PAOLA LIVORSI

Bridging human and instrumental vocality

Lectio praecursoria

The public examination (Artistic Programme) of Paola Livorsi was held on 28 October 2023 at the Black Box of Helsinki Music Centre. The subject of the doctoral degree and the title of the written thesis was: Human voice and instrumental voice: an investigation of voicelikeness. The Chair was Professor Jan Schacher. The statement of the demonstration of artistic proficiency was presented by the Chair of the Artistic Board Professor Otso Aavanranta. The statements of the written thesis were presented by PhD Mareike Dobewall and Professor Winnie Huang.

Video extracts from the following artistic components were played during the lectio: Imaginary Spaces (2016) The end of no ending (2017) Between words and life (2019) Sounding Bodies (2020) Medusa (2022)

Artists: Giorgio Convertito, Anni Elif Egecioglu, Roberto Fusco, Ahoora Hosseini, Piia Komsi, Veli Kujala, Petri Kumela, Juho Laitinen, Vera Lapitskaya, Tuuli Lindeberg, Paola Livorsi, Sara Orava, Marek Pluciennik, Suvi Tuominen, Ballet Finland, defunensemble, Jousitus ensemble, Uusinta ensemble.

The fanfare was played by the collective of the Centre for Music and Technology: Juulia Haverinen, Enni Katrin, Andrea Mancianti, Esther Calderón Morales, Alejandro Olarte, Dominik Schlienger, and Marianne Decoster-Taivalkoski.

The sound installation *Haptic Voices* (Livorsi 2023, sound engineer Esther Calderón Morales) was available for the audience before and after the doctoral examination.

My interest in voicelikeness stemmed from my experience as a violinist in the 1980s. At that time I noted that my instrumental sound possessed some similarities to my vocal sound, and later, in my experience as a composer, I realised how personal and recognisable an instrumental sound can be. It is not only every voice that is highly personal; instruments, and particularly string instruments, can also vary significantly from one another. From a post-human perspective, they can be considered quasi-living beings and co-performers, instead of objects to control or dominate.

Over the past eight years (2015–2023) I investigated the voicelikeness of human and instrumental voice through five artistic projects, through methodologies such as grounded theory, autoethnography, and ethnography.

Origins

If we take a step back and look at the nature of voice, it is a phenomenon present at the origins of humanity and of every human life: most of us have a voice (in a physiological or metaphorical sense), and as humans we develop our vocalisations into language through a complex process of language acquisition (here I focus on spoken languages, but I am aware of other kinds of language, such as signed language). Voice is not a solely human phenomenon; there are also forms of vocal communication (for example of vocal learning, Verga et al. 2022) in nonhuman beings.

Human vocalisations start at birth ("the primeval cry," Nancy 1993) and soon develop out of the desire to communicate with the surrounding world, at first with the main caregiver. The mutual character of this initial relationship is essentially musical; as Malloch & Trevarthen (2009) note, it is the first music duo of our life, a musicking connection. This phase is essential in language development, so much so that infants already cry and vocalise in their native language (Armbrüster et al. 2021).

I am convinced that there are deep and ancient connections between these two ways of being vocal, the human and the instrumental, as they appear in music and language. From the start, my interest was not drawn to song proper or language proper but to their numerous, ambiguous, yet fertile intermediate forms – belonging to the deeply expressive and communicative capabilities of the human voice.

Voice is experienced as both inner voice – the voice of our thoughts – and outer voice, an utterance directed towards someone else, in a variety of contexts and modalities.

From a phenomenological point of view any sound can be considered a voice (Ihde 2007 [1976], 115–116), since we speak to the world and the world speaks to us. Instrumental voice shares something of this phenomenon: as with human voice, it is an utterance directed towards someone else, the 'other' in front of us; in this sense, it is deeply relational. Not only that, but, as with human voice, instrumental voice is also unique. The lengthy development of a personal instrumental sound goes hand-in-hand with the development of a musician's identity.

