we exist a bit more as nodes or concentrations of resources that are specifically organized to form function. I saw Newton Harrison describe human evolution and technological development as more of a dance with our environment. Things will not go back to some fetishistic 18th century society where everyone is living on farms. But rather, as a species, we need to be smart and understand and be mindful of our relationships with the planet and the role that technology plays in that development, whether that technology be digital or otherwise.

I tend to believe more in spectrums and not binaries. I think oftentimes in the posthuman spaces people can get scared and jump to absolutes and say: “Oh, we’re going to be these online realities and bodies that are going to exist only in this way, in this capacity, or we’re not going to exist at all.” [And] I think that’s the real trouble with thinking about Western philosophical discourse: we do have strong dualities built into a lot of this. [I think] a bigger part of this discourse is seeing how things naturally evolve and how we live in a world of interconnected relationships.

AW: [We’re] in a very strange time with this quarantine and COVID-19 where we can’t go out. So, what do our bodies typically mean? Well, with our bodies we can get our thoughts and ourselves to move about the world and to interact with other people. [One] of the primary functions of our bodies has been to facilitate mobility and the [...] exchange of thoughts. But this [quarantine] is a heightened period [where] our bodies are being used to just then interact with our technology. And it’s the technology that’s doing all of the exchanges and mitigating our virtual self throughout the world.

AB: There’s a lot to be said about signals and signal compression in this [virtual] space, and thinking about how there’s a lot of nuance in meeting in person. [Like] with any medium, we have a type of compression that happens, where we’re taking a full, long lived experience, and trying to reduce it to [two parameters] of that experience. In this case, it happens to be audio and video. I would also argue that [...] these systems have

30 Documentation for Andrew Blanton’s works is available at www.andrewblanton.com.
34 Newton Harrison was a pioneer in the eco-art movement. Information about his works and collaborations is available at https://theharrisonstudio.net/
A bias and that [...] we’re speaking over an optimized system right now that is made to cut out any background noise algorithmically. I’ve been speaking to some of my friends quite a bit about this space, and it really has a lot of implications [...] on how we create media, and how we create these sort of experiences. [In] thinking about how [to] create a likeness of a thing, we have to make decisions and choices. [By doing so] we make simulations [where] we have to make choices of what to amplify to make things feel more like real life. So, on the one hand, we lose something, but then maybe on the other hand, parts of my voice are being amplified to make you feel like I’m more present. And so, it’s a really strange direction, but [it] also creates a new bias, and it creates a different version of reality that tends to be reflective of the creators.

AW: [Could] you describe your process of writing the texts spoken at the beginning of [your work MÖDULATOR]? [It is perhaps] an entry into a long line of text based indeterminate works that you cite [on MÖDULATOR’s website]? [These are] works by John Cage, La Monte Young, Alvin Lucier, and so on.

AB: Yeah, and I think there’s a direct [reference] even in the text. [My text for MÖDULATOR] ends with “as we are all sitting in a room together.” This is in direct reference to Lucier. I think the positioning of [MÖDULATOR] to that is really important.

It took a long time to write that piece. I built the software starting around 2014 when I was at STEIM in Amsterdam, and I was playing with it and working with it as an instrument. The idea was that the instrument can be taken and used for whatever people wanted as [...] multiple pieces and [...] distributed as a tool or an instrument. I think of myself as a tool builder. So I built [MÖDULATOR] out [and] really wanted to formalize it into a composition as well. I knew there were [...] compositional aspects [to] it because I’ve been performing with it and then showing how it worked. But it [...] was lacking a sort of an architectural structuring that I think it needed.

[I did want to] tip my hat to that world [of sound art] and speak to it. [MÖDULATOR] is really like a contemporary version of I am sitting in a room, it’s all just compressed into a shorter amount of time and made to be performed live as a very narrow reduction of it. But I was also thinking about posthumanism a lot, about how technology extends our bodies, and how [...] we use technology in really important ways as extensions of ourselves, and [also to] represent ourselves and connections to others around us.

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36  The text for MÖDULATOR is a direct reference to the original text in Alvin Lucier’s iconic work I am sitting in a room (1969).
37  The Studio for Electro Instrumental Music is a center for research and development of new musical instruments located in Amsterdam, Netherlands.

Caroline Louise Miller — Sound Masses for Dark Times

Caroline Louise Miller is a US composer and sound designer. Her music broadly explores affect, ecology, labour politics, tactility, and digital materiality, often addressing contemporary issues within dreamlike musical spaces that thread shimmering textures and romantic melodic lines through harsh noise and clattering dissonances. Based in Oakland, California, Caroline (henceforth abbreviated as “CM”) spoke with me on April 16, 2020. Below are excerpts from the recorded interview.

AW: What do the terms posthuman or posthumanism mean to you? And broadly speaking, how do they fit in your compositional work at large?

CM: To me, posthumanism is [...] about not seeing humans as central to everything. I think it’s expanding the idea of other materials and objects as life forms, [and] thinking of them as more central to the universe. It’s a way of thinking that’s decentring the human. An [author] that I find to be posthumanist in a way, even though maybe [she’s] drawing from a different tradition, is Jane Bennett. She wrote a text on [material animation], understanding animate materials [as] having their own lives, voices, and processes, and

39 Documentation for Caroline Louise Miller’s works is available at www.carolinelouisemiller.com.
thinking through the life of objects as something to consider in our worldview. So, for me, that's part of posthumanism—taking the [...] decentered perspective.

AW: Could you describe the process of writing Sound Masses for Dark Times? How did the concept of the work develop and how did you go about selecting the recordings to include in the mashup?

CM: I was asked to create an installation in [the summer of] 2016, right before Trump got elected. And the installation was going to be in an industrial space... a shed... in a collective space called the Ché Café, which is sort of a historically significant socialist anarchist venue on UCSD's campus that has been there basically since UCSD was founded.

I'm really into stacking things, stacking sounds, [and] I would experiment with this all the time. [I] would just take recordings that I thought would sound interesting stacked on top of each other and put them in a DAW and make these giant stacks without any editing. [Then I would] listen to them and see how the chaos sounded and what kind of affect it had. And I would wonder if I [could] amplify particular affects by [...] taking a bunch of recordings that are peaceful and stacking them on top of each other and/or angry or any other emotional or conceptual aspect that music could transmit. And, it kind of worked. I mean, there are a few things to consider, like if you don't want to just sound like total chaos and you want to create a peaceful sound by stacking eight different peaceful recordings on top of each other, then you might want them to be in the same key or in related keys.

You'll always get this unsettling feeling of chaos, but there are moments where things combine and coalesce. Almost like a new piece of music that sounds really awesome. To me, [the layering] ends up amplifying whatever effect was there in the first place. And it's even better if you can find recordings [...] of similar [lengths] with similar structures so that moments where there [are] peaks, the peaks will amplify each other, and moments where there's downtime, the downtime will create this trough.

AW: I listened to your [Sound Masses for Dark Times] demo improvisation about an hour ago, so [that] makes a lot of sense.

CM: The idea is sort of like corralling energy. [Noticing] that a lot of pieces, of course, have moments of high energy and low energy. Then, if those are stacked with other pieces, and those high energy times correspond, then you'll get this tiber peak energy.

With Sound Masses for Dark Times [...I] wanted to work with precarity and apocalyptic vibes. [Therefore], I chose a bunch of recordings that seemed to have some kind of precarious sound—a warning, a sort of apocalyptic aspect. [...] For other recordings there wasn't any immediately conceptual reason [...I] chose [them]. [They] just had this particular vibe to me. But most of them have a particular conceptual aspect. [For example], the “Prelude” from Tristan and Isolde obviously has been associated with apocalyptic landscapes in film and theatre for a really long time.41

[...In] the installation [version of Sound Masses], people can go and make their own mixtape or mashup and it's always three recordings at a time, unless you hit upon a specific number and then it's just the recording of me singing and playing guitar. People can essentially go into the installation and twiddle the knob and create their own mixtape of precarity inside of this industrial space with a lot of power tools and little bells hanging and really dark LED lights and stuff. So that was the first iteration of [Sound Masses for Dark Times] and it was really very DIY, but it was cool. It worked really well and I would like to do a live performance of [Sound Masses for Dark Times] with multiple people performing and creating a mixtape together.

AW: How do you feel [Sound Masses for Dark Times] relates to both our sudden isolation and also the topic of posthumanism?

CM: [For] the people performing it, [playing] it together, and [improvising] together, it can be an exercise in talking to each other through these recordings. That could be really nice. And maybe like taking control. It's almost like you're taking control over precarity a little bit by being able to switch, change the dial. [It's] like, “do we want to think about climate change, or the failure of radical and progressive movements to make any headway, or the pandemic? Take your pick, there [are] so many precarious things to worry about.”

[Regarding] posthumanism, [there is] the materialism that I was talking about before—developing a broader consciousness of how inanimate things, other ecosystems, and whatnot contribute to the world and shape us. I think that this piece is pretty centred on humans... human emotions and human experiences. I think that the need to move to a different way of understanding humans in relationship to the world is definitely part of the precarity driving this piece. The systems that are causing us to fail at fighting climate change are the same systems that are causing us to fail at fighting the pandemic.

