

Exhibiting The Voice

Article DOI: <https://doi.org/10.70733/35ghjst63tbw>

Kris Dittel, Jelena Novak

Abstract

The title of this article carries an inherent contradiction. How could something so elusive, and most of all, invisible, as the voice, be exhibited? Despite the availability of recording technologies for over a century, the voice still conveys the impossibility of being caught in place and time.

It was this contradiction that the exhibition *Post-Opera* (TENT, V2_Lab for the Unstable Media, Operadagen Rotterdam, 2019) worked with, in order to show the affect of the singing voice, the bodies they emit it, and challenge the socio-cultural frame that influence the perception of who can have a voice and what is considered a voice.

In the Western world, the notion of “having a voice” is commonly associated with the right to have a vote, to have a voice in society, often expressed in individualised and humanistic terms. Critics of humanism, and in particular critical posthumanists, have already pointed out the non-neutrality and inherent privileges the term carries, with its underlying connection to white, patriarchal, anthropocentric and colonial meanings. Instead of this rather Eurocentric conception of the voice, *Post-Opera* demonstrated a disconnect between this view and brought forth a proposition where singing machines, mechanisms, beasts, animals and other “others” joined in a collective form of vocal expression. They sung beyond opera and at the same time beyond human. This way *Post-Opera* proposed a different ontological understanding of voices and their potentialities, as well as the variety of ways voices are let to be heard.

This text reflects on the ways in which the exhibition and surrounding programme materialised on the intersections of visual art and postdramatic opera, while confronting voice studies and theories of critical posthumanism in order to posit the voice beyond its humanist license.

Introduction

The title of this article carries an inherent contradiction. How can we exhibit something as elusive and, above all invisible, as the voice? Despite the availability of recording technologies for over a century, the voice still represents the impossibility of being caught in place and time. It was this contradiction that the exhibition “Post-Opera” engaged with, in an attempt to interrogate the affect of the singing voice, the bodies that emit that voice, and the socio-cultural framework that has influenced perceptions of who is authorised to have a voice, and even what is considered to be a voice. The project was conceptualised and organised by the authors of this text curator, editor and writer Kris Dittel, and musicologist, opera scholar and dramaturge Jelena Novak.^[1]

“Post-Opera” brought together perspectives from opera the ultimate vocal genre and visual art in order to explore the relationship between the body and the voice, with its dynamic range, taking that relationship well beyond the operatic context, and “staging” it in the form of an exhibition with a rich programme of live events and performances. TENT Rotterdam exhibition space hosted artworks including multimedia installations, sculptural pieces, video installations and time-based-media works by Mercedes Azpilicueta and John Bingham-Hall, Jasna Veličković, Adam Basanta, Tom Johnson and Martin Riches, Franck Leibovici, Katarina Zdjelar, Ho Tsu Nyen and Jan Adriaans.^[2] It also included performances by Paul Elliman, Suzanne Walsh, Urok Shirhan and Janneke van der Putten, as well as a workshop by Geo Wyeth.^[3] Some of the work was “reactivated” in the form of live performances at TENT (*Opera of Things*, 2019, by Jasna Veličković), at V2_ (*Swarming Chants*, 2019, by Jan Adriaans) and in the urban space of Rotterdam (*Scores for Rotterdam*, 2019, by Mercedes Azpilicueta and John Bingham-Hall).

Besides artworks, installations, live performances, a workshop and a symposium, the exhibition also featured archival documentation and prints, allowing audiences a historical look into some of the earliest attempts to recreate the human voice by artificial means. These historical “footnotes” included illustrations of vocal anatomy (*Two anatomical drawings*, 1745–46, by Jacques Fabien Gautier d’Agoty, from the collection of the Rijksakademie van beeldende kunsten, Amsterdam), eavesdropping (*Speaking Statues*, 1650, a book illustration by Athanasius Kircher), and voice mechanisms (*Sirènes a voyelles et résonateurs buccaux*, 1900, by G.R.M. Marage, and a fictitious documentation of the history of *The Singing Machine*, 2010–13, by Martin Riches). Some additional perspectives on the voice were introduced during the symposium “Installing the Voice”, which focused on the ways in which contemporary artists, composers and performers reinvent the relationship between the body and the voice.^[4]

The artworks explored a wide range of possibilities and potentialities in relation to the singing voice, questioning, among other aspects, the nature of the body-voice relationship and the conventions associated with that relationship. What exactly do we hear, and what do we see, when singing takes place? By means of the singing voice, many of the artists also shed light on what it means and what it takes to sing beyond the human. Most of the pieces invoked opera and/or the operatic as the major pedigreed framework of the institutionalised singing voice, a context that cries out for re-examination.

In the Western world, the notion of “having a voice” is commonly associated with the right to have a say, to have access to a means of representation in society, and this right is often expressed in individualised and humanistic terms. Critics of humanism, and in particular critical posthumanists, have already pointed out the absence of neutrality and the inherent privileges carried by this term, with its underlying connection to white, patriarchal, anthropocentric and colonial contexts.^[5] Instead of this rather Eurocentric conception of the voice, “Post-Opera” brought forth a proposition in which singing machines, mechanisms, beasts, animals and other “others” joined in a collective form of vocal expression. Not only did they sing beyond opera, they sang beyond the human. In short, “Post-Opera” proposed a different ontological understanding of voices and their potentialities, as well as of the variety of ways voices are allowed to be heard.^[6]

Looking back at the research methodology that preceded “Post-Opera”, as well as the process of bringing this exhibition together as a series of multimedia artworks and performances to be heard as well as seen, we became aware that the project relied on a series of more-or-less unexpected entanglements between disciplines, interrogations of theories and contexts. They were brought together as a means of re-examining conceptions of the human voice, the singing voice and the operatic voice, and at the same time as an opportunity to explore the possibilities for “framing” the (singing) voice in an exhibition context.

Singing Beyond Human

Not all of us can say, with any degree of certainty, that we have always been human, or that we are only that.

Rosi Braidotti^[7]

In the past decade or so, the subject of the voice has been of increasing interest in the fields of philosophy, critical theory and artistic practice. This claim is supported by a rich body of writing on the subject, the emergent field of voice studies, and artistic practices engaged with the matter of the voice. This surge of interest in the vocal has even been labelled as a “vocal turn”, emerging in the wake of the linguistic and visual turns of the late twentieth century.^[8] Similarly, over half a century ago Michel Chion declared the reign of the voice over all other sonic elements in audiovisual media, which he described as the *vococentricism* of the moving image: “There are voices, and then everything else.”^[9] Chion pointed out that in films the voice is artificially enhanced relative to other sounds in the production and post-production process. According to him, just like in any sonic space the ear is naturally drawn towards the voice, in cinema the voice is projected in such a way that it dominates perception.^[10]

In the theoretical considerations underlying our project “Post-Opera”, we did not set out to create a hierarchy among different modes of perception and expression, be they visual, linguistic or vocal, but rather to assert a range of potentialities in thinking about the singing voice, to approach the voice from a truly transdisciplinary perspective, and to expose some of the blind spots and unquestioned truth claims concerning the voice. We approached this first by questioning what exactly we speak of when we speak of the human voice, drawing attention in particular to the common Eurocentric conception that underpins the discourse. Secondly, we sought to expand the horizon of vocal possibilities and advance a proposition in which “other than human” subjectivities vocalised together. In “Post-Opera” they sang beyond opera and at the same time beyond human.