Cavarero (2005 [2003], 66) invites us to rediscover the *phoné* as a "vital desire for emission": embodied sound coming from unique vocal cavities, carrying a fleshiness and sensuality that was put aside along the path of so-called civilisation – a feminine part (I hereby speak from my own body and experience) that is connected to the untamed and the unsubmissive.

Some authors, such as Malloch & Trevarthen (2009) and Jin Hyun Kim (2023), interpret musicality as a way of "communicating the vitality and interest of life" (Malloch & Trevarthen 2009).

A SCIENTIFIC FRAMEWORK

During the path of this research, I soon realised that investigating a complex and subtle phenomenon such as the voicelikeness of human and instrumental voices required a multidisciplinary approach. Disciplines such as palaeoanthropology, human development, music psychology, and ethology, but also philosophy, have been useful to shed light on multiple aspects of the relationships between human voice (as the continuum of vocality and language) and instrumental voice (as music).

My turn towards these studies was motivated by a curiosity to investigate the origins of voicelikeness, going back to the origins and relationships of music and language (although acknowledging the fact that the ultimate origin is never to be found). These readings stimulated further questions, such as the meanings and functions of music and language, seen as complementary rather than opposed communication means, and the disputed role of representation. I think that it is important for musicians to know and possibly participate in the debates these questions raise: artistic research can make a precious contribution, I believe, in both helping to frame questions about music and by giving an expert perspective about the actions and perceptions of music-making.

Most of the scientific studies reviewed here examine the relationships of music and language by looking at both the phylogenetic side (how the capacities for music and language have evolved in the human species) and the ontogenetic side (how these capacities evolve in every new individual).

The interest in the relationships between music and language resurfaced in the 1990s after a long pause: after the historical works of Spencer (2015 [1857]), Rousseau (1998 [1871]), and Darwin (1981 [1871]), the question remained unexplored, except for John Blacking's ethnomusicological studies (1983 [1973]). Only recently, in the 1990s and 2000s, were there publications such as the proceedings of the Stockholm International Symposium (Sundberg et al. 1991), two books about biomusicology at MIT (Brown et al. 1999; Honing et al. 2018), and other recent research (such as the special issue of *Behavioral and Brain Sciences*, Savage et al. 2021) that addressed the issue. Most of this research acknowledges the possibility that some capabilities for music may have a biological basis, while others consider music to be an entirely cultural invention, without any evolutionary adaptive function (such as Pinker 1997, who defined music an "auditory cheesecake") – not to mention other intermediate positions between these two.

This scientific framework correlates well with my interest in the continuum of

speech and song, which soon became one of the primary fields of investigation in this artistic research.

Theories of the coevolution of music and language (Brown 1999, 2017; Mithen 2005, 2009; Savage et al. 2021) hypothesise that similar capabilities could have served the development of both music and language, seen as communicative systems, which seems to be confirmed by significant overlaps in brain activity during the perception of music and language.

To turn to the present artistic investigation, a broad exploration of the vocal continuum of speech and song started from the speech particles of *Imaginary Spaces* (coupled with particles of cello voice), to continue in the following projects, with a crescent focus on the timbral connections between human voice and string instrument (in *The end of no ending* and *Between words and life*).

The musical qualities of language were at the centre of *Between words and life* and *Sounding Bodies*, through an exploration of prosodic qualities and the intermediate space between propositional and non-propositional language. In *Medusa* I explored both the timbral connections between voice and instrument and a broader range of vocal expressions – that I researched through my own voice.

In the scientific research that I refer to, the role of prosody is central as well, probably preceding the emergence of language proper in the development of protolanguages. Such protolanguages would have met the new social needs that emerged among growing hominin communities and the challenges posed by their changing social and environmental conditions. In contrast, prosody is a part of language usually considered accessory by most linguists, a simple addition to its "compositional and combinatorial levels" (Brown 2017).