AW: I see... the lack of cooperation, differing goals, the power of corporate interests versus protecting human interests... [that] kind of thing.

CM: Yeah, those are all related. I feel like corporate interests are almost pushing their own kind of posthumanism, which is like, “fuck individual human lives. We need to save the economy.”

[...In] terms of making this new version [of Sound Masses for Dark Times] it's definitely stuff to consider.

41 In particular, Lars von Trier's 2011 film Melancholia prominently features music from the Prelude.
Concluding Thoughts

When creating the concert series Technology and the Posthuman I was interested in showcasing works that provide a unique perspective on this theme. There was no wish to have the compositions give self-righteous lectures or posit answers to the concerns individuals and societies face during our Internet Age. Rather, I was looking at the role of today's composer as in-conversation with posthumanism—communing with the posthuman. The aforementioned works assert nuanced views of technology, with the goals of expression and provocation (over resolutions). Perhaps, what it means to be posthuman, as of 2020 and according to these composers and artists, may be an increasing awareness of technology’s multifarious roles in our lives, and the related ramifications technologies may have on our futures.
A Post-Percussive Approach to Performer-Controlled Electronics

Noam Bierstone

Abstract

The integration of electronic devices into Western contemporary instrumental practices has emerged as a driving force in the expansion of music performance possibilities. The ambition to treat electronic devices as musical instruments leads to the emergence of unique behavioural tendencies that can be manipulated in order to further expand the potential of new music performance. Similarly, radical developments in contemporary percussion performance in the 20th and 21st centuries have introduced a wide range of challenges, extending the fundamental notion of percussion playing and stimulating performers to develop new skills and approaches to music-making.

This extended understanding of percussion performance has formed what can be identified as a post-percussive practice. The manipulation of electronic devices in music performance, developed out of a desire to explore electronic technologies for their unfamiliar sounds and new performance possibilities, can be described as performer-controlled electronics. This paper proposes that integrating performer-controlled electronics within the context of a post-percussive practice can present a fresh perspective on performing with electronics, and help bridge the gap that currently exists between acoustic performance and live electronic performance.

Two works that the author regularly performs—Hanna Hartman’s Message from the Lighthouse (2009/16) and Mauricio Pauly’s The Threshing Floor (2014)—are used to demonstrate a post-percussive approach to integrating electronic devices can lead to fruitful and rewarding experiences in performing with electronics.

Introduction

There is a perpetual dynamic relationship between performers and electronic technology through the ongoing development of Western contemporary music, with performers influencing the continuous evolution of electronic equipment along with a desire to explore the artistic potential of such devices. As a result, performers are driven to expand their musical capacities as they incorporate electronic devices into their artistic practices. The rapid progression of contemporary percussion performance since the early 20th century has similarly initiated an exponential growth of musical and technical possibilities. With percussionists playing an important role in development of new musical tendencies over the last century, this paper proposes that integrating electronic performance through the lens of an expanded understanding of a percussive practice can present a fresh perspective on performing with electronics, and help bridge the gap that currently exists between acoustic performance and live electronic performance.

An expanded understanding of percussion can be understood as a post-percussive practice, which advances further than a simple notion of extended techniques for percussionists. Rather, it can be understood as a practice that abandons the fundamental concepts of what is typically considered as percussion, making its original characteristics practically unrecognizable. These fundamental concepts can be technical or theoretical and pertain to the act of hitting, a coherency of technique, instruments that are traditionally recognized as percussion, and assumptions of how certain instruments are supposed to be played. The notion of a post-percussive practice is a fluid and eclectic collection of approaches that celebrates curiosity, openness and personal contribution.

Performer-controlled electronics refers to the use of electronic devices or systems that are manually operated by a performer in musical performance. The term implies that a performer can develop a certain tactile connection to a device, allowing them to manipulate it, and leading to the creation of responsive interactions with a device and its sonic behaviour. This is a broad definition that, like a post-percussive practice, requires a personal approach and does not set strict boundaries as to what is or is not “performer-controlled.”

Post-Percussive Practice

The notion of a post-percussive practice has emerged from the rapid development of classical percussion playing and tradition throughout the 20th and 21st centuries. In Western music tradition, with the exception of orchestral timpanists or the rare marimba soloist, percussionists are rarely attached to one instrument, as is often the case for other musicians. Whereas the identity of other musicians is generally tied to their respective instruments, percussionists are instead identified as versatile hitters of various objects. Whether a percussionist is playing a conventional instrument or a collection of found objects, the root of the word ‘percussion’—to hit or to strike—has been the primary feature that maintains a percussionist’s identity.

Through the latter part of the 20th century, what can be considered as extended techniques for percussionists began to occur more frequently, such as the use of bows on vibrphones and cymbals, superballs rubbed on bass drums, and other new methods of producing sounds beyond the traditional notion of how instruments are “supposed” to be played. An expanded understanding of percussion can be understood as a post-percussive practice, which advances further than a simple notion of extended techniques for percussionists. Rather, it can be understood as a practice that abandons the fundamental concepts of what is typically considered as percussion, making its original characteristics practically unrecognizable. These fundamental concepts can be technical or theoretical and pertain to the act of hitting, a coherency of technique, instruments that are traditionally recognized as percussion, and assumptions of how certain instruments are supposed to be played. The notion of a post-percussive practice is a fluid and eclectic collection of approaches that celebrates curiosity, openness and personal contribution.

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sound. This mirrors the development of extended techniques on other instruments, rooted in a quest to expand the sonic capacities of an instrument.

All Western classical instrumental practices, including percussion, have developed a catalogue of conventional playing techniques formed by the standard repertoire for the instrument. As a result, a shift of perspective must occur for extended techniques to no longer be categorized as “extended” or special effects relative to an existing catalogue considered as the standard way to play an instrument. This shift of perspective, in the form of a desire to abandon the considered conventions and characteristics of Western classical instrumental practice, has driven developments in contemporary music. In percussion music, these tendencies take advantage of the versatility of a percussionist’s skillset, but move so far away from conventional percussive techniques and instruments that they have formed what can be described as post-percussion or a post-percussive practice.

The disorganized and dispersed nature of a post-percussive practice makes it difficult to define as a coherent system. However, this lack of coherency can be understood specifically as the identity of the performer in this practice. The versatility that contemporary percussionists have developed proves to be an advantage when dealing with the new and unconventional demands of experimental practices such as the post-percussive. Certain recurring characteristics of a post-percussive practice—that become fundamental to the integration of performer-controlled electronics—are outlined below.

Characteristics of a Post-Percussive Practice

Defamiliarization of Instrumental Technique

The defamiliarization of instrumental technique is a distinctive quality of a post-percussive practice. It signifies a deconstruction of instrumental conventions to instead develop an approach that embraces all possible sound-producing actions on an instrument. The concept of defamiliarization, a term coined in 1917 by the Russian formalist Viktor Shklovskij, refers to the artistic technique of presenting an object in an unfamiliar way in order to enhance perception of the familiar object, and has greatly influenced 20th century art movements such as Dadaism. In music, this process can be carried out on any instrument or instrumental combination. By not recognizing traditional technique as the gold standard of sound production, all techniques and sounds—including traditional techniques—can be considered as suitable to a renewed instrumental context.6

In the case of percussion, defamiliarization implies that the act of hitting and the assumed conventional use of sticks or mallets is not taken as an automatic point of departure. This does not restrict the use of conventional percussive strokes or sounds, but rather signifies that there is no overarching instrumental technique that can be learned independently and applied from one work to the next, as is the case in conventional instrumental performance. That said, the relationship that one builds with an instrument through the study of conventional playing can still inform newly invented techniques, as it provides the musician with the reflective listening and performance skills to adapt oneself to a renewed, defamiliarized instrument.

Work-Specific Techniques

A consequence of the defamiliarization of instrumental technique is the creation of work-specific techniques. These are techniques that are uniquely developed in the conception of a work, and are often idiomatic to the structure and aesthetic of the work.7 This often necessitates a lengthy set of instructions that describe how to perform the required techniques and the sounds they are meant to produce, as a way of teaching the performer the musical language of the work.

The concepts of defamiliarization and the development of work-specific techniques are central to the music of composer Pierluigi Billone, whose percussion works, including Mani. Gonxha (2011), Mani. Δίκη (2012), and Mani. Αμόν (2019), have greatly influenced my artistic practice and pursuits. In these works, Billone develops a musical language where the sounds and techniques used are both inherent and idiomatic to the instrument and to the structure of the work. This is a result of Billone’s compositional method where instrumental study, systematic instrumental exploration, structural elaboration, notational development, and compositional conception are all integrated and inseparable from the beginning of the working process.7

Music such as Billone’s requires the performer to be more invested in the development and elaboration of the musical language, as one cannot simply apply previously learned techniques to the performance of the work. Inevitably, there is a daunting feeling of having to learn an instrument from scratch. For example, there are very few techniques that can be transferred directly from conventional percussion playing into a situation where sticks and mallets are replaced by two Tibetan singing bowls in the performer’s hands, as is the case in Mani. Gonxha and Mani. Δίκη. Nonetheless, the identity of percussionists as versatile musicians accustomed to playing different instruments and adapting to new setups is vital to developing the necessary skills to perform such works.