In the Western world, vocalicity is often thought of as an expression of individuality and sovereignty.^[11] To be in possession of a voice is to be considered an individual with associated rights and privileges, articulated by, for example, phrases such as “to make one’s voice heard”, which allude to our ability to express an opinion or to have a vote. These considerations are reflected in much of the thinking and writing about the voice that refer to it as a tool of individual expression and selfhood. Instead of this individualised conception of the voice, “Post-Opera” started by examining what it means to be human and to be considered a vocal subject. The binary distinction between what and who is considered human or non-human has been foundational to centuries of European thought since the Enlightenment.^[12] Yet it is misleading to allow Enlightenment rationality to stand as the principal criterion here, as though such rationality is the sole representation of humanity.^[13] The Eurocentric claim of universal truth can also be challenged in the vocal realm. If the definition of the human is rooted in white, patriarchal, ableist conceptions, founded on the division between the “self” and the “other”, we may ask what kind of subjectivities are left out when considering vocal subjecthood.^[14]

In order to rethink vocal subjectivities, we found inspiration for “Post-Opera” in feminist perspectives on critical posthumanism.^[15] According to Rosi Braidotti, the posthuman subject is defined as a relational being that is not confined to a particular species, existing in the nature-culture-techno continuum, and “always already part of the stuff of the world”.^[16] Karen Barad’s theorisation advocates a narrative of materialisation of *all* bodies human and non-human included through the conception of “agential realism” that places other than human, “intra-

acting” material agents centre stage.^[17] While Donna Haraway has “no patience” for posthumanism,^[18] her ideas concerning the cyborg that problematised the division between nature and culture, mind and body, male and female, and human and animal, are nevertheless significant for its theorisation.^[19] As Zakiyyah Iman Jackson observes in the most outstanding commentary on posthumanism, the “‘post’ marks a commitment to ‘work through’” an epistemological re-examination of taken-for-granted conceptions.^[20] This is indicative of a process that involves not equating “Man” the ultimate subject of humanism with “reason” as an attribute of Western Enlightenment alone, but rather as a transformative theory, shed of its (liberal) humanist ideals of making it simply a matter of access and inclusivity.^[21]

While critical posthumanism offered an exciting theoretical framework for “Post-Opera”, it fell some way short of a deeper theorisation of vocality within this perspective. Much existing writing on the voice from a posthumanist view tends to prioritise the technological otherness of voices. And while there can be no doubt that artificial voices and digital vocal technologies emerge in everyday life with increasing frequency, other posthuman vocal subjectivities tend to be left out of the equation. The role of technology in altering and digitising voices, and in creating artificial voices, was also important for “Post-Opera”. At one end of the spectrum, Jasna Veličković established protocols that amplified and made audible the voices of various industrial objects by more-or-less complicated technological procedures. At the other end, Martin Riches constructed *The Singing Machine*, using the motor of an old vacuum cleaner to produce the airflow and a retro-computer to control the voice production, and in doing so played with even mocked high-tech voice recognition software and voice reproduction, which appears on the horizon of artificially (re)produced voices today.

Another important aspect of critical posthumanist thinking that informed “Post-Opera” was a post-anthropocentric stance that does not position the human at the top of the hierarchy of species. From the vocal perspective this issue was brought up by the artist Suzanne Walsh, whose performance *BirdBecomeBird* scrutinised the human-animal divide and committed to the idea that music and singing transcend the boundaries between species. Although humans have been reproducing and imitating bird songs for centuries, Walsh’s performance was not conceived as a continuation of this tradition. Instead, by making use of amplification, sound recording and looping technology, she managed to reframe birdsong as a form of vocalisation in its own right, rather than a simulacrum produced by mimicry. The performance started with a sequence of improvised sung phrases on a loop, and as the piece progressed it developed into a cacophony of non-human voices, eventually filling the space with cries and cackles. At no point during the performance did one notice Walsh emitting animalistic sounds into the microphone. However, it was a series of twitters and other bird sounds that recurred in the chorus of looped sound fragments. Eventually, these sounds led back to a musical sequence. Suzanne Walsh’s performance never truly became birdsong, in the sense of a virtuosic mimicry. Neither did it allude to the “animal within”, which is a frequent trope of classical philosophy and psychoanalysis, and one in which animality becomes a locus for projections representing human weaknesses. Instead, Walsh’s piece occupied a confusing thin line along which human and bird vocalisations merged into one another. As the philosopher Oxana Timofeeva points out, it is impossible to represent animals: the animal is “either a representation or a representative”, produced by the “unstable field of the ‘human’”.^[22] Without aiming to represent or mimic animality, Walsh’s performance evoked a mutual interdependence of species, as well as invoking our intermingled past and future.

With “Post-Opera” we took an experimental approach and speculated about the singing voice as a site of posthuman subjectivity.^[23] Braidotti describes posthuman subjectivity as a manifestation of relational being that is complex, embodied and embedded in the world, and is not framed by the “ineluctable powers of signification”.^[24] In this respect the question of the voice opens out to a provocative thought experiment. First,

the voice bears a complex relation to the body. It departs from it, but at the same time it is not part of it, and therefore it has the potential to call into question the traditional subject-object binary.^[25] Second, the voice is traditionally considered an attribute of the human species alone, however, as Suzanne Walsh's performance demonstrated, this presumption is open to question and begs re-examination from a multispecies perspective.^[26] Third, the voice exists in relation to others. As the musicologist Nina Sun Eidsheim points out, the role of the listener is just as important as that of the vocaliser. Moreover, according to her, the voice is not an individual, distinct entity but part of a continuous field, shaped by the cultural and environmental circumstances of the body.^[27]

Collective forms of vocalisation and vocal expression provided an important motif running through "Post-Opera", notably in contributions by the artist Mercedes Azpilicueta and the researcher and urbanist John Bingham-Hall, whose contributions consisted of an audiovisual installation and an on-site performance event. The starting point of their investigation was to question how urban spaces and architectural settings influence and transform the human voice, and affect not only what becomes audible, but also how voices can be heard within them. For this quest, they brought together an assemblage of vocalists: Rotterdam-based choirs, conductors and an urban collective, and selected three locations for vocal experiments, based on their distinct sonic qualities. They included the underground station Wilhelminapier, the pedestrian underpass of the Maastunnel and the concrete forest beneath the railway viaduct at Mevlanaplein.^[28] The collective vocal exploration of the sites resulted in the work *Scores for Rotterdam* (2019), composed of several elements: an installation comprising three textile sculptures and an audio piece, created on the basis of vocal experiments on-site.^[29] Each of the soft sculptures, presented at the exhibition space, corresponded with one location and marked its distinct architectural features and the way sound passes through it, conveying a visual translation of the vocal experiments, functioning as a spatial score.



