Susanne Vill at ISTA 6, Bologna, Italy, 1990. Photo: Fiora Bemporad

# Susanne Vill

# Floating in the Voice Universe
## Power and the Variety of Vocal Expression

Abstract: *Experiences and demands at the ISTA in Bologna 1990 concerning practical vocal activities, interpretations of compositions and improvisations as well as systematic and theoretical reflections on phonation and vocal styles resulted in a complex catalogue of vocal techniques and expressions. Scholars can use it to analyse performances. Speakers, actors, singers and vocal artists may use it as a manual for exercises and inspiration of sound colours.*

Keywords: *ISTA 1990, Breath, Voice, Sound, Vocal techniques, Vocal styles*

The ISTA session *Performance Techniques and Historiography* 1990 in Bologna was to become a life-changing experience that fed my mind with a wide range of phenomena in *Theatrum Mundi*.

Recommended by Eugenio Barba's former assistant Christoph Falke, I was invited to join the meeting as one among 104 participants.

Arriving at the Villa Guastavillani I heard the Balinese singer Ni Nyoman Candri and wanted to ask her about her technique. For an unobserved warming up of my voice I went to the cellar of the villa. But Gaia Varon heard me and took Eugenio there. He had wanted to invite opera singers to demonstrate their art in the ISTA's programme *Owls and Nightingales*, but only a quartet with a *répétiteur* of the Bologna Opera agreed to come for a few hours. So, Eugenio asked me to sing in the *opening* wake-up music at 6:30 a.m. that started the daily work.

Among the material presented for the 'divine' choice of a scenario for our production, I was fascinated by David Maayan's recitation of the beautiful Hebrew poem *Sof hajamim laila*. I asked him to recite the poem together with my vocal improvisation of its front line, with my accompaniment played on the two Balinese gong agung (gong gede) and with Hemant Kumar Das on his sitar. Among the sounding *openings* our presentation was the first amalgamation of elements of different cultures in one organic piece of music.

Ni Nyoman Candri showed me how she produced the sounds of the stomach, the belly and the heart. Then Tomiro Wakayama let me try the Japanese formant technique with its inner sounds that are so different from the belcanto technique of an open emission. The musical conductor Ivan Hansen composed a love song for the scene of the Mandarin (Torgeir Wethal of Odin Teatret) and the beautiful woman (the

**185**

Susanne Vill's demonstration at ISTA 6.
Photo: Fiora Bemporad

onnagata Kanichi Hanayagi), and I had to sing it accompanied by an intercultural group of musicians. I also was asked to add vocal improvisations to the musicians of mixed nationalities and their musical styles. One day, when I finished my warm-up with my favourite Puccini aria "O mio babbino caro", Eugenio came in and said: "Susanne, when you are singing, I can't work, this is sabotage!", and his helpless smile apologised for the complaint.

When Eugenio asked me to give a work demonstration of my vocal technique for the participants, I chose the subject *European Techniques of Voice Production and Styles of Singing*, and wrote down a list of modes and effects of voice production in different musical styles. Later this list functioned as the basic cell of further catalogues published in essays and presented in work demonstrations and workshops at ISTA sessions, in Austria, Germany, Israel, Singapore and Spain. The surprising offer met me far away from my library. So, I chose for my solo presentation as examples of musical styles: Birdy's "People" for pop, "Denn wie man sich bettet, so liegt man" from Brecht/Weills' *Mahagonny Songspiel* for a song style, "Un bel dì vedremo" from Puccini's *Madama Butterfly* for belcanto, and for Wagner-Gesang Brünnhilde's "Starke Scheite" from *Götterdämmerung*.

After the demonstration Eugenio said: "It is wonderful. If I ask you to give me a bird, you give me a bird, if I ask you to give me a pearl, you give me a pearl, and if I ask you to give me whale, you give me a whale - even a whale."