Adaptability as a Form of Virtuosity

A post-percussive practice highlights the skill of adaptability as a new form of virtuosity in musical performance. Percussion music has always required flexibility and versatility

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from the performer: percussionists must constantly adapt to new instruments and setups, and they modify percussive strokes to different instruments, materials, and acoustic spaces. Contemporary percussionists are equally proficient moving around large instrumental setups as they are performing small object setups that involve minimal movement.

The concept of work-specific techniques increases the importance of adaptability, as performers attempt to apply previously learned skills to new, dissimilar situations. Unlike conventional percussion practice, where percussionists learn basic technical principles that can be applied or adapted to a majority of standard percussion instruments, a post-percussive practice calls upon the musician to discover unique and unrelated performance setups, actions, and systems from one work to the next. This means that each performer must form their own set of skills within this practice, applying what they have learned and gathered from previous personal experiences to the requirements presented by new situations.8

Virtuosity of adaptability requires the musician to perform specialized actions using techniques or objects that they have often never encountered before. This demands a reflective approach to performance in which the performer must discover for themselves how previously learned skills can be applied to what may initially appear an unfamiliar context.

**Exploiting the Potential of an Instrument**

A recurring theme in works that can be characterized as post-percussive is the exploitation of one instrument or a small collection of instruments through a multitude of playing techniques. This approach contrasts to early solo percussion works that are characterized by large collections of instruments performed with a limited set of techniques. The composer and trombonist Vinko Globokar addressed this difference in 1989 in his article *Anti-Badabum.*9 He criticized the existing contemporary Western percussion practice at the time of routinely accepting that each instrument has a unique natural timbre, primarily based on the action of striking, that musicians must seek as the preconceived ideal sound of the instrument. As he explains,

> This philosophy implies an accumulation of sound materials, for according to this logic of unique sound one must, for every new timbre to be obtained, use a different instrument. With a large number of instruments, a stereotyped kind of virtuosity can be developed based on the joy of striking with an emphasis on physical activity, the aim being to play faster and faster and louder and louder.10

Globokar suggests instead an approach where a single instrument is used for a varied palette of timbres and articulations that might initially be considered as foreign to the nature of the instrument, modelled on the tradition of instruments such as the zarb or the tabla, where multiple performance techniques are used to extract the timbral complexities of the instrument.11

This approach highlights the idea that it is precisely through the narrowing of material that the experience of differentiation can be expanded. This can be considered as a focusing in—or zooming in—on an object’s sound to discover variations in sound that may not be perceived otherwise. In addition to requiring the performer to develop the technical capacities to produce these subtle variations in sound, it also requires the performer to develop a greater acute and sensitive listening in distinguishing sonic parameters such as timbre, texture, and grain that one may not typically encounter in conventional classical music performance. These sonic parameters are drawn from an interest in noise-based sounds, and they figure prominently in the incorporation of electronics into concert music performance. As such, a sensitivity to them is invaluable in the integration of performer-controlled electronics.

**Performer-Controlled Electronics**

The incorporation of electronic devices into music is rooted in the aesthetic, cultural, and technological advances of the 20th century that prompted the notion that any sound can contribute to the musical palette. Luigi Russolo’s Futurist manifesto *The Art of Noises* (1913) calls for the embrace of noise born from the invention of the machine, and for it to become a primary element in art.12 John Cage similarly appeals for the incorporation of noise in *The Future of Music: Credo* (1937), and for the need for electronic instruments to construct the future rather than imitate the past.13 Cage viewed electronic music as an extension of percussion, since any sound that could be manually produced was considered as acceptable in percussion music. This helps to explain why early examples of performer-controlled electronics are often combined with the use of percussion, and provides context for approaching the use of performer-controlled electronics as an extension of a post-percussive practice.

Cage’s *Imaginary Landscape No. 1* (1939) is one of the earliest works to incorporate electronic devices into instrumental performance.14 It is scored for four players: two players controlling turntables, one playing a Chinese cymbal, and one playing the piano.15 Cage asks for the piece to be executed in a radio studio and then performed through a live or recorded broadcast, reformulating the fundamental relationship between a musical creation and its environment. Additionally, Cage transforms the radio studio itself into an instrument by using the test tones of the studio—in the form of frequency recordings played on the...

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8 Stene, “This Is Not a Drum: Towards a Post-Percussive Practice,” 41-42.
11 Globokar, “Anti-Badabum.”
tumtables—as a generator of meaningful sound. Since the test tones are an inherent part of the medium of the radio, Cage is taking a formerly neutral medium and bringing it to the foreground of the work. This makes the listener perceive a sound emanating from the speaker that is not intended to be noticed, and that one would usually ignore, as an integral part of the musical work. The listener is thus forced to disengage the sound from its normal use and meaning, first by accepting it as a discreet phenomenon and then as an aesthetic object. This approach simultaneously challenges the nature of the radio and of musical sound itself.

The incorporation of sounds that are originally by-products of a system into the structural framework of a piece is very important in both experimental acoustic music and performative electronic music. Cage’s treatment of the radio unifies the medium and the message by creating a sounding object of the medium itself. This becomes an essential principle in the use of performer-controlled electronic devices. Just as extended techniques are no longer exotic extensions of conventional technique but become integral to the musical language of an instrument, electronic devices are not used as special auxiliary effects but instead can be fully integrated into the conception and realization of a work.

Other emblematic works in the development of performer-controlled electronics are Cage’s Cartridge Music (1960) and Karlheinz Stockhausen’s Mikrophonie I (1964). Cartridge Music marks the development of the turntable from a tool used to reproduce previously recorded material into an instrument capable of producing its own sounds and possessing its own aesthetic.16 Mikrophonie I exploits the microphone as a mobile performance instrument in relation to a large tam-tam. Stockhausen attempts to use the microphone to modify the same parameters as conventional musical instruments and guide all aspects of sound-shaping.17 Mikrophonie I is unique in that it simultaneously cultivates the performative use of electronic devices, extends the fundamental notion of percussion playing, and presents a new model for chamber music performance. It introduces unique performance challenges through a renewed notion of virtuosity and a shift towards deliberately unstable sound-producing systems. As such, Mikrophonie I signals a turning point both in the history of percussion music and in the development of performer-controlled electronics.

The general approach of performer-controlled electronics implies a certain tactile connection to a device that allows the performer to track the relationship between an action or adjustment and the resulting sound, leading to the creation of responsive interactions with the device and its sonic behaviour. Such an approach favours devices that have an inherent specificity that can be explored and exploited in an immediate and direct manner, and explains the general tendency towards the use of analog devices in performer-controlled electronic settings.

Characteristics of Performer-Controlled Electronics

Similar to the notion of a post-percussive practice, performer-controlled electronics can refer to a wide range of approaches. Nonetheless, certain characteristics of performer-controlled electronic devices can be highlighted. These characteristics provide a point of comparison to the characteristics of a post-percussive practice, from which we can investigate how to apply a post-percussive approach to this kind of electronic music performance.

Instrumentalizing and Creative Abuse

Instrumentalizing, a term proposed by Andy Keep in “Instrumentalizing: Approaches to Improvising with Sounding Objects in Experimental Music,” refers to the potential of treating any object as a musical instrument. The process “seeks to discover the performability, intrinsic sonic palette and possibilities for sonic manipulation of objects,”18 and is a common artistic practice for many improvisers and sound artists. It can be performed on any object that has the potential to sound or to manipulate sound in real time, and can range from simple acoustic objects to a wide range of technologies. Instrumentalizing typically involves the de-contextualization and re-contextualization of the device used, and can include devices designed for music production as well as those intended for uses in other fields.19 At its core, the idea is that an instrument is not completed at the stage of design or production, but is rather made complete through its use.

The process of instrumentalizing reformats the common perception that a musical instrument or object is a predetermined entity used to realize an external musical language. Instead, the object is explored for its inherent sonic properties. This approach seeks to create an artistic statement that is responsive to the emerging characteristics of an adopted or appropriated sounding object. For example, the use of prepared phonograph cartridges in Cartridge Music uncovers the inherent sounds of objects that would otherwise go unheard through the re-contextualization of the phonograph’s intended purpose. The phonograph’s original function as a playback device is deconstructed; it is then reconstructed as an instrument capable of producing its own sounds, thus stretching and redefining its sonic potential.

This approach is similar to the defamiliarization of instrumental technique, as described earlier, rooted in a rejection of instrumental conventions and an embrace of extraneous instrumental sounds. The treatments of technologies such as the phonograph, microphones, and oscillators in Cartridge Music and Mikrophonie I represent a reaction to the fixed nature of electronic music studio composition. These technologies could be explored for their unfamiliar sounds and new performance possibilities, resulting in unique sonic characteristics and an “explicit rejection of past musical technique.”20

17 Sound-shaping refers to the practical activity of instrumentalizing, a term discussed in the following section. See also Andy Keep, “Instrumentalizing: Approaches to Improvising with Sounding Objects in Experimental Music,” in The Ashgate Research Companion to Experimental Music, ed. James Saunders (Farnham, England: Ashgate, 2009), 113-129.
18 Keep, “Instrumentalizing”, 113.
19 Keep, “Instrumentalizing”.
The notion of creative abuse is a primary method within the process of instrumentalizing, especially when working with electronic devices. Creative abuse refers to the exploitation of a sonic object by any means necessary and in manners for which it is not initially intended or generally accepted. This can be achieved by pushing an electronic device to the edge of unstable activity through the experimentation of its capacities, leading to the emergence of the device’s “personality” and the discovery of unique behaviours. Creative abuse places devices in situations where undesired elements of the media are accepted and embraced, and can ultimately be exploited in performance.21

In acoustic music, the use of prepared instruments and extreme extended techniques can be understood as a form of creative abuse. As extended techniques are pushed to the extreme, the original intention of an instrument is forgotten; it is fractured by its treatment and is transformed into a new sounding object. In electronic music, although creative abuse can be applied to both new and outdated technology, it relies on the materiality and inherent limitations of the media, just as acoustic instruments by nature are material objects with limitations. While these limitations can be stretched, as demonstrated by developments throughout musical history and especially in experimental performance practices, they cannot be completely erased.