Mercedes Azpilicueta and John Bingham-Hall, *Scores for Rotterdam* (2019), Post-Opera, TENT Rotterdam, 2019. Copyright: TENT, Rotterdam and Aad Hoogendoorn.



Mercedes Azpilicueta and John Bingham-Hall, *Scores for Rotterdam* (2019), Post-Opera, performance at Mevlanaplein, Rotterdam, 2019.

Copyright: Zuri Ramirez

In his commentary on *The Voice in Cinema*, Chion describes the relationship of space and the voice. Just like the “presence of the body structures the space that contains it” and creates perspective in this way, so the “presence of the human voice structures the sonic space that contains it”, creating a sonic perspective by extracting information and meaning.^[30] In this regard Azpilicueta and Bingham-Hall’s piece raised another important question: is it only human voices that have the capacity to carry meaning and to create perspective in the sonic space?

In the playful composition of *Scores for Rotterdam*, unexpected vocalising characters made an appearance. For instance, a baritone singer at the underground station suddenly resembled a “buffo” character derived from the comic genre *opera buffa* as his voice traversed and “dismissed” the city noise, but also playfully engaged with it. Squeaky escalators and the sound of clicking traffic lights acted as more than simple instruments; they became protagonists, voices in their own right, joining the choir of singers, and culminating in a falsetto escalator finale. In this piece, intentional and coincidental participants formed a unique choir, calling into question not only what forms of vocalisation are possible in public spaces but also how we can think about collective voices, be they organic or inorganic.

Apart from the on-site recording sessions, the work included a live performance with a collective workshop element. The artists gathered the audience members at the Mevlanaplein in Rotterdam and instructed them to follow elements of the architectonic structure of the site as if it were a kind of score. Together with choirs and collaborators of the artists, the audience performed peculiar vocal utterances by yelling and singing, creating an added layer of meaning to the three-part installation exhibited at TENT Rotterdam.

Jan Adriaans’s multichannel sound installation *Swarming Chants* (2019) explored the question of collective voices from a different angle, looking at the forces that hold collectives together and the power of the voice in particular. To do this, Adriaans employed the concept of *swarm intelligence*, a behavioural process of self-organised systems, based on a non-conscious process that makes individual actions subordinate to the dynamic of a larger entity or group. For instance, an amorphous cloud of birds dancing in the skies or a swarm of fish that may not act purposefully yet move in a coordinated manner that can save them from the claws of bigger birds

or the teeth of bigger fish can constitute a non-conscious process within which individual action is subordinated to the dynamic of a larger entity. Unlike discordant groups (such as crowds), swarms behave like unique entities, operating as an intelligible unit, a coherent whole. Not only fish and birds, but also individual persons can turn into flocks. Besides physical movement, swarming can take other forms of expression, such as the collective singing body, which stood at the centre of Adriaans's artwork.

Swarming Chants is based on sound recordings of various football fans from across Europe. The work explores how their chants spontaneously erupt during football matches and become a collective singing voice without a singular body or defined epicentre, just like other swarming entities. The lyrics of football songs usually associate the fans' group identity firmly with a specific geographic location, unifying its members in the face of their opponents, who represent "the other". However, the different chants in Adriaans's composition blend into one another: the swarming voices switch language, (national) identity and location. In the original recordings, as well as the final composition, the chants are separated from the original, individual singing bodies. This way, the work exposes the power of the collective voice by turning its swarm dynamics and affective impact into a unique sonic experience, also evoking the peculiar vocal power of operatic choirs.

Videos can not be displayed in PDF documents. Follow the link to see the source.

[Link to source](#)

Jan Adriaans, *Swarming Chants* (2019, 15'), excerpt

In a playful way, Adriaans also draws parallels between the acoustic and affective experiences of football stadiums and opera houses. The "atmosphere of the stadium" technically refers to the collective sound produced inside the arena.^[31] In many ways the architecture of football stadiums resembles that of an opera house: they are both built to accommodate large groups of people, with specific acoustic considerations, and they both amplify but also contain the voices generated within them. The affective experience is also similar: seemingly representing utterly opposed cultural contexts, both activate a form of collectivity in which individual expressions merge into a composite body, and this is underlined in Adriaans's composition by the presence of classical opera repertoire, such as the spontaneous eruption of the Triumphal March from Verdi's opera *Aida*.

A different kind of collective vocal interaction takes place in Katarina Zdjelar's short film. The artist works predominantly without scripts, preferring to create an environment in which participants are invited to interact, often in the mode of a rehearsal. Thus, for "Post-Opera" Zdjelar brought together a number of vocalists and instrumentalists and invited them to improvise musically in an interpretation of Athena Farrokhzad's poem "Europe, Where Have You Misplaced Love?".^[32] The poem speaks of contemporary Europe's prevailing sense of exceptionalism, and the impact of racism and xenophobia, in potent language. The resulting film, *Reading "Europe, Where Have You Misplaced Love?"* (2019), does not depict a final, completed performance of this improvisational exercise, nor does it contain a smooth melody. Rather it depicts the continuous *making of* a song, with all the interruptions, uncertainties, variations and profusions that it contains. One by one, the participants take control and then let it go again just before arriving at a common melody, at which point doubts, or perhaps another voice, steer the process in a different direction.



Katarina Zdjelar, Reading 'Europe, Where Have You Misplaced Love?' (2019), Post-Opera, TENT Rotterdam, 2019. Copyright: TENT, Rotterdam and Aad Hoogendoorn.

Nina Sun Eidheim suggests considering the voice not as a knowable entity, but as a *process* that is culturally framed and whose reception depends on the listeners and their ability to perceive.^[33] Thus, this process is not an individual one, but is collectively formed, with the voice shaped by collective processes. The collective formation of a song and of sounding, as happens in Zdjelar's piece, exposes precisely the sometimes interfering and interrupting interplay of voices that exists always in relation with and to others. Searching for a song and a voice becomes a continuous process in which a multiplicity of interrelating voices coexists.

Ventriloquist Impersonations and Operatic Artifice

The voice acquires a spectral autonomy, it never quite belongs to the body we see, so that even when we see a living person talking, there is always some degree of ventriloquism at work: it is as if the speaker's own voice hollows him out and in a sense speaks "by itself", through him.

Slavoj Žižek^[34]

There is something deeply disturbing, and at the same time strikingly correct, in the above quotation. Around the time when I (Jelena Novak) was conducting research into the relationship between the singing body and the voice in opera, I was confronted with the real-time video image of my vocal cords during a medical examination.^[35] Until that moment I was convinced that the reason for the ventriloquist dissonance between the voluminous, over-exaggerated voice of conventional opera and the often immobile body of the singer that produces it on the opera stage was the fact that no one sees the actual place from which the voice emerges. However, when I saw my vocal cords producing what I was singing and talking, I was at a loss. I was unable to relate my vocal identity to the image of my vocal organs, some alien-looking tissue mechanism in my throat. Being confronted with my vocal cords, seeing them in action, did not remove the ventriloquist-like discomfort. The dissonance seemed to intensify the ventriloquism, and body and voice never stood further apart in my perception.