As a special favour Eugenio chose me and five other participants to visit Jerzy Grotowski's laboratory at the "Centro per la Sperimentazione e la Ricerca Teatrale" in Pontedera. A small bus took us there. Thomas Richards welcomed us and became our guide for the evening. The vault of the performance, lighted by many candles, filled a solemn, almost spiritual atmosphere. The visitors were placed aside from the 'stage' area and told not to speak or interact. Then five actors presented results of their exercises of the last three years. The intensive, charismatic presence of the actors imposed a strong impact on us spectators. Their actions and chanting induced various impressions, some of them painfully touching, others surprising with an unforeseeable simultaneity and beyond our grasp with the mysterious transference of their mental synergy.

Leaving the performance space, we were invited for a meeting and dinner at the performers' home. There we could ask some of our many questions and received astonishing answers.

The University of Bologna had granted our meeting a generous financial support, that ISTA appreciated by offering in return a programme of lectures by the scientific staff, scholars and artists. Within a one-hour time limit, each of the free speeches should combine academic and artistical approaches. Among the scholars' proposals Eugenio also chose my suggestion *How to imagine the vocal dramatic expression of opera singers of the past by use of historic recordings?* To prepare this unexpected task, I went to a record shop in Bologna, where I found recordings of castratos and divas. Then the symposium *Theatre Anthropology: Ethos and Pre-Expressivity* started with eleven scholars and artists, me amongst them. I presented my insights. For the first part of my speech, I chose 'legendary voices', rated according to their vocal technical perfection, taking into consideration the recording conditions at the turn of the century and what they could

acquire from the singers' input. Then I moved on to the vocal styles and dramatic impact of the interpretations, discussed as phenomena of contemporary fashions. The last part referred to lost traditions: castratos with Alessandro Moreschi's recording of Paolo Tosti's *Ideale*, and Frieda Hempel's adding another f³ to the Queen of the Night's aria in Mozart's *Die Zauberflöte.*

The activities at ISTA demanded a vocal presence of about 12 hours a day, something totally unusual for singers of my tradition. When, finally, my voice left the unaccustomed use, the otolaryngologist at the hospital prescribed medicine, rest and silence. So, for the final performance of the *Theatrum Mundi* at the Chiostro San Martino I rehearsed the choir with Ivan Hansen's composition of *Subo al triquete*, a Spanish translation of a Walt Whitman poem. With the creations of *The Crossing* Eugenio staged a performance of 31 intercultural scenes with the ensembles of Bali, India, Japan and Odin Teatret. A spectacular *coup de théâtre* with fireworks highlighted the 'dance of energies'. The numerous spectators cheered enthusiastically, and the Mayor of Bologna honoured the director and the leading team for the great success and an unforgettable event.

Leaving Bologna, we knew we had experienced an extraordinary theatrical marvel.

## Power and the Variety of Vocal Expression – Vocal Techniques

The voice is used for: communication – expressing emotions – conveying emotions – conveying aggression – energising others – comforting – conveying subtexts – commenting situations – illustrating objects – painting a landscape in vocal sounds – creating vocal art forms.

In *Voices of the World. An Anthology of Vocal Expression*[1] the authors treat vocal techniques in terms of calls, cries and clamours – voice and breath – spoken, declaimed, sung – compass and register – colours and timbres – disguised voices – ornamentation – voices and musical instruments a) singing in the instrument b) imitation of instruments – employ of harmonics.

In the chapter of polyphony, they distinguish vocality concerning heterophony – echoes and overlapping – drones and ostinato.

Composers of new music distinguished different characters of vocal utterances and forms of vocal sounds:
   - Creatural sounds:[2] prelingual noisy, rustling sounds, infantile or archaic expression, babbling, roaring, shouting, screaming. In an eruptive sounding process the dull, shapeless sound, breaking forth from the human interior, supports the shaping of the affective potential.[3]

1. Gilles Léothaud et al., *Voices of the World. An Anthology of Vocal Expression*, Paris: Musée de l'Homme 1996.

2. The term appeared in this sense in: Dieter Schnebel, *Denkbare Musik. Schriften 1952-1972*, Hans Rudolf Zeller (ed.), Köln 1972; cited in: Dieter Schnebel, *Aktualität Wagners. Anmerkungen zu Sprache - Musik - Drama*, in: *Tristan und Isolde*, programme Württembergische Staatstheater 1981.