The importance of prosody is however confirmed at the ontogenetic level by human development studies, such as that of Malloch and Trevarthen (1999, 2009). Both the phylogenetic and the ontogenetic perspectives underline the importance of the interpersonal and social dimensions of music and language, of which I became more aware through the artistic path of this research, developed with and through others, in changing working groups, and for other persons (the listeners).

Philosophically, the Arendtian concept of *in-between* (Arendt 1998 [1958], 182) helped me to focus even more on the relationships between composer, performer, and listener, in a public, shared space characterised by personal and free actions.

The porous boundaries between these roles matured through my artistic path, and led me to an integration of the participatory elements of music into a fundamentally presentational music culture (Savage et al. 2021, 6–7; Turino 2008).

For me, the evolutionary interdependence of biology and culture, as underlined in the above-mentioned research, entails an increased attention to the infinite, minute interconnections existing between body and mind. While considering them to be an indissoluble continuum, I remain curious about the scientific and philosophical findings relating to the field of voicelikeness – an approach that I consider complementary to artistic research.

MOVEMENT, EMBODIMENT, AND PERFORMATIVITY

The dynamic relationships between body and mind also evidence the fundamental role of movement, which emerged in various scientific accounts: from the auditorymotor coupling observed in the brain during both listening and producing music, to language acquisition seen as a "perceptual-motor problem" (Jusczyk 1997, 34); to the probable non-distinction between forms of musicality, dance, and language (transmitted through mimesis, Cox 2016) in human ancestors. As Varela & Depraz (2005, 72) affirm, movement is the distinctive "mode of being" of animals, compared to other life forms (in which movement is found, but not perceptible in human terms).

Movement, or being connected with degrees of interpersonal relationships (closeness or distance in the performative space, at both a physical and a symbolic level) had an important role in my artistic investigations. Movement also shows how actions shape and transform a shared space. Generally, the use of movement was also motivated by a desire to make musical actions less pre-defined and rigid, giving them back something of the spontaneity and dynamicity of life (which better succeeded when introducing forms of improvisation).

I am more interested in exploring the non-representational qualities of music and language (without denying their representational features) rather than in defining their functions or meanings; the focus being, instead, on the affective layers of music and language, their potential to communicate movement and relationship from body to body.

According to enactivism, cognition itself is a form of embodied action, happening through recurrent loops of action and perception (Colombetti & Thompson 2005, 56) in a continual exchange between organism and environment (the organism shaping the environment itself). An enactivist approach to embodiment is inherently dynamic and relational, which makes it especially relevant for the present research. Most of the artistic components contain movement on many levels, dynamic fluctuations of qualities, and various degrees of relationality. It is a world of multiplicities that is inherently non-hierarchical, composed of fields of tension where individuals interact and affect one another – "move" and "are moved" (Hodkinson 2020) – in a shared and changing environment.

The perspective of embodiment influenced my way of thinking across the years, increasing and sharpening my attention on the dynamic processes underlying music action and perception, and leading me to multiple forms of bodily explorations and bodily engagement across the artistic projects of this doctorate.

Performativity unexpectedly assumed an increasing importance in my research. It is interesting to note that it is a linguistic term (from the "speech act," Austin 1962), meaning something "producing or changing facts" (Kim & Seifert 2007, 234), for both oneself and others.

My bodily engagement started with *Imaginary Spaces* (where, at least in 2016, it was an unplanned decision that I chose to act along with the audience, following the evolving situation). It continued with an engagement mediated by the camera in the two following projects (on my skin, eyes, and hands), leading to a performer's role in *Sounding Bodies* and *Medusa*. What I called "a performative turn" continued through the vocal explorations for *Medusa*, and in the follow-up projects *Medusa's waters* (a series of videos), as well as the duo Plucié d'Orsi. In short, it inaugurated for me new ways of working and researching, that I intend to develop in the future.