While trying to define “operatic-ness”, Marcia Citron writes about *artifice* as one of opera’s main characteristics.^[36] The strongest root of that artifice comes from the non-synchronous relationship between body and voice, i.e. what we see on the stage in relation to what we hear at the same time. For the “Post-Opera” project, recent developments in contemporary opera, identified as *postoperas*, broadened our understanding of the ventriloquist relationship between the singing body and the sung voice.^[37] That body-voice mismatch has been taken for granted for a long time. However, the body-voice relationship does establish meanings in the world of opera, and even becomes one of the major driving forces in some recent work.^[38] The reinvention of the vocalic body in recent opera, taking on board many of the changes that emerged as the result of the impact of new media, involves a de-synchronisation between image and sound, as well as a redefinition of body-voice-gender relationships.^[39]

In pieces such as *La Belle et la Bête* (1994) by Philip Glass (based on a film by Jean Cocteau), *Three Tales* (1998–2002) by Beryl Korot and Steve Reich, *One* (2002) and *Eight* (2018–19) by Michel van der Aa, *Homeland* (2007) by Laurie Anderson, *La Commedia* (2004–08) by Louis Andriessen and Hal Hartley, *A Dog’s Heart* (2010) by Alexander Raskatov, and *Aliados* (2010–13) by Sebastian Rivas/Antoine Gindt to mention only a few the relationship between the singing body and the voice becomes a site for creative exploration. It is above all the vocalic body that stretches the boundaries of the opera world.^[40]

The unconventional staging of the abovementioned works affects the dynamics of the body-voice relationship. For example, in *One* the singer’s live performance is closely interwoven with a rhizome based on a pre-recorded matrix of sounds and images. *Eight* involves the listening spectator in a kind of gaming VR experience, including floating singing voices assigned to the translucent female figures who lead the spectator through the piece. In the video-documentary opera *Three Tales*, documentary footage is reworked and synchronised with pre-recorded and live-performed music that sometimes also transforms the singing into monstrous voices.^[41] In *La Belle et la Bête*, the original film is projected while its soundtrack is silenced, and Glass’s operatic music, including the singing parts, is synchronised with the pronunciation of the spoken dialogues of each film character.^[42] In *Homeland*, Laurie Anderson performs with a band on stage while using a harmoniser to manipulate the perceived gender of her voice. The film-opera *La Commedia* merges film projection, opera performance and video projections in complex ways. Playing with vocal travesty, the role of the poet Dante is assigned to a high female voice. In *A Dog’s Heart*, the stray dog puppet on stage is manipulated by several puppeteers and two singers, one with a “pleasant” and the other with an “unpleasant” voice. Although transparent, the live-performed situation of synchronising the voice to a puppet brings an unexpected glimpse of surrealism. In *Aliados*, “un opéra du temps reel”, at one point the singing voice of the character of Margaret Thatcher turns against her, starting to lead its own vocal life.

Whether technological procedures are used to produce a detached, machine-like, even “monstrous” vocal expression, or there is a purposely obtained de/synchronisation between bodies assigned to a voice (and vice versa), calling into question their mutual “belonging” to each other or how vocal representation of gender is projected onto the “wrong” body, the result is a break in the conventions of representation between body and voice. This ventriloquism also resonates with present-day experience, in which artificial voices come from all kinds of electronic devices, including elevators, kitchen appliances, traffic lights, and mobile-phone applications. This cacophony of disembodied voices is embedded in the ontology of daily life, displacing the body-voice mismatch from the “dead ground” of theoretical discussion.

Most of the pieces displayed or performed within “Post-Opera” were in one way or another engaged with the ventriloquist qualities of the singing situation. For example, in *Opera of Things* (2019) Jasna Veličković alludes to

the concept of the “Internet of Things”, which involves extending Internet connectivity beyond standard devices into any range of common objects. The piece pushes the concept of the voice beyond its conventional connection to animate beings. Veličković is interested in producing sounds triggered by the electromagnetic fields of everyday electronic devices, thus giving them a “voice”.

Veličković’s three-part sound installation and composition make us hear the “voices” invoked by the objects on display: two groups of power adapters and a Velicon, an electro-acoustic instrument invented by the artist and consisting of a metal board with magnetic abstract figures and coils manipulated by the performer/composer. Each part of her installation was placed in a different room of the exhibition space. The first part, called *Beauty 3.2V (Adapter Aria)* exhibited a power adapter on a white plinth. The artist used the same adapter when producing the singing sound, a high genderless seductive voice that was discreetly projected across the exhibition space. The second part of the installation, *Diva and the Beast Duet*, featured the Velicon. Here the monstrous voice of “The Beast” produced an uncanny friction due to its low frequencies, and a looping process heightened the very specific sense of disquiet. The third part of the installation, *Ophelia Castrati Quartet (Adapters)*, displayed the “choir” of adapters, all singing together. Each part of this artwork also included a set of loudspeakers as well as a light to illuminate the exhibited objects the adapters and Velicon immediately before they started “singing”, as if they were actually on the opera stage.



Jasna Veličković, *Opera of Things, Diva and the Beast Duet, Post-Opera*, TENT Rotterdam, 2019 Copyright, TENT Rotterdam and Aad Hoogendoorn.

In the live performance with the Velicon, the performer/composer Veličković drew a coil over the magnets, triggering the magnetic fields and producing their “voice”. Similarly, in her live performance of other “things”, she uses the magnetic field of objects such as lamps, remote controllers, ventilators all objects that “were coded to be silent”.^[43] She shows that all those objects have their own voices, and she gives them the opportunity to sing and be heard. Conversely, she also shows how voices that are omnipresent but silent either require different ears to be heard for example, some animals can hear the frequencies of voices unheard by the human ear or need to be decoded/translated to a frequency audible to human ear.

The ventriloquist dimension of *Opera of Things* has the potential to change how we perceive the impact of interactions with the technological world around us. Hearing the pulsating sound of the remote controller, or

getting carried away by the fluent voice of a power adapter singing an aria, or being surprised by the melodious sequence sung by the lamp oblige us to question the audiovisual coordinates of the world we live in. Veličković reveals the vivid silent world of voices that are all around us. Her performance becomes a kind of protocol for the detection of voices. In the course of emancipating previously silent voices, she also demonstrates the congestion of spaces that we consider to be silent and empty. When silent voices all around us are revealed as audible, when they are in some way exhibited, spatial congestion and related questions of an economy of spaces are foregrounded, and their social and political dimension is opened up to critique.^[44]

If Jasna Veličković turned “outwards” to find voices in places no one thought they existed, Janneke van der Putten turned “inwards”, towards the layers and inner landscapes of the voice and of the body itself. In her *Solo Acoustic Performance* Van der Putten used her voice as an instrument in order to explore physically, sonically and intuitively several different environments. Her hugely demanding piece challenged both the limits of her singing body and of her voice. Van der Putten performed her *Solo Acoustic Performance* alone, using only her vocalic body, and without any amplification or intervention by electronics. In the first part of her performance she sang in two voices while slowly and repetitively rotating her body. Her lower voice carried a long sustained tone (a drone), while at the same time her higher voice performed repetitive arpeggios consisting of several overtones. One “cycle” consisted of the simultaneous sounding of the drone (first voice) and the overtones (second voice), and it was “measured by” one body rotation whose duration corresponded with the length of a single breath. Each new breath introduced another cycle of the drone-overtones-body rotation “motive” performed by her two singing voices and her single breathing body.