3. Wolfgang Rihm about his opera on Heiner Müller's *Die Hamletmaschine*: "Der Text, sein Text, steht für sich und ruft um sich hervor, worauf er steht." ("The text, his text, stands for itself and calls up around itself what it stands upon.") in: Wolfgang Rihm, "Gangarten, Hamletmaschine, Brief an P.O.", in: *Die Hamletmaschine. Musiktheater in fünf Teilen*, programme of the world premiere National-altheater Mannheim 1986/87.

Susanne Vill rehearsing with Jan Ferslev, Ivan Hansen, I Made Pasek Tempo, I Wayan Rai, Ida Bagus Nyoman Mas. ISTA 6, Bologna, Italy, 1990. Photo: Fiora Bemporad

  - Cultural sounds:[4] our lingual and musical reality, the entirety of the historical tone generators.
  - Artistic singing: artistical modes and techniques of vocal sound production.

The music theatre may combine the potentials of vocal expression: the creatural sounds, also known from ritual invocations, meet the cultural sounds of our musical traditions.

**Qualities of the voice:**
Pitch of the voice, range, volume, vigour, timbre, flexibility, capacity to carry the sound on through a distance, capacity to modulate the sound.

**Vocal techniques work with:**
The placement of the tone in the mask, on the top of the head, etc., to meet and use formants, harmonics, breath, support (of the diaphragm, *appoggiarsi in petto*, *appoggiarsi in testa*), resonators, well-balanced registers, articulation, diction, changes of speaking – singing/speaking – singing, the singing voice, the screaming voice.

The musical intelligence of the speaker/ singer impresses with an ability to imagine and invent different sounds, with psychological and dramatic empathy and the capacity to form sounds according to the aesthetic aim of expression.

**Producing vocal differentiations:**
Speaking in a realistic manner: natural – contrasting the 'natural' meaning of the situation – as a subtext – ironic – sarcastic – exaggerated – weird – strange – grotesque.

4. loc. cit.

Finding realistic sound shapes through: imagination (to be someone or something else) – expression of emotions: fear, anxiety, sadness, sorrow, yearning, frustration, rage, anger, dislike, disgust, envy, restlessness, interest, joy, pride, pleasure, desire, lust, surprise, jealousy, compassion, embarrassment, shame, guilt – vocal gestures –- onomatopoetic sounds – illustrations.

## Modes of speaking[5]

**Natural:** authentic, spontaneous, without mediation, being in a certain situation, including small irregularities, inadequacies, changes of the movements of speaking, of speeds, of intensities (dynamics).

**Articulating**: reading without inner participation, rattling off a text like learnt by heart, 'in search of the meaning', distance between the sensual representation of the meaning of the text and the pronunciation of the words, audible lack of understanding, no participation of the consciousness.

**Auratic**: articulations go apart from the meaning of the text. The way of speaking transports a certain melodic, rhythmic pattern or movement beyond the words. The aura of sound covers the structure of meaning and creates an appearance of beauty, of the special, of the sublime, of determination, of fate, of necessity, of higher orders, forms of being (politicians, official speakers etc.).

**Analytical**: interpretation of the text, decoding the signs and symbols for a precise articulation, calling on the sensual representations of reality, on which the text relies, kinesthetic actualisation of the coherences of life and duplicating the logical and poetological form given to the text by the author. The speakers understand and mediate the text, they also speak with subtexts: the sensual representation of the realities of which the text speaks, including analogies and paradoxes. The kinesthetic actualisation shows different aspects of experience.

**Emotional**: emotions such as joy, pleasure, desire, pride, surprise, aggression, dislike, envy, jealousy, rage, anger, fear, sadness, shame, disgust, sorrow, guilt and pain colour the speaking. (This is not in favour of the speakers who often lack the means of expression, or of the audience. Sorrow and pain are not so strictly tabooed like the other emotions.)

**Illustrating**: inserts of short laughter or sobbing (only to show a simple character).

**Figurative**: the movements of the speaking actions display the character of signs, but they are independent of the syntactic and poetic structures of the text. Changes of the speed of articulation, of the pitches, directions of speaking, of addressed points in the space (dance of the articulation, danger of mannerism).