The shared space in-between and the disclosure of an identity

Across the five artistic works of the present research, I dealt with questions of space, place, and environment, understood as lived, shared, emotional, acoustic, virtual, performative, multidimensional, and non-hierarchical spaces.

According to Hannah Arendt (1998 [1958], 179), the in-between is the "space of appearance," where each human being appears in their uniqueness, with their own body and voice. This appearing is alike to a "second birth" (Arendt 1998 [1958], 176–177), in a public, shared space where one can see and be seen, speak out and be heard. It is the in-between, where it is possible to disclose "who" one is, more than "what" one is (Arendt 1998 [1958], 179). This revelation of identity is strikingly similar to what happens in the live arts, included music, where something essentially personal is shared with a community of listeners.

I completed these reflections about identity with some respectful visits to the field of psychology, from the Lacanian conception of the "other" (Lacan 1988 [1978]), to the musical role of the voice and the body in analysis (Sapen 2008), and some references to Jungian and post-Jungian psychology.

Cavarero (2000 [1997]) further develops Arendt's thought with the concept of "narration of identity": an identity only exists when someone else is capable of narrating it; only upon hearing it can a person fully realise the sense of past events. This reveals how identity, be it personal or musical, is deeply relational – that is, it is also constitutionally plural and subject to change.

These thoughts of identity and space stimulated the research of deeper vocal layers in alternative performance settings (with decentralised and multiple listening points) and invited me to work on the boundaries between roles and art fields, and to consider these boundaries more porous. As Ingold (2020 [2015], 147) says, "the interstitial space" is a fertile space characterised by a "winding and unwinding, inhalation and exhalation [...], where "movement is the primary and ongoing condition."

Conclusions

With the present research, I put a spotlight on the re-evaluation of the vocal layers in musical identity that often are forgotten in music education and in the music profession, and on music-making as an embodied and relational practice. With Kim (2023), I agree on the need for a redefinition of the current concepts of music and language. Much remains to be explored among the non-representational qualities of music and language.

I aim to give voice to unheard, undisciplined, and archaic voices, often belonging to the other and the under-represented (among which, the feminine).

I propose the new concepts and practices of *in-hear*, paying attention to inner voices, and *co-hear*, hearing one another in a community of listeners. Derived from *insight*, in-hear translates the personal and visual point of view into an auditory point of listening; it means attending to one's individual voice in its plurality, hearing the other within (in perceptual and imaginative ways); drawing from the word's phonetics, it also means *in-here*, hearing being a situated act, happening in a definite place and time.

Co-hear indicates a state of resonance with the other without, hearing the other without; in this sense, *cohearance* is not only a conceptual practice, but a sensorial and interpersonal practice, a commitment to hear the other next to me (the other with whom, as Arendt says, I share this world, whether I choose it or not).

Arendt's philosophy (1998 [1958]) importantly proposes a shift from a utilitarian conception of labour and work, which implies a violent relationship with the object and the other (a *homo faber* who makes and destroys, mostly in solitude), to a conception of discourse and action where the person in their uniqueness is at the centre and connected to others (in the human condition of plurality) – the others being more than a sum of abstract human beings. I think that this perspective can be useful in music-making as well, where the musician is too often assimilated with an isolated manipulator, while the individuality of the person disappears behind their qualities, and the community easily becomes a group of interests or of consumers.

Other philosophies, such as Bergson's and Lévinas's, help me to appreciate the inherently dynamic and multiple character of life, an incessant movement of varying energies and nuances that risk going unnoticed in the occidental splits between subject and object, mind and body, humans and nature: as Cixous (1989 [1979]) says, the point is to "live the orange." I believe that capturing something of that

movement is the challenge of any artistic research, of which this work is only an initial attempt.