Hearing two voices singing from one throat at the same time redefines the horizons of the singing world, and challenges our common understanding of how identity is tied to the body-voice construct. Two voices sung simultaneously and emerging from one body connote something deeply disturbing and strangely moving. The scene that springs to mind as bearing a close symbolic relation to this “point-de-capiton” situation is the one from the film *Melancholia* (2011) by Lars von Trier. It is the scene in which we see the night sky with two “real” Moon-like images present at the same time. This portrayal of the two Moons changes the coordinates of the whole field of meaning: something is irreparably wrong in this newly approaching reality in which the new planet approximates the Earth. Something similar happens when we hear Janneke van der Putten expressing herself in two voices: one can admire her virtuosity, be touched by the expressiveness of her voice, but also be disturbed by its “beyond human” qualities. The way her performance is structured is repetitive, steady, and without acceleration. Endurance, stamina and a sense of endless repetition invoke a kind of trance, similar to the listening experience associated with early forms of repetitive minimalist music.

But suddenly, without announcement, the perspective changes, and a new vocal material is introduced, where the two voices seem entangled, no longer emitted in parallel lines. At that moment the artist introduces another expressive technique: a glottal attack. The pulsating vocal projection is again repetitive and connected to the length of Van der Putten’s breath, with each repetitive structure beginning at a lower pitch. Amazingly, the intensity of the vocal projection remains steady during this lengthy, virtuosic and physically very demanding tour-de-force, with the sense of discomfort and anxiety heightened by what is in effect a radical distortion of the conventionally accepted relationship between body and voice. At the same time, despite the discomfort, this performance does provoke some kind of physical and emotional response, leaving the spectators excited, moved or confused. The artist calls into question stereotypical definitions of the voice, of singing, and of the body-voice relationship. Hers is a voice that performs itself, that engenders its own anatomy, over and over again, dissecting itself publicly and exposing its constituent bits and pieces through fearless song, in an almost palpable vocalic sculpture.

Paul Elliman's *How we learn the old songs* (2019) shares some of the voluminous qualities of Van der Putten's singing, but from a strikingly different angle. Elliman traces the ways in which human voices and bodily gestures emerge in unexpected correspondences with other events and sounds of the city, resonating too with issues of authority and power. In the performance, a small group of singers attempts to replicate the sounds of an arriving fleet of emergency vehicles: police cars, fire trucks and ambulances. Neither the beginning nor the end of the performance is clearly signalled, with the performers and the artist mingling freely with the audience, initiating their performance in improvisational mode, and without any amplification. Like the sounds of urban emergency vehicles, the sounds of their vocal performance are loud, threatening, admonitory, unstable and mobile.

How we learn the old songs first “attacked” the audience at the opening of the exhibition; then, at a later occasion, the performers mingled with the seated audience at the symposium “Installing the Voice”. While Paul Elliman was delivering his keynote lecture, the performers interfered with his talk with wailing sirens, pulsating sounds, and bursts of “hiccougging” noises, all connoting the hyper-realistic vibe of the urban emergency. Then, on a few subsequent occasions, they held unannounced “open rehearsals” in the exhibition space, when they would burst into “siren mode” out of the blue, unsettling the visitors. Their voices sublimated the dramas and tragedies of all those voices singing on stage that had ever happened before. They showed the power of the “alarming” voice, its power to sound like a machine, a siren, a danger. The immediacy, strength, insistence and disruption of these vocal expressions remain engraved in our minds. They echo with the power to keep us awake.^[45]



Paul Elliman, *How we learn the old songs* (2019), Post-Opera, TENT Rotterdam, 2019. Copyright: TENT Rotterdam and Aad Hoogendoorn

Exhibiting the Voice in Time and Space

The line is made, it is complete; time is what is happening, and more than that, it is what causes everything to happen. The measuring of time never deals with duration as duration; what is counted is only a certain number of extremities of intervals, or moments, in short, virtual halts in time.

Henri Bergson^[46]

The voice is always in the present. The moment it is emitted, and the moment its resonance reaches the listener, it is instantly grounded in the now. The voice captures and holds the present, albeit existing within a temporal continuum.

How can we “exhibit” the voice, framing it in the spatial-temporal construct that is an exhibition? And how can the specific temporality of an exhibition emerge within the spatial-temporal construct of art institutions? How can an exhibition make tangential contact with the continuum of time, without appearing as a linear “cut out” of temporality? Can an exhibition present a non-linear experience within which artworks retain their singularity, while at the same time presenting a chorus of human and non-human voices? These were some of the questions and contradictions we considered when contemplating the spatial layout and “timing” of the exhibition.

On the one hand, with their still prevailing model of a white cube, exhibition spaces are not built to accommodate in acoustic terms sound and the voice. What we attempted in the case of “Post-Opera” were spatial adjustments designed to find the best possible acoustic solutions, including sound panels, the choice and positioning of equipment, and so on. Likewise, in order to accommodate a chorus of voices and at the same time to allow individual pieces to be heard without interference, it was necessary to make numerous adaptations and also to address spatial and temporal considerations. Literature dealing with the limitations of the structure and design of the white cube is available in abundance. In our case the aim was to stretch those limitations as far as possible, while creating an affective listening experience with a non-linear structure.

On the other hand, exhibitions are usually framed by time: they can be visited over a period of several months during the opening hours of institutions.^[47] Exhibition-makers often take into consideration the amount of time necessary for a visit, which can range from a few minutes to an hour, or several hours.^[48] In most cases exhibitions represent a linear experience, with a sequence of artworks, potentially time-based media with a specified beginning and end that constitutes its length or *duration*.

With “Post-Opera,” however, we attempted to think about the experience of the exhibition’s duration in terms of non-linearity, as a kind of continuum. In this respect, Henri Bergson’s thoughts on duration proved helpful. According to Bergson, the instant one attempts to measure a moment, it has already gone. What one measures, then, is a complete, immobile line, whereas time is mobile, a continuous flow.^[49] In other words, when time is divided into parts, it is no longer the same as when it is considered a continuous duration. Following Bergson’s consideration, if exhibitions are measured in the moment, they remain straight lines cut out of a continuous flow of time. They begin the moment a visitor crosses the threshold of an institution, “zooms in” to an online event, or arrives at a performance, and they end when the audience leaves the institution behind, closes the tab in their web browser or when a performance comes to an end. Again, exceptions abound, but as is per usual with special cases, they tend to leave norms unshaken. We attempted to break with this linearity in “Post-Opera”. Visitors would no doubt still enter the exhibition space and finish their visit at specified moments in time, but the non-linearity we embraced was about how visitors might experience the artworks and the exhibition as a whole, which had no obvious starting point, and was presented as a spatial-temporal web.