## Speaking and singing in a non-realistic manner

Artificial modes: art of speaking, recitation in different styles.
   - Following musical patterns.
   - Using modifications of musical material: repetition – variation – contrast –

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5. Manfred Mixner, "Analyse des Sprechakts – Arbeitstechniken für Sprecher bei der Rundfunkproduktion", ("Analysis of the Act of Speaking – Techniques for Speakers in Broadcasting Productions") in: Thomas von Fragstein, Hans Martin Ritter (eds.), *Sprechen als Kunst, Positionen und Prozesse ästhetischer Kommunikation*, Frankfurt am Main: Scriptor u.a. 1990, p. 173-180.
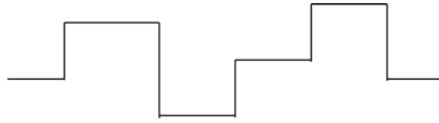
    continuation, development.

    - Construction by use of the five parameters of music: variations may concentrate on a single parameter or on combinations of two or more parameters.

**Pitch:**
Tonal - chromatic - atonal

**Intensities (dynamics):** Moving in steps to different levels

or developing successively

**Durations:**
Choose fixed rhythms – free rhythms – define and use units of time (a number of seconds by use of a stopwatch).

**Tone colours**:
Caused by imaginations of different sounds – expressions – characters – contents.

**Density**:
Create passages which differ in the density of their succession of sound/action events.

## Use external non vocal means

Hands to clap, to hold and move in front of the mouth, to snip etc. – pipes – mouthpieces of instruments – technical instruments: amplifier, vocoder, echo, sound software and digital editing.

## Breath

Breathe though the mouth – breathe through the nose – fill the upper thorax – fill the chest – abdominal breathing – *appoggiarsi in petto.*

**Gestures of breath**:[6]

    - To pant, to gasp, to puff, to wheeze, to groan, to press, (open-mouthed) wondering.

    - To clear one's throat.

    - Draw a deep breath with and without sound – inhale panting – breathe pantingly

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6. See: Schnebel, Dieter, *Maulwerke (I Atemzüge, II Kehlkopfspannungen & Gurgelrollen, III Mundstücke I, IV Mundstücke II, V Zungenschläge & Lippenspiele)*, 1968-1974, Mainz: Schott Music s.a.

with open mouth and as much air as possible – breath tremolo and vary the position of the mouth – breath vibrato – vary the depth of the breath regularly and aperiodically – break the lines – change the duration and depth – change inhaling and exhaling.

## Noises[7]

- Fricatives: to creak, to grate, to press, to spit, to puff, to snarl, to snore, to hiss.
- Vibrating sounds: to coo, to roll, to flutter.
- Plosives: b, p, d, t, g, k, to spit, to stammer, to stutter, to click one's tongue, to smack (one's lips).
- Use theses noises by changing the position of the mouth (imagine different vowels) and changing the pitches.

## Gestures in articulation

**sound – character – expression – relation – impulse (realistic and non-realistic)**

Use combinations of sounds and text:

as vocal material – change and vary it as musical material;

as sound colour – change the colours without relation to the meaning;

for carrying some special contents:

- onomatopoetic modes: murmuring – howling – croaking – etc.
- oral gestures: chattering – babbling – pontificating – sermonizing – preaching – reciting – singing psalms – shouting – screaming – muffled – husky – etc.
- defining the character of the speaking person: naïve – soft – positive – openhearted – powerful – convincing – empathic – sophisticated – distinguished – reserved – authoritarian – proud – wild – anxious – weak – etc.
- defining the origin/ social background of the speaking person: speaking in language varieties – with a foreign accent – a dialect – a sociolect – youth language – etc.
- expressing conditions of body and mind: cool – sober-minded – inspired – enthusiastic – hopefully – greedy – envious – power-hungry – passionate – tipsy – husky – prosaic – dispassionate – exhausted – dull – hurt – desperate – drunk – on drugs – stoned – crazy – etc.
- expressing emotions: speaking excited – angry – furious – nervous – eager – anxious – keen – curiously – stiff – with pent-up emotions – dramatically – dreamingly – surprised – astonished – complaining – crying – howling – hooting – wailing – squalling – blubbering – bawling (with rage) – calming down – cheerful – funny – serene – raucous, etc.
- defining relations with people or things:[8] dominating someone – rejecting someone – throwing something away – attracting someone – surrendering to someone – submitting something to someone/ something – offending someone – attacking someone – caressing someone – withdrawing yourself from someone – expressing ambivalence – lying to someone – cheating someone – confusing