Creative abuse highlights elements of musical technologies that the production process attempts to eliminate, bringing these elements to the foreground of the technological system. Through the creation of music from the sounds of technological dysfunctions, our attention is shifted to the failing of systems that have been designed to not fail, therefore contributing to the transformation of these devices into active participants of artistic creation and performance. The mistreatment of technology, just like the perceived misuse of an acoustic instrument, therefore, goes beyond the shock of the act and into the field of artistic productivity.22

The incorporation of electronic devices into an already extended musical practice can thus be viewed as a further defamiliarization of instrumental performance, rather than an entirely different practice. In this way, one can develop electronic performance techniques in conjunction with newly invented instrumental techniques, allowing them to function and interact on the same plane of importance.

Since the use and treatment of electronic devices will inevitably vary from one work to the next, the notion of work-specific techniques from a post-percussive practice is similarly applicable to performer-controlled electronics. The process of developing these techniques allows performers to familiarize themselves and develop a performing relationship with an electronic device in a manner that will resemble their re-familiarization with an acoustic instrument. A performer adept at developing work-specific techniques in acoustic performance should be able to transfer these skills to the performance of electronic devices by discovering their sounding characteristics, their tactile response, and their unique behaviours.

In this way, developing a musical language from objects or electronic device manipulations can be approached in a similar manner.

Inherent unpredictability

Instrumentalizing and creative abuse highlight functions of electronic devices for which they are not initially intended. As a result, these functions typically do not behave as consistently as musicians are accustomed to in instrumental performance. The use of performer-controlled electronic devices therefore requires a performance practice that accepts and embraces the inherent unpredictability of electronic devices. This is demonstrated in Cartridge Music, an extreme example in this case since Cage requires the performers to follow instructions without subjective input.23 Players must perform an action and accept any possible outcome, which allows for unexpected outcomes to emerge. Cage notes in the score that “all events, ordinarily thought to be undesirable, such as feedback, humming, howling, etc., are to be accepted in this situation.”24

Mikrophonie I represents another form of unpredictability, since no performer has full control over the final sounding result. With each individual sound being produced by the combination of three performers, the players are performing actions that result in sounds that cannot always be anticipated. Therefore, in addition to the complexity of notated actions in Mikrophonie I, a key challenge for performers—who are generally trained to produce a predictable outcome—becomes the embrace and management of an aesthetic of unpredictability.

The embrace of an aesthetic of unpredictability can also be demonstrated by the use of acoustic feedback in musical performance. Feedback was originally a sound to be avoided, since it disturbed the standard approaches of sonic reproduction and amplification. As with the previous examples, the active use of feedback was a way to purposely misuse technological equipment. Feedback became a common feature of much music in the 1960s, which could be due to the fact that the problem of feedback had largely been solved and could be controlled. Therefore, since it could be avoided, there was a clear difference between sounds that were intended and those that were not.25

Once feedback functions as a central sounding element of a work it can be manipulated as sounding matter, drawing the audience’s attention to the interaction between the performer and the feedback system. Artists such as Robert Ashley, Eliane Radigue, and Jimi Hendrix were drawn to the unpredictability of acoustic feedback, as opposed to the very controllable nature of conventional instruments that had been developed over time. The instability and

23 Cathy van Eck, Between Air and Electricity: Microphones and Loudspeakers as Musical Instruments (New York: Bloomsbury, 2017), 83.
fragility of the feedback system was regarded as an interesting and captivating element of performance.\textsuperscript{26}

In \textit{The Wolfman} (1964) by Robert Ashley, for amplified voice and tape, sustained vocal sounds are combined with highly amplified resonance feedback shaped by the performer’s mouth cavity. Resonance feedback is created by bringing a microphone proximate to an air cavity—the performer’s mouth in this case—which can be excited to resonate into feedback even with a relatively distant loudspeaker. Ashley explains that the tongue must be kept in contact with the roof of the mouth to create a special cavity that allows for a certain amount of acoustic feedback to be present within the vocal sounds. The mouth must also be kept close to the microphone to allow for the softly produced vocal sounds to control the feedback and achieve a proper mix of levels. As a result, the performer can roughly control the electronic sound with their mouth cavity.\textsuperscript{27}

Eliane Radigue began experimenting with feedback in the late 1960s, using the basic equipment of tape recorders, loudspeakers, and a microphone. Her results in works realized with feedback and processed feedback, including \textit{Stress-Osaka} (1969), \textit{Usral} (1969), \textit{Omnh} (1970), and \textit{Vice - Versa, Etc...} (1970). These pieces feature continuously shifting yet very slow streams of sound, with transformation occurring within the sonic material itself. Radigue maintained the subtlety, serenity, and focus of these works, influenced by the technique of feedback, as she replaced the feedback process with the use of synthesizers in the 1970s, and as she began incorporating acoustic instruments in the 2000s.\textsuperscript{28}

Jimi Hendrix fully incorporated feedback into the physicality of his playing, introducing the electric guitar as an entirely new kind of instrument by diverting it away from its conventional use. His crucial innovation was to play at high volume while standing close to the speaker to obtain feedback, which he could then control in a very nuanced and sensitive way using the angle of his guitar, the weight and position of his fingers on the strings, and the position of his entire body.\textsuperscript{29} Hendrix’s developments played an important role in the use of feedback in rock and popular music genres, influencing future generations of artists and composers working in various musical fields to incorporate feedback into their work.

Feedback systems have since been used by composers, performers, improvisers, and sound artists in various ways, such as sending a feedback signal through effect pedals or controlling it in a very nuanced and sensitive manner with an instrument. A feedback system is given vitality as an active sound shaping instrument by the strong interaction between performer movement and feedback sound. Although the relationship between movement and resulting sound is much less predictable than with conventional instruments, every small movement affects the sound. Since these devices are not intended to be used in this manner, they have an inherent and designed resistance against such uses, resulting in sounds that can be surprising for both audiences and performers. The unpredictability that results from such treatments of electronic devices, and the tension that emerges from the juxtaposition of unpredictability and strict musical performance, is central to the works that have shaped my experiences with performer-controlled electronics.

The unstable and volatile nature of the treatment of certain electronic devices demands an altered performance practice. As compared to Western classical instrumental practices, such a practice involves more searching, listening, and adapting to sounds, with a greater acceptance of unpredictability. When working with such unstable environments, one cannot search for the reproduction of exact sounds but must rather aim to recreate sonic behaviours. This perspective can be paralleled to common percussion techniques—such as bowing a cymbal or rubbing the tip of a drumstick across the surface of a tam-tam to create a high-pitched harmonic—as well as the unstable nature of many other acoustic sounds used in experimental music performance today.\textsuperscript{30} One can develop the skills to shape and manage the produced sound while also embracing its unpredictable nature. This kind of approach is common in experimental improvisation circles, where the material resistance and deviations of objects used play a fundamental aesthetic role in the practice.\textsuperscript{31}

Performers can treat their connection to such electronic devices as an extension of their traditional relationship to an instrument, finding the skills that are transferable and viewing this as an opportunity to expand their capacities and develop new performance sensibilities. Percussionists, and especially those working in a post-percussive practice, are well suited to this approach since they are trained to develop a versatility in adapting to new instruments and methods of sound production.

The integration of performer-controlled electronic devices into an instrumental practice extends the performer’s capacity for adaptability. Rather than operating as a conventional instrumentalist, the performer often becomes an exciter or prober of sounds, controlling sonic activities that may have a behaviour of their own. The notion of virtuosity of adaptability that emerges in a post-percussive practice assumes an even greater role in the use of performer-controlled electronics. The integration of performer-controlled electronics into a post-percussive practice stimulates performers to expand an ever-growing set of skills while also drawing on past experiences to transform the unfamiliar into the familiar.