Instead of a clear beginning and end or an “approximate duration”, “Post-Opera” functioned as an infinite loop that audience members could enter and exit at any moment. In an attempt to propose a dynamic vision of time, none of the presented time-based media works had a clear finishing or starting point. They were either looped multimedia installations, or erupted at announced or unannounced times, taking place within or outside the institution. Some artworks expanded what would normally be considered comfortable or realistic to experience in full (Ho Tzu Nyen, *No Man II* consisted of a six-hour loop), while others (Adam Basanta, *A Truly Magical*

Moment) could be accessed by two callers on mobile phones at any time of the day, regardless of the opening time of the institution.

An extensive programme of performances took place across the exhibition's run, including some that erupted apparently spontaneously (Paul Elliman, *How we learn the old songs*), or through activation by an assistant, present at certain times of the day (Martin Riches, *The Singing Machine*). None of these practices represented in their singularity an exception or a particularly novel temporality, but it was through the set-up of the exhibition project as a whole that we aimed to create a flowing sequence, allowing audience members to tune in and out at will. Besides architectural determinants such as the entrance and the permanent walls audience members did not receive a floor map to guide them, nor indications of any set order in which the artworks on display should be viewed. Instead it was human and non-human, beyond-human, becoming-human, and post-human voices, calling out seemingly at random, that navigated the space, inviting visitors to follow them.

An *inner loop* was set up between several of the exhibited works, which sounded their voices at different moments and different places within the exhibition space, in an attempt to draw visitors towards them. This inner loop was created by means of a light cue and a sound playback network, ensuring that selected artworks would not overlap but be part of a cycle.^[50] In this way each individual visit could "start" from a different point in the exhibition's staging. The voices of Mercedes Azpilicueta and John Bingham Halls' collaborative piece *Scores for Rotterdam*, and Jasna Veličković's three-part installation *Opera of Things* were both included in this inner loop. This non-linearity also promoted a rhizomatic mode of thought and perception, allowing for multiple ways of making connections, creating potentialities, and generating a collectivity of voices.^[51]

In addition to contemporary artworks, "Post-Opera" also presented a rather different kind of inner loop, based on historical and archival materials. These had a double function. On the one hand, they served as "footnotes" drawing connecting lines to artworks and performances and on the other hand they supplied an additional narrative strand for the exhibition. They indicated moments in history when the voice became "tied to the body" and the subject of scientific investigation. Dating back to the late seventeenth and eighteenth centuries, to the onset of the disciplines of philosophy and science, the selected objects and images exemplified the beginnings of a quest to capture, dissect, represent and recreate the human voice. This demystification expelled the voice from the body, dismantling it into tissue and muscle, the raw materials of vocal production. This historical trajectory (which continues until today), premised on the notion that the voice is something that can be scientifically (anatomically) understood, recreated and reproduced without an actual living body, was born from Enlightenment thought.

It was in this period that the two anatomical drawings by the French anatomist, painter and printmaker Jacques Fabien Gautier d'Agoty (1745–46) were created.^[52] They illustrate the dissection of the throat and a back, complete with ribcage. One of the images depicts a nude female figure with a slit back, visible lungs and ribcage, face slightly turned towards the viewer, which came to be described informally as "the anatomical angel". The image shows the figure as weak and ethereal, and at the same time exemplifies the crude, medical gaze of classical anatomy that Michel Foucault positioned at the centre of the modern political economy of subjectivity.^[53]



Jacques Fabien Gautier d'Agoty, Two anatomical drawings (1745–46) Post-Opera, TENT Rotterdam, 2019. Copyright, TENT Rotterdam and Aad Hoogendoorn.

It was around the same time period, in 1769, that the inventor Wolfgang von Kempelen developed his famous speaking machine. This was a functional representation of the vocal tract, with bellows acting as the lungs to create an air flow, and with a “wind chest” containing various devices for producing sound, and finally with a funnel that represented the oral cavity. While the exhibition did not include Kempelen’s apparatus, it showed other experimental mechanisms developed in order to reconstruct the human voice, along with *The Singing Machine* (2010–13) by Martin Riches, which performed *The Audition* (2019), specifically written for the occasion by minimalist composer Tom Johnson. The uncanny experience of a baritone voice arising from a strange yet striking and charming contraption, singing an operatic aria, provoked emphatic audience reactions. *The Singing Machine*, when activated, became almost alive, a projection screen of desires to see ourselves in this technological “other”.

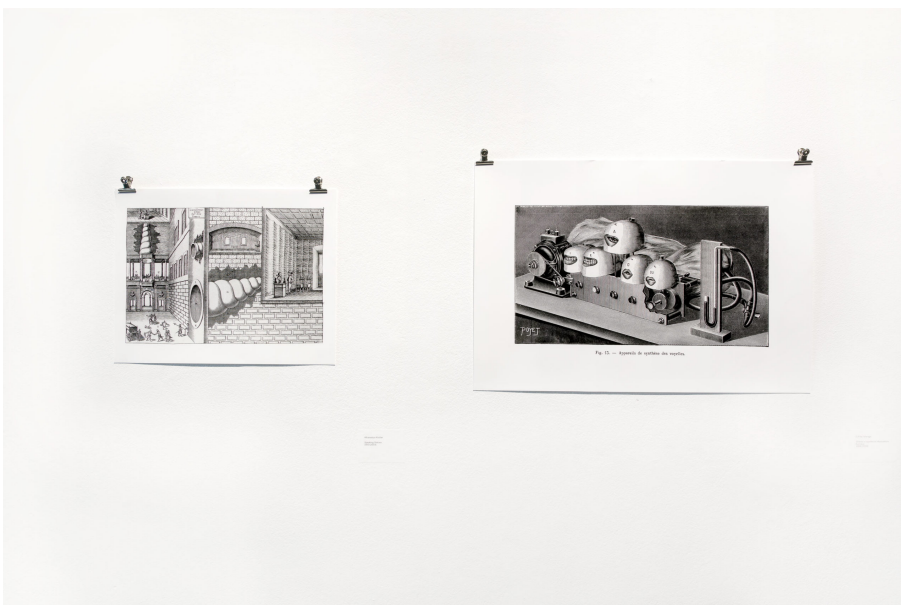


Martin Riches, The Singing Machine (2010–13), with the score of an aria “The Audition” (2019) by Tom Johnson, Post-Opera, TENT Rotterdam (2019)



The Singing Machine, technical drawings by Martin Riches, Post-Opera, TENT Rotterdam (2019) Copyright, TENT Rotterdam and Aad Hoogendoorn.