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7.  From Hanna Aurbacher's workshop *Gesang – Stimme* at the Institut für Neue Musik und Musik-erziehung, Darmstadt, Germany, April 13-16, 1973.

8.  From Julia Varley's workshop *Vocal Actions*, Universität Bayreuth 1993.

someone – alienating the object of your speech – speaking like from afar – imitating another voice – speaking with another voice – like a medium – like an obsessed person;

- adapt your voice to a special communication: speaking with an animal – a child – an almost deaf person – with a megaphone for a big crowd – a foreigner e. g. a Chinese (the meaning of the words depends on the vocal melody), etc.

- transferring an impulse, speaking emotionally for the purpose to: address – stimulate – motivate – energise – moderate – appease somebody.

## Speaking

Use of the different resonators[9] – place the tone in the mask – outside of the body – at the top of the head – in your chest – in your belly – in your back etc.

## Singing

Italian technique: *con emissione aperta – emissione coperta/suono coperto* – using different formants – falsetto – pipe-voice;
pop and rock vocals: crooning, belting, shouting;
with ethnic techniques like diaphonic and throat singing: overtone singing (Choomii), undertone singing (Kargyraa), the throat singing of the Inuit (Katajjaq) – Balinese sound of the chest, of the stomach, the heart[10] – sound of the head, Chinese falsetto (jiasheng)[11] etc.

## Articulation

*Legato – portato – staccato – vibrato – non vibrato – sotto voce – mezza voce – un fil di voce – leggero – portamento – glissando* – with a trill – darting – suddenly falling in – slurring the sound – hoarse – raucous – croaking – guttural – open sound – pressed – nasal – clear – aspirate – whisper.

## Terms of expression

Terms of expression in the different parameters of pitch, duration, intensity, sound colour, density.[12]
**Durations:**
Short – long – various shades from *lento* (slow) up to *vivace, vivacissimo, prestissimo – accellerando* (*poco a poco* or *subito,* accelerate gradually or suddenly) – *allargando* (slowing down) – *andante* (walking) – *moderato* (slow) – *allegro* (quick) – *agitato.*
**Intensity and dynamics:**
Different levels of intensities from *pianissimo*, *piano* up to *forte*, *fortissimo*, *ffff* or *fff possibile*;

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9. According to Jerzy Grotowski's practices.

10. Like in the Balinese vocal technique shown by Ni Nyoman Candri in Bologna.

11. The Chinese head tone technique jiasheng is a special falsetto used in Peking opera to characterize the principal feminine role, see: *Les Voix du Monde*, CD II, Disguised voices (p. 145): 9. China [Han], Song from the Peking Opera *Jingxi/Pingju* in the opera *Yutangchun (Sprintime in the Hall of Jade)* sung by Zhang Junqiu.

12. Mentioned in Dieter Schnebel's *Maulwerke* (see fn 6) and György Ligeti's *Aventures et Nouvelles Anventures*.

Gradual development, beginning almost toneless *crescendo – diminuendo* up to *morendo*, *al niente*, *quasi niente*;
Sudden breakthrough.

## Traditional Italian terms of expression

*Quasi meccanico – molto tranquillo – tenuto – delicato – sostenuto – dolcissimo – misterioso – eco (solenne, funebre) – estatico – espressivo (molto) – capriccioso – virtuoso – fantastico – gesticolando – agitato (allegro) – espressivo – appassionato – eroico – feroce – molto aggressivo – molto energico – con tutta forza.*

## Technical instructions for the voice production[13]

Voiceless – voiced – with head voice – aspired tone – fade out the sound of your tone – touch your sound only fugitively – stylised expression – stop suddenly – accelerate your vibrato – repeat the sounds quickly – glottal sound – quick movement of the tongue and the lips – move your lower jaw to create a slow aperiodic vibrato – push your lips forward and speak or sing into the space in front of your teeth – form a tube with your hands and whisper into it – form a horn with your hands – close your mouth with your hands – close your nose with your hand – sing into a tube to denaturalise your sound etc.