References

- Arendt, Hannah 1998 [1958]. *The Human Condition*. Chicago & London: The University of Chicago Press. http://dx.doi.org/10.7208/chicago/9780226924571.001.0001
- Armbrüster, Lotte, Werner Mende, Götz Gelbrich, Peter Wermke, Regina Götz & Kathleen Wermke 2021. Musical Intervals in Infants' Spontaneous Crying over the First 4 Months of Life. *Folia Phoniatrica et Logopaedica* 73. 401–412. http://dx.doi.org/10.1159/000510622
- Austin, John L. 1962. *How to Do Things with Words. The William James Lectures delivered at Harvard University in 1955.* Oxford: Clarendon.
- Bergson, Henri 2003 [1907]. L'évolution créatrice. Paris: Presses Universitaires de France.
- Blacking, John 1983 [1973]. How Musical Is Man?. Seattle: University of Washington Press.

Brown, Steven 1999. The 'musilanguage' Model of Human Evolution. In Steven Brown, Björn Merker & Nils L. Wallin (eds.) *The Origins of Music*, Cambridge MA: MIT Press. 271–300. https://doi.org/10.7551/mitpress/5190.003.0022

- 2017. A Joint Prosodic Origin of Language and Music. Frontiers in Psychology 8, 1894. http:// dx.doi.org/10.3389/fpsyg.2017.01894
- Brown, Steven, Björn Merker & Nils L. Wallin (eds.) 1999. *The Origins of Music*. Cambridge MA: MIT Press. https://mitpress.mit.edu/9780262232067/the-origins-of-music/
- Cavarero, Adriana 2000 [1997]. *Relating Narratives. Storytelling and Selfhood*. London & New York: Routledge. https://doi.org/10.4324/9781315824574
- 2005 [2003]. For More than One Voice: Toward a Philosophy of Vocal Expression. Transl. Paul A. Kottman. Stanford CA: Stanford University Press. http://dx.doi.org/10.1515/9780804767309
- Cixous, Hélène 1989 [1979]. Vivre l'orange / To Live the Orange. In *L'heure de Clarice Lispector*. Paris: des femmes.
- Colombetti, Giovanna & Evan Thompson 2005. Enacting Emotional Interpretations with Feeling. *Behavioral and Brain Sciences* 28(2). 200–201. http://dx.doi.org/10.1017/S0140525X05280044
- Cox, Arnie 2016. Music and Embodied Cognition: Listening, Moving, Feeling, and Thinking. Bloomington: Indiana University Press. http://dx.doi.org/10.2307/j.ctt200610s
- Darwin, Charles 1981 [1871]. John Tyler Bonner & Robert M. May (eds.) The Descent of Man, and Selection in Relation to Sex. Princeton: Princeton University Press.
- Hodkinson, Juliana 2020. Moving and Being Moved: Affective Resonance at Play in Sonic Performances. In Catherine Laws (ed.) *Performance, Subjectivity, and Experimentation*. Leuven: Leuven University Press. 33–52. http://dx.doi.org/10.2307/j.ctvv41431.5
- Honing, Henkjan (ed.) 2018. The Origins of Musicality. Cambridge MA & London: MIT Press. http://dx.doi.org/10.7551/mitpress/10636.001.0001
- Ihde, Don 2007 [1976]. Listening and Voice. Phenomenology of Sound. Albany: State University of New York Press.
- Ingold, Tim 2015. *The Life of Lines*. New York: Routledge. http://dx.doi.org/10.4324/9781315727240
- Jusczyk, Peter W. 1997. The Discovery of Spoken Language. Cambridge MA: MIT Press.