Another example included among the exhibited “footnotes” that demonstrated early attempts to solve the mystery of the vocal organs, was G.R.M. Marage’s voice synthesis machine *Sirènes a voyelles et résonateurs buccaux* (Sirens with vowels and mouth resonators), created in 1900. The lithograph presented here depicts the machine while taking some artistic liberties: the small openings on the ceramic semi-spheres become mouths articulating a specific vowel, with a white cloth floating behind them in a ghostly manner.^[54] Despite their muteness, these images introduced an eerie, imaginative aspect to the exhibition, while also signalling the linearity of scientific thinking and a longstanding fascination with the voice.



Athanaus Kircher, “Speaking statues” (1650/2019) and G.R.M. Marage, *Sirènes a voyelles et résonateurs buccaux* (1900/2019), Post-Opera, TENT Rotterdam (2019)

Conclusion

We close this text with another “footnote”, recalling the moment when our separate preoccupations with the singing voice came together. Our transdisciplinary research began with an encounter prompted by a single memorable artwork, Katarina Zdjelar’s short film, titled *AAA (Mein Herz)* (2016). Our discussions of this film revealed a shared point of interest, despite our different disciplines, namely contemporary visual art and contemporary opera, and the film became a figurative and literal meeting point for our curatorial endeavour. In this one-shot, four-minute-long piece we see a close-up of a young woman gazing directly at the camera, as if to hypnotise the viewer. However, it is not her gaze but her singing that amazes the spectator: the vocalist, Barbara Kinga Majewska, performs a composition created of fragments of several musical pieces, each drawn from a different cultural and historical context. Vocal idioms drawn from pop songs (sung in English), from classical *Lieder* (sung in German), and from quasi-operatic “romance” (wordless), together with spoken recitation in Polish, follow one another seemingly at random. Just as we engage with a familiar-sounding tune, there is an abrupt cut, and we are transported to an unexpected place, an alternative continuum.^[55]

Videos can not be displayed in PDF documents. Follow the link to see the source.

[Link to source](#)

Katarina Zdjelar, *AAA (Mein Herz)* (2016, 4’30”), excerpt

The three “source” pieces, with their distinct temporalities, merge in this demanding vocal performance, switching languages, rhythms and vocal techniques. The voice travels between them seemingly effortlessly, for what remains constant throughout the performance is the materiality of the voice. The choice of language is a seemingly arbitrary factor. In this film, semantic meaning makes room for the salience the “presence” of the voice.

In his historical study *The Voice in Cinema*, Chion observed that the singing body was one of the first real subjects of cinema, even before the advent of sound.^[56] These early films attempted to capture the voice, mostly by focusing on the singing mouth and body, which transforms and “mobilizes around the voice and the modulating air column that emerges through the open lips”. According to Chion, the reason film-makers are attached to filming the mouth is that it “affords the most precise cues for synchronization”.^[57] However, this does not apply to Zdjelar’s short film. In fact, what becomes evident is that what we see and what we hear subvert any synchronisation of image and sound, and of the voice and the body in particular. The singer’s face becomes a screen on which different vocal identities are shown. Corporeal movements are concealed and the de-synchronisation between the singing voice and the cyborg-looking face provokes us to ask who sings, how and why. Who sings, how and why were indeed the core questions in our exhibition “Post-Opera”, and they are questions that continue to resonate. The exhibited voices throw light on those questions, and even provide some new propositions.

Jelena Novak's engagement with this article was made possible through the support of CESEM Centro de Estudos de Sociologia e Estética Musical da NOVA FCSH, UIDB/00693/2020, and the financial support of FCT Fundação para a Ciência e a Tecnologia, I.P., through National funds. Norma Transitória DL57/2016/CP1453/CT0054.

Kris Dittel received financial support from the Mondriaan Fonds to participate in the writing of this article.

Footnotes

1. See more about "Post-Opera" —TENT, V2_Lab for the Unstable Media, Operadagen Rotterdam, 2019—at <https://www.tentrotterdam.nl/en/tentoonstelling/next-up-post-opera/> (accessed 2021-02-12).
2. Jan Adriaans's installation *Swarming Chants* (2019) was hosted by V2_Lab for the Unstable Media, Rotterdam. See <https://v2.nl/events/swarming-chants> (accessed 2021-02-22).
3. The length of this essay prevents us from writing in detail about each participant and artwork, which does not diminish their significance for the project as a whole.
4. More information about the symposium can be found at <https://www.tentrotterdam.nl/en/event/symposium-installing-the-voice/> (accessed 2021-02-12).
5. See, for example, Braidotti, Rosi. *The Posthuman*. Cambridge: Polity. 2013. pp. 68-69.
6. Whereas the project questioned the conventional genre of opera and operatic singing modes, and its participants presented a diverse range of voices that go beyond conventions of the operatic, the theoretical and philosophical references used in this article remain close to the Western canon.
7. Braidotti, *The Posthuman*, p. 1.
8. See Feldman, Martha and Zeitlin, Judith T. (eds.). *The Voice as Something More: Essays Towards Materiality*. Chicago, IL: The University of Chicago Press. 2019. p. 3; and Kane, Brian, "The Voice: A Diagnosis?". *Polygraph*. No. 5. 2015.
9. Chion, Michel. *The Voice in Cinema*. New York, NY: Columbia University Press. 1999. p. 5.
10. *Ibid.*
11. See Feldman and Zeitlin, *The Voice as Something More*; and Sun Eidshem, Nina. *The Race of Sound: Listening, Timbre, and Vocality in African American Music*. Durham, NC: Duke University Press. 2019.
12. Braidotti, Rosi and Hlavajova, Maria (eds.). *Posthuman Glossary*. London: Bloomsbury. 2018.
13. See Jackson, Zakiyyah Iman. "Animal: New Directions in the Theorization of Race and Posthumanism". *Feminist Studies*. Vol. 39. No. 3. 2013; and McKittrick, Katherine (2015).
14. See, for example, Braidotti, *The Posthuman*.
15. Including, among others, Donna Haraway, Karen Barad and Rosi Braidotti.
16. Braidotti, *The Posthuman*, p. 49.
17. Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, NC: Duke University Press. 2007.
18. Åsberg, Cecilia and Braidotti, Rosi (eds.). *A Feminist Companion to the Posthumanities*. New York, NY: Springer. 2018. p. 11.
19. Haraway, Donna. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York, NY: Routledge. 1991.
20. Jackson, "Animal: New Directions", p. 682.