The use of “instrumentalized” and “creatively abused” electronic devices can be understood as contributing to the continued expansion of musical instrument possibilities. In instrumental practices, the inherent limitations of an instrument are what allow for creativity and innovation to emerge as these limits are exploited, pushing an instrument’s and a performer’s capacities past what was previously conceivable. The processes of instrumentalizing and creative abuse subvert the use of electronic devices typically designed

\textsuperscript{26} Eck, \textit{Between Air and Electricity}, 83-84.
\textsuperscript{28} Joseph Ghosh, “Vivre sa vie.” Liner notes for Œuvres Électroniques, by Eliane Radigue. INA 6060/74, 2018, 14 compact discs.
\textsuperscript{30} For example, the use multiphonics and split tones on wind instruments, or the gliding of various objects along piano strings.
Performing (with) performative electronics

The use and development of a performer-controlled electronic practice has been explored by artists in various ways. There are no set rules that one must follow for an electronic performance situation to be deemed as performer-controlled, and the aim of this paper is not to define what is or is not performer-controlled. The integration of performer-controlled electronics into an instrumental practice requires a personal approach that embraces the process of experimenting with objects, devices, and their various combinations, or in other words, “getting the hands dirty”.32 There is no substitute for spending time with the materials, exploring their sonic characteristics and discovering their unique behaviours, much like a performer does with an acoustic instrument. As numerous performers in various artistic fields who incorporate these elements demonstrate, a performative electronic practice can be developed in different ways and lead to original and distinctive results.

I have not set out to develop a new performative relationship with a single instrument through its electronic augmentation, but rather extend an already expanded percussion background through the incorporation of performer-controlled electronics. This approach is assembled from a deconstruction of conventional technique, and a resulting lack of coherency, through the exploitation of the intrinsic sonic characteristics of instruments, objects, electronic devices, and their various possible combinations. The composers and musicians that I have worked with in this field are from a generation that has grown up immersed in popular culture with access to all sorts of musical genres beyond those conventional manner, or to develop new digital instruments that can be programmed to produce any possible sound. Both of these approaches run into issues: the division of tasks between two people of the generation and control of sound is a problem, as the person generating the sound is disconnected from the final output; and music that is designed using electronically generated sound from computers suffers from the problem that one cannot actually touch and manipulate the generation of sound. (Osterberg, “Human Bodies, Computer Music,” 14.)

I began performing works that integrate electronic devices into my instrumental setup in 2014. As with many classically-trained musicians, the use of electronics in performance was daunting to me. However, I discovered that in cases where I was given control of the electronics controlled independently—I could apply similar working methods that I had developed through a post-percussive practice.


The highly-amplified setup used in *Message from the Lighthouse*, a work for solo percussionist by Hanna Hartman, can be considered as one of the simplest forms of performer-controlled electronics. In this example, a high-end Schertler DYN contact microphone picks up the full range of frequencies transmitted from a contraption built of two flower pots and stainless steel knives, and amplifies them to a degree that can make the audience feel as if they are inside the flower pots themselves (see Figure 1). The sounds created by the instrument would not be heard without the use of the microphone, or a microphone of such high quality. The sounds that are heard are therefore intrinsic to the newly created object of which the microphone is an integral element. This use of a microphone can be compared to a singer’s use of extremely close microphone placement—perhaps the simplest form of performer-controlled electronics—which could either be using an air microphone or a contact microphone placed on the throat, to amplify and bring to life internal sounds that rely on amplification for their existence.

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33 The developments that characterize performer-controlled electronics are more often found in popular culture and underground music circles than in electronic music research institutions such as IRCAM (Paris) or CIRMMT (Montreal). The approach favoured by such institutions has been to electronically process a musician playing their instrument in the conventional manner, or to develop new digital instruments that can be programmed to produce any possible sound. Both of these approaches run into issues: the division of tasks between two people of the generation and control of sound is a problem, as the person generating the sound is disconnected from the final output; and music that is designed using electronically generated sound from computers suffers from the problem that one cannot actually touch and manipulate the generation of sound. (Osterberg, “Human Bodies, Computer Music,” 14.)
A Post-Percussive Approach to Performer-Controlled Electronics

The extreme amplification system used in Message from the Lighthouse allows for the deconstruction and reconstruction of the object’s sounding characteristics, through the de-contextualization and re-contextualization of the object itself. As such, I discovered that I could approach the flowerpot contraption, constructed through a process of instrumentalizing and creative abuse, in a similar manner as I approached my performance of post-percussive works. Just as I had to learn and develop new techniques in the performance of those works, Message from the Lighthouse required me to discover the sonic characteristics of the flowerpot contraption, its performability, and its possibilities for sonic manipulation.

As I was preparing the work, I quickly realized that it would be useless to attempt to construct and test the flowerpot contraption without the required amplification. The manner in which one constructs the object—choosing the appropriate flowerpots and knives—is fully reliant on being able to hear the sounds in their totality. I also realized that using a lower quality contact microphone hindered my progress, as I was searching for sounds that could not actually be produced without the correct amplification system. The electronic system of the contact microphone and loudspeaker, as well as careful frequency equalization on the mixer, is thus a fundamental component of the instrumental object.

In turn, I found that this construction influenced how I went about playing the object, and shaped the actions that I use in performing the piece. As an exciter and prober of sounds, I discovered that I was responsible for triggering and shaping sounds rather than creating them. It felt as if the sounds were already inside the created object, and the electronic system simply provided me with the means to transmit them into audibility.

Mauricio Pauly, The Threshing Floor

The Threshing Floor (2014) by Mauricio Pauly is the work that led me on the path to integrate performer-controlled electronics into my practice. Pauly wrote the piece for my duo scapegoat with saxophonist Joshua Hyde; we premiered it in 2015, and it has since become one of our trademark works that we have performed over 25 times across North America, Europe, and Australia. We first began workshopping the piece in 2013 in Manchester, experimenting with the integration of guitar effect pedals and different forms of feedback control at our instruments. The resulting work incorporates the electronic component directly into our instrumental setups. Both performers control two effect pedals, a BOSS DD-6 Digital Delay and a BOSS OC-3 Super Octave, in addition to highly-amplified instruments and resulting feedback production. The full setup is detailed in the score (see Figure 2).

As the diagram indicates, each performer has a personal mixer that allows them to control their individual amplification levels and equalization (EQ). The fine-tuning of levels and EQ influence the produced sounds in certain sections of the piece, such as the frequency of feedback pitches. This action can be considered as similar to a string player fine-tuning their instrument, only that feedback carries much greater levels of unpredictability. Each performer has a wedge-shaped loudspeaker placed behind them; this not only allows for the production and shaping of feedback due to the proximity of the microphone and loudspeaker system, but also maintains the localization of amplified sounds to each performer’s position in space.

The use of contact microphones on both instruments allow for the use of techniques and sounds that would be otherwise inaudible, such as the sticky opening of saxophone keys and the pressing and lifting of moist fingertips on the frame drum. Furthermore, Pauly and I discovered that the choice of contact microphones very much contributed to the sound and aesthetic of the piece. The K&K Hot Spot microphones used are relatively cheap microphones with limited frequency response, yet when we tried performing the piece with higher-end microphones we discovered that we were unable to replicate the sounds that we were searching for. Since the musical language of the work had been developed with the full setup of instruments and electronics, the inherent quality of the original microphones becomes an essential and inseparable component of the instrument and the work.

The development of the musical language of The Threshing Floor can be understood as the process of instrumentalizing the instrument and electronics setup. The decision to use specific microphones and guitar pedals contributed to the “intrinsic sonic palette and

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possibilities for sonic manipulation” of the instruments. For example, the sounds of the sticky opening of saxophone keys and the lifting of fingertips off the frame drum were initially unavoidable by-products of the high-volume contact amplification. However, once we discovered that these sounds could be controlled and shaped by our playing, they could then be integrated into the musical language of the work. Similarly, the capsule microphone is not only used as a tool for amplification, but also contributes unique sounds through its unconventional uses: it is held in contact to frame drum’s skin to alter the timbre of various friction sounds, it is rubbed directly on the skin to produce a rough scratching sound, and it is pressed onto the kick drum’s head during superball rubbing actions to create low, distorted buzzing sounds.

The high-amplification levels also result in various forms of feedback that are fully integrated as musical elements in the work. The saxophonist creates feedback by approaching the dynamic microphone with the bell of the saxophone, using the body of the instrument as a resonating chamber to create feedback. Hyde alters the feedback frequency using the keys of the saxophone, a technique that he further developed with Michelle Lou in Opal, a work that she wrote for us in 2017.

In the percussion setup, feedback is produced in two ways. At the very beginning of The Threshing Floor, high amplification levels on the contact microphones result in feedback when the frame drum’s head is unmuted. I am thus able to shape and control this feedback by lifting my hand off the drum and simultaneously adjusting volume levels on the mixer. In this opening section, my feedback sounds are combined with saxophone multiphonics and feedback; I therefore adjust the EQ of the contact microphones to attempt to blend within the frequency range of the saxophone. (See Figure 3).

Feedback is also created with the capsule microphone using the kick drum as a resonating chamber. For this, I move the capsule microphone between the edge of the frame drum and the rim of the kick drum, exploring the different feedback frequencies that can be created. In some situations, certain spots can be found where two frequencies are produced at once. If the frequencies are close enough in pitch to one another, special beating patterns emerge. Since this method of producing feedback is more volatile than with the contact microphones, it is only used in open sections where the two performers ebb and flow in and out of quiet feedback tones, blended with pre-recorded tape tracks that give the impression of extending and resonating the live feedback sounds.