- Kim, Jin Hyun 2023. Musicality of Coordinated Non-representational Forms of Vitality. *Journal of Comparative Literature and Aesthetics* 46(1), 59–69. https://www.proquest.com/openview/b8810a4ad35fb113115e04f99df45d7a/1?pq-origsite=gscholar&cbl=2026350
- Kim, Jin Hyun & Uwe Seifert 2007. Embodiment and Agency: Towards an Aesthetics of Interactive Performativity. In *Proceedings SMC'07*. Lefkada, Greece. 230–237.
- Lacan, Jacques 1988 [1978]. The Seminar of Jacques Lacan. Vol. 2. The Ego in Freud's Theory and in the Technique of Psychoanalysis, 1954–1955. Ed. Jacques-Alain Miller. New York: Norton.
- Lévinas, Emmanuel 1987 [1947]. *Time and the Other*. Transl. Richard A. Cohen. Pittsburgh: Duquesne University Press.
- Malloch, Stephen N. 1999. Mothers and Infants and Communicative Musicality. *Musicae Scientiae*, Special Issue 1999–2000, 29–57. http://dx.doi.org/10.1177/10298649000030S104
- Malloch, Stephen N. & Colwyn Trevarthen 2009. Musicality: Communicating the Vitality and Interest of Life. In Stephen N. Malloch & Colwyn Trevarthen (eds.) *Communicative Musicality: Exploring the Basis of Human Companionship*. Oxford: Oxford University Press. 1–11. https://psycnet.apa.org/record/2008-14595-001
- Mithen, Steven 2005. *The Singing Neanderthals: The Origins of Music, Language, Mind and Body.* London: Weidenfeld & Nicolson.
- 2009. Holistic Communication and the Co-Evolution of Language and Music: Resurrecting an Old Idea. In Rudolf Botha & Chris Knight (eds.) *The Prehistory of Language*. Oxford: Oxford University Press, 2009. 58–76.

http://dx.doi.org/10.1093/acprof:oso/9780199545872.003.0004

- Nancy, Jean-Luc 1993. *The Birth to Presence*. Transl. Brian Holmes et al. Redwood City: Stanford University Press. https://www.sup.org/books/title/?id=2947
- Pinker, Steven 1997. How the Mind Works. New York: Norton. https://psycnet.apa.org/record/199730233-000
- Rousseau, Jean-Jacques 1998 [1871]. Essay on the Origin of Languages: In Which Melody and Musical Imitation Are Treated. Transl. John T. Scott. Hanover: Dartmouth College Press. 289–332.
- Sapen, Daniel 2008. Freud's Lost Chord: The Place of Music in Psychoanalytic Mythology. New York: Adelphi University.
- Savage, Patrick E., Psyche Loui, Bronwyn Tarr, Adena Schachner, Luke Glowacki, Steven Mithen & W. Tecumseh Fitch 2021. Music as a Coevolved System for Social Bonding. *Behavioral* and Brain Sciences 44, 1–22. http://dx.doi.org/10.1017/S0140525X20000333
- Spencer, Herbert 2015 [1857]. The Origin and Function of Music. In John Shepherd & Kyle Devine (eds.) *The Routledge Reader on the Sociology of Music*. London: Routledge. 43–50. http://dx.doi.org/10.4324/9780203736319
- Sundberg, Johan, Lennart Nord, & Rolf Carlson (eds.) 1991. Music, Language, Speech and Brain: Proceedings of an International Symposium at the Wenner-Gren Center, Stockholm, 5–8 September 1990. London: Macmillan Education UK.

https://doi.org/10.1007/978-1-349-12670-5

Turino, Thomas 2008. Music as Social Life: The Politics of Participation. Chicago: University of Chicago Press. https://press.uchicago.edu/ucp/books/book/chicago/M/bo5867463.html

- Varela, Francisco J. & Natalie Depraz 2005. At the Source of Time: Valence and the Constitutional Dynamics of Affect: The Question, the Background: How Affect Originarily Shapes Time. *Journal of Consciousness Studies* 12(8–10). 61–81.
- Verga, Laura, Marlene G. U. Sroka, Mila Varola, Stella Villanueva & Andrea Ravignani 2022. Spontaneous Rhythm Discrimination in a Mammalian Vocal Learner. *Biology Letters* 18(10). 1–4.