21. *Ibid.*
22. Timofeeva, Oxana. *The History of Animals: A Philosophy*. London: Bloomsbury. 2018. pp. xiii-xiv.
23. Kris Dittel is at present developing a research project that aims to theorise the voice as a site of posthuman subjectivity.
24. Braidotti, *The Posthuman*, p. 188.
25. Mladen Dolar describes the voice as a “missile” that departs from the body without being part of it. The voice does not belong to language yet it enables verbal signification. See Dolar, Mladen. *A Voice and Nothing More*. Cambridge, MA: The MIT Press. 2006. p. 73. Fred Moten describes this attempt rather as a continuous struggle to constitute a body. For him the voice is a tension filled being, an entity that is precisely what refuses and resists forces of objectification. See Moten, Fred. *In the Break: The Aesthetics of the Black Radical Tradition*. Minneapolis, MN: University of Minnesota Press. 2003. pp. 85-170.
26. For example, the inter-species musician David Rothenberg “imports” performances made by birds, insects and whales into the world of music, dismantling the hierarchy between human and animal that prevails in conventionally structured music institutions. See, for example, Rothenberg, David. *The Nightingales in Berlin*. Chicago, IL: University of Chicago Press. 2019; and *Bug Music: How Insects Gave Us Rhythm and Noise*. London: Picador Paper. 2014; as well as *Thousand-Mile Song: Whale Music in a Sea of Sound*. New York: Basic Books. 2010; and *Why Birds Sing: A Journey into the Mystery of Bird Song*. New York, NY: Basic Books. 2006. The international conference “Human Voice, Animal Voice”, organised by Michal Grover Friedlander at Tel Aviv University (2018), brought together discussions that demonstrated various possibilities for animals to take the right to have a voice that produces music.
27. Sun Eidsheim, Nina. *The Race of Sound. Listening, Timbre, and Vocality in African American Music*. Durham, NC: Duke University Press. 2019. pp. 10-11.
28. Vocalists included Zuri Ramirez & The Codarts Composers Ensemble, the Tarwewijk koor and the Groene Connectie urban initiative.
29. Sound recording and editing by Clare Gallagher. The textile pieces were created with the assistance of Laura Fernandez Antolín and Darwin Erwin Winklaar.
30. Chion, *The Voice in Cinema*, p. 5.
31. From a conversation between Jan Adriaans and Kris Dittel, Rotterdam, 2019.
32. The performers were Nadia Bekkers, Nina Hitz, Nicole Jordan and Mareike Ziegler.
33. Sun Eidsheim, *The Race of Sound*.
34. Žižek, Slavoj, “I hear You with My Eyes”; or, *The Invisible Master*, in *Gaze and Voice as Love Objects*. Edited by Renata Salecl and Slavoj Žižek. Durham, NC, and London: Duke University Press, 1996. pp. 90-126.
35. See more about that research in Novak, Jelena. *Postopera: Reinventing the Voice-Body*. New York, NY, and London: Routledge. 2015.
36. Citron, Marcia. *When Opera meets Film*. Cambridge: Cambridge University Press. 2010. p. 246.
37. *Postopera* refers to an operatic piece that is post-dramatic and postmodern at the same time. The desynchronisation between the singing body and the voice takes a prominent place in recent progressive pieces of post-dramatic musical theatre and postopera, to the point that they become the main motor stretching the borders of the opera world. See more in Novak, *Postopera*.
38. Support for these claims comes recently from Heiner Goebbels. He writes about “a de-synchronization of listening and seeing, a separation or division between visual and acoustic stage”. See Goebbels, Heiner. “Aesthetics of Absence”, in *Lectures: How Opera Works*. Edited by Pierre Audi. Amsterdam: Amsterdam University Press and National Opera and Ballet. 2018. p. 159.
39. *Ibid.*

40. The vocalic body is a concept established by Steven Connor. "The principle of the vocalic body is simple. Voices are produced by bodies, but can also themselves produce bodies." See Connor, Steven. "Violence, Ventriloquism and the Vocalic Body". In *Psychoanalysis and Performance*. Edited by Patrick Campbell and Adrian Kear. London and New York, NY: Routledge. 2001. pp. 75–93, and p. 80.
41. Novak, Jelena. "Monsterization of Singing: Politics of Vocal Existence". *New Sound International Journal of Music*. Vol. 36. No. 2. 2010. pp. 101–119. Available at <http://www.newsound.org.rs/pdf/en/ns36/09%20Core%20Novak%20101-119.pdf> (accessed 2021-06-29).
42. See Novak, Jelena. "Throwing the Voice, Catching the Body: Opera and Ventriloquism in Philip Glass/Jean Cocteau's *La Belle et la Bête*". *Music, Sound and Moving Image*. Vol. 5. No. 2. Autumn 2011. pp. 137–155.
43. From arecent conversation between Jasna Veličković and Jelena Novak, January 2021.
44. See *Stay out of Our Light: Freedom and Resistance in the Attention Economy*. Oxford: Oxford University Press. 2018. Available at <https://www.cambridge.org/core/books/stand-out-of-our-light/3F8D7BA2C0FE3A7126A4D9B73A89415D> (accessed 2021-06-29).
45. The first person plural that we use as writing subjects designates two of us, the authors of this text, exchanging ideas while discussing the problems of exhibiting the voice. "We" resides in a fluent, non-hierarchical dialogue entangling knowledge and expertise in voice studies, art theory, musicology, opera studies, critical theory, posthumanism. The "us" in this sentence goes beyond we, and it might even include the readers of this text.
46. Bergson, Henri. *The Creative Mind: Introduction to Metaphysics*. Mineola, NY: Dover Publications. 2007. p. 8.
47. A standard exhibition duration could be approximately three to four months in museums, and one to two months in smaller and/or commercial institutions. This temporality is expanded by the emergence of Biennials that tend to run for several months or even years.
48. Exceptions are of course plentiful, for instance exhibitions with film and video works, which, in case one might choose to view them in their completeness, may span several days, or exhibitions with generous research displays, offering a web of ideas, which would take longer to decipher than is comfortable for a single visit to an exhibition space. Generally, such exhibitions do not aim for completeness, but offer a fragmentary yet affective experience. Visiting biennials can take several days, even if we do not aim for a full experience of the artworks on display and the performances.
49. Bergson, *The Creative Mind*, pp. 8–10.
50. The network was developed and set up by media artist André Castro.
51. We do not see "Post-Opera" pioneering in creating a rhizomatic experience solely by not providing a floor plan or a predefined routing of the exhibition, but those elements (or lack thereof) contributed to the spatial-temporal configuration of the exhibition project.
52. Part of the Rijksakademie van Beeldende Kunsten collection, Amsterdam.
53. Braidotti, Rosi. *Nomadic Theory*. New York, NY: Columbia University Press. 2011. p. 56.
54. Due to the damaged state of the original machine, which is part of Utrecht University collection, the object could not be shown in the exhibition. Instead, we presented an enlarged version of an engraving, originally published in 1901 in the French-language popular science magazine *La Nature*.
55. This piece combines different fragments of music, including Womack & Womack's *Teardrops* (1988), Sergei Rachmaninoff's *Vocalise* (1915) and Franz Schubert's *Die Post* from the song cycle *Winterreise* D. 911 (1827). The singer is accompanied by piano (material from *Die Post*), violoncello (from *Vocalise*) and synthesiser (from *Teardrops*), and as the music unfolds the instruments start to intermingle materials. The singer also recites in Polish, without musical accompaniment.

56. Chion, *The Voice in Cinema*.

57. *Ibid.*, p. 128.

58. *Ibid.*