These uses of feedback can be understood as a form of creative abuse, where the highly-amplified instruments are pushed to the edge of unstable activity, thus allowing for the resulting elements to be exploited in performance. As performers, this compels us to develop a deep understanding of the components that result in feedback production—volume levels, microphone placement relative to instruments and loudspeakers, resonating characteristics of the instruments, and the influence of effect pedals—in order to incorporate the unstable behaviour of feedback into the relatively controlled setting of chamber music performance.


The feedback systems used in The Threshing Floor behave very differently with each change of venue, equipment, and positioning, so I found that I rely much less on replicating physical actions from one performance to the next and instead focus more on the qualities of the sounds produced. In feedback production, minute movements can result in drastic sonic changes. Furthermore, the performer loses the direct contact to the sounding object that one may be accustomed to in instrumental playing, and that is maintained in a work such as Message from the Lighthouse. I found that certain adjustments had to be made when I could...
no longer rely on the tactile response of the object I was manipulating. I had to place greater importance on aural response through more acute listening, rather than rely on any sort of felt resistance from the sounding object. This required me to spend additional time with the objects and devices—carrying out the process of instrumentalizing—to track the relationship between a sound producing method or parameter adjustment and the resulting sound.

In these situations, the notion of tactile manipulation is maintained even if tactile response is not, therefore sonic changes and results can still be correlated to physical manipulations. As with more conventional instrumental situations, actions can be repeated to retrieve and reactivate fruitful sonic behaviours. This is a skill that I cultivated through my focus on a post-percussive practice, and that has become invaluable in my pursuit of performer-controlled electronics systems. I have found that I can maintain a strong sense of control over the materials used by experimenting with the devices and discovering their behaviours, exploring their essential characteristics as it relates to the sonic material of the work.

The effect pedals used in The Threshing Floor are featured in various ways. The OC-3 Super Octave is used straightforwardly; it transposes a sound sent through the pedal down one or two octaves, blending the transposed sound with the direct sound to varying degrees depending on the pedal settings which are changed by the performers throughout the work. The octave transpositions are applied to both instrumental sounds—including sounds looped through the DD-6 Digital Delay pedal—and to feedback tones. Triggering the octave pedal on and off also resets and produces different feedback sounds, allowing for the performers to push the volume of feedback knowing that the octave pedal or another action will reset the feedback before the sound reaches a dangerous level. This is demonstrated in the excerpt below, where the amplification volume is so high that feedback appears quite regularly, yet the instrumental and pedal actions control the volatile nature of the sound.

The DD-6 is used in a more unique manner through a form of creative abuse. In addition to using the pedal for its looping function, Pauly exploits it for an inherent glitch that creates a stutter effect. The tightness of the stutter, essentially created as an extremely short loop, is not fully controllable. One can aim for a shorter or longer stutter loop, but since the technique relies on the inherent glitch of the pedal it is by nature unstable, contributing to the aesthetic of chaos and volatility moulded by the behaviour and limitations of the device. This use of the glitch in the DD-6, while perhaps unfamiliar to Western contemporary classical music, is nothing new. Pauly in fact borrowed it from the Japanese noise-rock band Melt-Banana after seeing them use it in a live show.

There are an aesthetic of dirtiness and imperfection that permeates The Threshing Floor. The sounds and behavioural tendencies of the hybrid instrumental-electronic system provide a level of unpredictability to the musical material. The sonic contamination that can arise from these behaviours is embraced as an integral element of the work, contributing to a liveliness that can only be felt in live performance.
Conclusion

A post-percussive practice signifies a deconstruction of Western percussion conventions to instead develop an approach that celebrates the unique (re)construction of an instrument and its technical language for each and every work. This requires performers to learn and develop work-specific techniques and stretches their capacities for adaptability from one situation to the next. The integration of performer-controlled electronics into an instrumental setting can be understood as an extension of the potential of a post-percussive practice. It requires a similar approach by the performer in learning the language and behaviour of the electronic device as they would with an acoustic object, thus importing the device into the realm of an instrumental practice. Incorporating electronics allows for the further exploitation of an instrument’s potential, or in the case of the already seemingly limitless world of percussion, it provides new instruments to exploit through their deconstruction and reconstruction.

An electronic device must be able to be treated as a musical instrument for it to be brought into the realm of an instrumental practice. This does not mean that it will behave like a conventional musical instrument but rather that it must have an inherent materiality that can be explored. This materiality, and the limitations associated with it, is what allows a performer to develop a tactile relationship with the device. From here, a performer or composer can apply the processes of instrumentalizing and creative abuse to discover the performability of the device, and ultimately exploit its potential within an extended-instrumental setting.

The incorporation of electronic devices into an instrumental setting not only requires a performer to develop a relationship to the electronic device, but it also modifies their relationship to the previously acoustic instrument. Even with the use of simple contact amplification, one can no longer expect an instrument to behave in the same manner; new sound production techniques become available while others must be set aside, reformulating the artistic possibilities of the instrument. Furthermore, the incorporation and various treatments of electronic devices often contribute unpredictable or volatile sonic behaviours that a performer must learn to control within the confines of a system. The performer in this case must relinquish some of the control they are accustomed to having in acoustic playing, and instead embrace their role as an exciter or prober of sounds as they trigger and shape unique sonic behaviours. Most importantly, performers must recognize that with the incorporation of electronic devices, it is very rare that any two performance situations will ever be same, and that a performance relationship built upon flexibility and adaptability will lead to the most fruitful and rewarding results.
Virtual Reality as Musical Environment

PRZYMSŁAW DANOWSKI

My fascination with VR technology began around 1992 on a school trip to the cinema. The movie was “The Lawnmower Man” by Brett Leonard, a film based on a Stephen King’s novel. It was filled with VR imagery, as the main character was the subject of dreadful experiments that used VR as a means of accelerating human evolution. Back then, I had little knowledge of this technology, but it triggered a fascination that prevailed for many years until I was able to get my own VR equipment and begin to experiment with it. My focus wasn’t on evolution though, but rather on music composition and performance. Unfortunately, as the internet was at its beginnings, I had no access to more information about VR besides sci-fi literature and popular science and IT magazines. My country, Poland, was in a transformation process from communism to free-market economics and the access to modern technology was very limited. I couldn’t imagine VR as a real thing, just a fictional concept.

The vision of VR presented in the movie was directly derived from the concepts of Jaron Lanier, CEO of VPL, the company that supplied wearable hardware as the costumes. VPL was the first company that tried to popularize VR as a new medium and an artistic creation environment. Lanier is a musician himself, so it was natural that he tried to use VR as a musical instrument. One of first such performances took place in 1992, when he presented his “The Sound of One Hand” at the SIGGRAPH conference in Chicago1 (there is video documentation of the performance available on Lanier’s website2).

Lanier’s approach was more focused on improvisation rather than playing precomposed musical structures. He designed virtual instruments that were controlled by the DataGlove—wearable hardware placed on a user’s hand—including the Rhythm Gimbal and The Cybersax.3 Their sounds were generated by MIDI devices controlled by the interface that was driven by the data coming out of VR. In other experiments Lanier uses real instruments to control VR environment.4 One of the most interesting things that Lanier brings up is that VR can be used to create the environment that one is already immersed in. He even proposes that as a programmable environment, VR had the capacity to be calibrated to various digital sound cannot be achieved by simulation of known physical instruments. I imagined that as a programmable environment, VR had the capacity to be calibrated to various gestures, movements or positions of users. That feeling was the thing I was always looking for in work with music and sound, yet I couldn’t find it in front of a mixing desk or monitor with Digital Audio Workstation. I was looking for an interface that would be as expressive as the woodwind instrument I played.

For a number of years beside being a multimedia artist, I was a professional classical and jazz musician. What I found to be an intense experience during my performing experience was the moment when, after years of practising, the instrument felt like it was part of my body. My muscles reproduced remembered movements while I could focus on aesthetic details and fitting my part into the ensemble. That feeling was the thing I was always looking for in work with music and sound, yet I couldn’t find it in front of a mixing desk or monitor with Digital Audio Workstation. I was looking for an interface that would be as expressive as the woodwind instrument I played.

As VR rose back with its third wave, I instantly fell back to my original fascination with it, intuitively feeling that it might be something that would accommodate my need of expressiveness and sonic versatility. My conclusion was that fully expressive interaction with digital sound cannot be achieved by simulation of known physical instruments. I imagined that as a programmable environment, VR had the capacity to be calibrated to various gestures, movements or positions of users. That turned out to be true and these capabilities are growing as the devices are developing.

5 Lanier, Dawn of the New Everything: a Journey through Virtual Reality, 301.

6 According to Michael R. Heim’s terminology first wave of VR was Lanier’s era up to the late 90’s and the second wave was at the turn of the 21st century. See Michael R. Heim, “Bridging Real and Virtual: A Spiritual Challenge,” Journal for Religion, Film and Media 3, no. 1 (2017): 159-181, https://doi.org/10.25364/05.3.2017.1.8.
A need for such new instruments was expressed by Antonin Artaud in his “Theatre of cruelty” manifesto.\textsuperscript{8} Artaud was the first to use the phrase “virtual reality”; it was his description for the new format of modern theatre. In Artaud’s manifesto there is a passage concerning musical instruments:

MUSICAL INSTRUMENTS: They will be treated as objects and as part of the set. Also, the need to act directly and profoundly upon the sensibility through the organs invites research, from the point of view of sound, into qualities and vibrations of absolutely new sounds, qualities which present-day musical instruments do not possess and which require the revival of ancient and forgotten instruments or the invention of new ones. Research is also required, apart from music, into instruments and appliances which, based upon special combinations or new alloys of metal, can attain a new range and compass, producing sounds or noises that are unbearably piercing.

Virtual space as a canvas for sounds

One of the natural qualities of virtual 3D space is that it can be operated in ways that in the physical world would be possible only for beings residing in the fourth dimension. One can move freely in 3D space, scale it, watch from any angle and position, transform it to 2D image, listen to it from any spot while watching it from different positions. Having those abilities, we can think about new forms of interacting with sound. These are new affordances for developing spatial features of music compositions. Locomotion inside VR is very natural and easy. It doesn’t require vast physical spaces, so it expands accessibility of using space as a means of arranging sounds, parallel to the arrangement of sounds in time. Tarik Barri in his “Versum”\textsuperscript{9} system enables the composer to place audiovisual objects in 3D space and then the audience is able to move around them, effectively running the composition. There is no strict timeline and the path through the composition can be defined in a number of ways, creating the “meta-compositions” as Barri names them.

“Versum” is an example of a system wherein the space becomes a leading structure of the composition. It is also evident that its interface becomes the notation tool for the composition, where the spatial arrangement of the objects is a scoresheet at the same time. This way of organizing performance resembles features of a gallery exhibition—a common form for presentation in visual arts. Such spatial arrangements of sounds in space could be defined as “architecture of sound”. Although “Versum” is not a VR work, it could be easily imagined as one, projected via headset. “Versum” uses POV locomotion as a way of interacting with the composition. The speed of movement through the 3D space induces the level of Doppler effect. The audiovisual entities are time-agnostic; they constantly produce sounds from the beginning of the composition. There are no other means of affecting the sound during the performance other than the navigation system.

4D SOUND collective created the software TRACER,\textsuperscript{10} a spatial audio middleware for Ableton Live DAW that allows composers to arrange sounds in 3D space by drawing sound trajectories in virtual reality. It was designed for the Spatial Sound Institute (SSI) studio in Budapest, Hungary.

These trajectories correspond to the positions of the sound in the room and the virtual overlay is aligned with the studio space. The sounds can be decoded and played by the SSI speaker system as they move with time along the trajectories. The audience can explore the spatial soundscape by walking or by just sitting and listening to the shifting sounds.

In both applications the audience is free to explore the compositions by travelling in their architectures—virtually or physically.

These two examples are highly specialised applications, but there is also a genre which instead of using bespoke tools adapts applications not primarily designed to be music instruments. Avatar Orchestra Metaverse is a telematic music performance collective. They use Second Life (SL) application as a space for constructing their instruments and doing

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\textsuperscript{8} Antonin Artaud, The Theater and Its Double (New York: Grove Press, 2004), 95.


performances. This approach results in aesthetics that are rooted in gaming and virtual social network environments. A note from their concert program aptly describes their artistry:

A day in the life of the Avatar Orchestra Metaverse: Meeting in a networked virtual world as avatars, AOM members design and play new otherworldly virtual instruments while experimenting with identity, perception, telepathy and collectivity. They present the sounds, images and movements from a few of their repertoire works, using custom-designed instruments that determine movement, audio emissions, and the release of particles and textures that give visual indications of sounds made independently by individual players in real time. Combined with their unusual sets and scripted objects, gestures and machines available in Second Life, they create a rich and wildly varying otherworldly experience, perceived in a unique way by each visiting avatar.\textsuperscript{11}

In one of the scenarios for their performances, the audience is allowed to move around the artists’ avatars in the Second Life room, and in some of the compositions the audience members are also invited to play with the virtual instruments. To operate instruments, performers use HUDs—an additional user interface placed on top of the application SL window. Using Second Life not only simplifies the technical aspects of telematic cooperation but also allows to connect with its user base and promote art in this online community. There are other metaverse platforms like Sansar or VRChat that are also being used by many artists as spaces for their performances, e.g. Polish based theatre group Dream Adoption Society.\textsuperscript{12}

\textbf{Monad/Connexion}

In the fall of 2019, I and my colleagues—Jakub Wróblewski and Andrei Isakov—created an audiovisual tool in Virtual Reality. I wanted to have a controller or instrument that did not resemble any known instrument—analogue nor digital. I imagined it like a quasi-biological entity that I could manipulate with touch-like gestures. We called it “monad”. The first use was in a concert where I presented a composition called “Connexion”, which was modulated with the monad live on stage. The idea behind this performance came from the need of lifting borders between the composer and performer, performer and the audience, composition and the instrument, the visuals and the sounds—following the concept of oneness raised by philosopher Plotinus. We wanted also to achieve the intense feeling of physical interaction with avatar objects.

“Connexion” uses a precomposed music track, which is then modulated during the performance with granulation and spatial panning. The performer is placed inside virtual reality and uses the monad to alter the parameters of granulation and propagation of the sound with hand gestures. Connexion was created using Unreal Engine 4 (UE4). We used the first version of Oculus Rift VR headset with Touch Controllers. The audio setup was based on an eight-channel loudspeaker system that surrounded the auditorium with two additional subwoofers. The audio routing used ambisonics to pan and render sounds to the horizontal 8.2 speaker array.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{connexion_schematic.png}
\caption{Connexion Schematic}
\end{figure}

\textsuperscript{11} “Avatar Orchestra Metaverse”, accessed October 14, 2020, \url{http://avatarorchestra.blogspot.com/}.
\textsuperscript{12} \url{https://dreamadoptionsociety.com/}

UE4 was used as a panner and a MIDI controller. The primary source of sound was SpaceCraft Granular Synth that was plugged into Reaper. Its parameters, such as grain duration and spread, were controlled by MIDI messages sent from UE4, and they were based on the position of hands in relation to the centre of the monad sphere. Sound from the synth was routed via a virtual sound device to capture the audio component back into UE4. In UE4, the captured sounds were played back by the player’s avatar hands, so they acted as secondary audio sources. As the performer moved hands around the monad sphere, the sounds were played from the hand’s position, and then rendered accordingly around the auditorium via the horizontal spherical sound system.

The Monad is an avatar object that reacts to the performer’s movements. Playing this instrument consists in moving the hands around the sphere and bringing the hands closer to and away from its surface. Its visual form is a sphere, which extends spiky shapes when the virtual hands get closer to its surface. Those spikes represent the positioning of sounds in the soundfield so the performer knows how the spherical panning of the sound is working.
The performer positions sounds in space with his hand movements. The composition is also affected with a secondary method. The position of the hands around the sphere (vertical position and distance) controls granular synthesis of the precomposed sample that is being played. In this arrangement the performer doesn’t change the pitch nor the timing of the sounds in the classical context but rather operates two types of DSP as a means of musical expression.

The system enables the projection of POV video onto a screen, which is shown to the audience. The performer can move around the sphere, go inside it and modify its reactions with his hand movements. All those actions are connected to the signal processing of the sound.

On the 3rd of November, 2019, we had a premiere performance. I was the performer using a VR headset and a built-in headphone system with binaural rendering of the sound reference produced by the system.

Physical reception of interactions inside the virtual reality environment is almost as real as with real world objects. The scale is accurate and the range of the movements is suitable for developing a wide scale of expression. The response from the object gives instant information about the performer’s input, so there is a multimodal perception of the interaction. Without the need of applying real resonators, like strings or reeds, the forms of avatar instruments can be shaped in any way. A sphere was a perfect choice for representing the soundfield in this spatial performance, but for other types of interactions the shapes and forms can be unrestricted to known objects. One example of such unrestricted virtual reality visualization is the application SoundSelf, which creates fractal projections to a soundtrack that can be controlled by the participant’s voice. The audience reaction to the Connexion performance was enthusiastic, but some people were disappointed they couldn’t watch it from within the virtual world. This is our objective for next versions of the system—making it possible to experience the performance inside virtual reality as immersion of the audience.

**Composing within VR**

Monad is designed mainly as a performative object as it uses a precomposed track and during performances the track is manipulated. I was recently invited to use the PatchXR system, which is considered a 3D version of visual programming engines such as Max/MSP. Is this Jaron Lanier’s idea of phenotropic programming brought to life? Maybe, at least in part. The system is based on Unity 3D engine, but its functionality allows the user to construct audiovisual devices inside of it without the need of coding in the source project. It has its own frequency modulation synthesis engine and can communicate with external devices via MIDI or OSC. There are building blocks for mathematical and logical operations and the avatar movement controllers such as sliders, buttons, knobs, and more sophisticated blocks like the theremux (a three dimensional slider in the form of a sphere inside a three axis box). This allows the user to build his own avatar device that can produce sound through an unlimited number of virtual speakers positioned in the virtual world. The user can record movements and create instances of their avatar that will reproduce such recordings in a looped manner, so one can create a kind of ensemble that way. There are tools for manipulating sound and image as well.

I was invited to create a composition for A MAZE Festival in Berlin. Due to the pandemic the festival was held online. See https://2020.amaze-berlin.de/.

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14 Due to the pandemic the festival was held online. See https://2020.amaze-berlin.de/.
connected to the sound system surrounding the object. Each slider represented a different sound parameter and all those were distributed to a number of synthesizers and sequencers connected to the virtual speakers. The slider could be controlled manually or by data via OSC. Urchin was an attempt to reproduce form of Monad in PatchXR environment using the given building blocks. PatchXR’s modularity caused some problems, as the blocks have defined sizes and shapes. For example, I was able to put many objects in a small space of a sphere only by overlapping them. That produced more problems when I tried to move them afterwards, but in general the modular approach has many advantages. The uppermost advantage is that the designing process happens inside virtual reality.

During conversations with PatchXR developers, we agreed that massive online music collaboration within VR environments is the most wanted feature that we would like to incorporate. In the face of the pandemic lockdown such collaboration might be an alternative to traditional ways of performing music.

**Conclusion**

Each of these examples represents different way of using virtual reality as a musical medium, their use of space, tactile interaction, real-virtual continuity and modularity. Immersive environments are changing the way we interact with sound and image. To find these new methods we need to experiment inside those environments, because only then can we realize how we would create without limitations of the physical world. Our art forms would be extremely different if we could teleport, use telepathy, change our shapes and sizes, look through the walls or listen to more spots than these two where our ears are. Designing an environment is the new way of composing audiovisual artistic forms. A new kind of architecture, where interaction is one of its native features. In the sound and music area—the sound objects are becoming Artaud’s parts of the set. In that sense the designed environment becomes a kind of a scoresheet and instrument itself and once the participant is immersed, he instantly becomes the performer.
Contributors

Noam Bierstone is a Canadian percussionist and curator dedicated to modern artistic performance. Committed to the creation and development of new music, Noam is a founding member of three primary artistic ventures: the saxophone and percussion duo scagges, which has extensively toured and performed across North America, Europe, and Australia; the Montreal concert series and performance collective NO HAY BANDA, that has quickly grown to be recognized as a leading voice of experimental new music in Canada, and the Montreal-based percussion quartet ArcKin. Noam pursues ongoing collaborations with various composers and artists, with a particular interest in works that expand the notion of percussion playing through new techniques, hybrid instruments, theatrical and choreographic elements, and performer-controlled electronics. Noam is regularly invited to perform at international festivals and with leading new music groups across Canada and Europe, and in his spare time he enjoys cooking, gardening, and folk dancing. noambierstone.com

When he eventually turned 36 and had composed about 80 pieces, he had been on stage as a performer and composer based in Warsaw, Przemysław Danowski—a funny noise making cellist when asked kindly. In this respect, he is honoured to be a veteran of the Feast, PAS Quebec Days, amongst others. Colin’s experiments with sound, electronics, theatre, and percussion; investigating excess, bodily extremes, unpredictable instruments, and rich raw noises. He has worked with the Noisebringers, TAK Ensemble, AndPlay, and Noudi. He is a founding member of the Drift Ensemble, poetry and Brutalust. He has presented in the Huddersfield Contemporary Music Festival, Berlin’s CMT festival, the Darmstadt Internationale Ferienkurse für Neue Musik, Australian Art Orchestra, and Union Division (UK). He lives in Geneva.

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Maria Sappho Donohue is a hybrid. She acknowledges the plasticity of the present and therefore does not worry much about being anything in particular. Most often she enjoys any opportunity to explore the magically absurd. She has worked with the BBC Scottish symphony orchestra, Australian Art Orchestra, the Instant Composers Pool, and is a current member of the Glasgow Improvisers Orchestra. She is a winner of the New Piano Stars Competition, Governors Recital Prize, and the Deward Awards. She is a current PhD Candidate at Huddersfield University, on the European Research Council project IRiMaS, ‘In her spare time’, as biographies like to have, she runs the Feminist Free Improvisation Archive, works for Mopomo TV (the oldest running free improvisation series in the UK) and is the co-editor for the discursive cultural arts magazine the Mass. www.mariasappho.com

Colin Franke experiments with sound, electronics, theatre, and percussion; investigating excess, bodily extremes, unpredictable instruments, and rich raw noises. He has worked with the Noisebringers, TAK Ensemble, AndPlay, and Noudi. He is a founding member of the Drift Ensemble, poetry and Brutalust. He has presented in the Huddersfield Contemporary Music Festival, Berlin’s CMT festival, the Darmstadt Internationale Ferienkurse für Neue Musik, Australian Art Orchestra, and Union Division (UK). He lives in Geneva.

Cristina Fuentes Antoniazzi is an actor, meditation teacher and communication consultant. She is Chilean and currently resides in Manchester. She is a PhD researcher in Drama, Performance and Dance at The University of Huddersfield. The objective of her research project is to develop a Mindfulness-Based Performing Training (MBPT).

Cristina studied acting at Universidad Diego Portales, with Psychology studies at the same university. She has a diploma in “Mindfulness in Relations”, by the Instituto Mindfulness Chile. She is a meditation teacher accredited by Shamhala International and also has a degree in Management from the School of Economics and Business, University of Chile.

Currently, she teaches Mindful Acting classes to professional actors in Manchester. For more details on her work, please visit her web page www.presenciaautentica.com or instagram account @presenciaautentica.

Cristina Ghirardini obtained her PhD in Storia e critica delle culture e dei beni musicali (History and critics of musical cultures and heritage) from the University of Torino in 2007. Her doctoral dissertation focused on the sources of Filippo Bonanni’s Cappella Armonico (1722). She has worked as a freelancer with various cultural institutions and sound archives. Recently she has taken part in the project Sound Archives and Musical Instruments Collections directed by Ilario Meandri at the University of Torino, where she collaborated on the catalogue of the musical instruments of the Museo del paesaggio sonoro in Riva presso Chieri. She is conducting research on sung improvised poetry in ottava rima in central Italy as a PhD student within the IRiMaS (Interactive Research in Music as Sound) project that is directed by Michael Clarke at the University of Huddersfield. Her publications can be found at https://independent.academia.edu/ CristinaGhirardini.

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D Henry McPherson is an artist, improvising performer, researcher and composer, from the United Kingdom. His creative practice draws widely across the visual, sonic, kinetic and somatic, emerging in a shifting exploration of the myriad overlapping forms of communication, rooted in a
Irina Rosenberg: I am a UK-based violinist, academic, improviser and specialist in performance of repertoire for violin and electronics. Currently pursuing a PhD at the University of Huddersfield, through my artistic research project “Theatre of Transformations”, I am investigating the performative aspects of mixed music for violin and electronics.

Dedicated to establishing long-term collaborations and developing new works across different genres, I have presented numerous premieres across Europe and North America and appeared in various settings at festivals such as Huddersfield Contemporary, Borealis, Guadeamus, Chicago New Music, Wonderfeel and others. Educated in Bergen, Düsseldorf, Utrecht and Chicago, I consider Elisabeth Perry, Ilya Kaler and Irvine Arditti my most influential teachers. My repertoire extends from the music of early Baroque Era, to some of the newest works of the 21st Century.

I collaborate and conduct an artistic research practice on improvisation together with pianist and researcher Jonny Best, with whom I regularly perform improvised silent film accompaniments. Our work is documented at www.impro.network. Through my work with Yorkshire Sound Women Network, I have been involved with educating and inspiring young women to explore music and sound technologies. I am a visiting lecturer at the University of Wolverhampton (campus in Leicester).

Dejana Sekulic, violinist, sound+silence explorer, and performer, born on 43°18’58.5"N 21°54’39.5"E, obtained her Bachelor performance and teaching degree at the Faculty of Art at the University of Niš, Masters and Postgraduate music, performance degree at the Royal Conservatory Brussels (with Ostrakh and Bouckaert), and completed advanced program for contemporary music lead by Ictus (Brussels) and Spectra (Gent) ensembles at School of Arts Gent. She is actively performing as a soloist, as part of the “LAPS” ensemble, duo Momitani-Sekulic, and violin and live electronics duo with Gilles DonueX. Currently, she focuses on her research “Temporality of the Impossible”, at CeReNeM+ReCePP, Huddersfield (UK), that explores thinking the future in the present as the past, in contemporary violin repertoire. Her other artistic works include research in the field of interactive sound installations and video. Passionate in acquiring knowledge, Dejana is equally passionate in sharing it, and is therefore actively engaged with teaching. http://dejanasekulic.com/

Katherine Young makes electroacoustic music and sonic art centred around collaboration. The Laphil, Chicago Symphony Orchestra’s MusicNOW, Internationales Musikinstitut Darmstadt, Third Coast Percussion, Ensemble Dal Niente, Bludenzer Tage zeitgemäsßer Musik, and others have commissioned her music. She has worked closely with Wet Ink, Ensemble Nikel, WasteLAnd, Distractfold Ensemble’s Linda Jankowska, and Yarn/Wire. Her installation work has been commissioned by the University of Chicago’s Smart Museum of Art. As a bassoonist and improviser, Katherine amplifies her instrument and employs a flexible electronics setup. She has documented her work on numerous recordings, including her debut with Sam Scranton as Beautifulish (out December 2020 on Shinkoyo) and a duo with Anthony Braxton. Katherine teaches composition, improvisation, and electronic music at Emory University in Atlanta. https://katherineyoung.info/