## Working with the text

- Build levels on different parameters: pitch – duration – intensity – tone colour – density (succession of sound events).
- Use as construction modes: formal patterns – inserts (words – texts – sounds – songs).
- Interjections:[14] laughter – exclamations – shouting – cries – noises – vocal segregates – coughing – swallowing – gulping – sobbing – laughing – suffocating – etc.
- Levels of speaking – singing.

## Vocal styles

in opera, operetta, musical, jazz, pop, rock, ethnic, new music and digital performance:
- Belcanto – Wagner-Gesang – expressions of Verismo – alternations of speaking and singing
- 'natural' vocalising – legitimate singing (clear phonation with flat resonance) – *parlando* – speech song – *sprechgesang* – *chanson* – song (Brecht/Weill)
- jazz with scat (vocalises, improvised singing with meaningless syllables, onomatopoeia, imitation of instrumental phrases)
- pop vocals, rock vocals, 'power-voice'[15] (screaming voice with amplifier and digital sound editing) – crooning (soft, aspired sound) – belting (clarion, reedy sound) –

13. Selected items from György Ligeti, *Aventures et Nouvelles Anventures* and Dieter Schnebel, *Maulwerke*, translations by S.V.

14. Eco ascribes these voice qualificators and voice characterizing forms within the paralinguistic utterances to a para-language.

15. Andrés Balhorn, *Powervoice. Die praxisorientierte Methode für den Rock-/ Pop-Gesang*, mit Audio-CD mit professionellem Trainingsprogramm, Hamburg: Gerig, 2007.

*Nouvelles Aventures*, Words and Music by György Ligeti. © 1962 Henry Litolff's Verlag Limited & Co.
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shouting (exclaiming) – screaming (high outcries) – grunting (deep guttural sound)
– growling (low grunting)
- ethnic vocal styles like overtone singing (Choomii), undertone singing (Kargyraa),
the throat singing of the Inuit (Katajjaq), Chinese falsetto (Jiasheng)
- beatboxing
- new music with various vocal techniques and sound effects
- digital performance with editing of vocal sounds.

Different forms of crossover are possible between stylistically correct interpretation, special use of breaking stylistic identities, alienation through sound, use of different styles and ethnic vocal techniques.

## Use of postmodern techniques[16]

**Repetition**
**Fragmentation**: Take a part of your text out of the context, alter it with a new rhythm – other accents – separate special elements (phonemes) – imagine a colour for the text – speak it with the imagination of a contrasting colour – alienate it with a contrasting style (natural – articulating – auratic – analytical – emotional – illustrative – figurative).
**Deconstruction**: Find a comment for your text – explain what it's about – tell the motives of the author behind the text – tell the biographical or psychological background of the text – give the historical background – speak about its form – criticise it – tell what you like of it – tell about the scientific discoveries made since the text was produced – put questions – give riddles.
**Montage**: Break the reading of the text and insert: your comments – other texts (in different languages) – singing – music –- dancing – painting, a conversation with somebody about the text (questioning, explaining, continuing the story).
**Heterogeneity**: Create heterogenous passages contradicting the meaning of the text.
**Ambiguity**: Show the ambivalence of facts or meanings inherent in the text.
**Plurality**: Open the presentation of the text for different meanings, leaving the interpretation to the audience – denote the signs (go back to the roots, take the text 'literally').
**Intertextuality**: Quotations of different authors – quotations referring to the meaning of the text (newspapers, poems).
**Virtuality**: Use technical equipment (vocoder, echo, slides, cameras and projections, videos) – choose a sample of a different/ historical person's voice to pronounce the text – let an artificial intelligence perform and/ or transform the text, etc.
**Interculturality**: Use elements of different cultures (texts, songs, pictures, dances, movies etc.) – speak in a different language – with a different accent/ dialect – dress/transform into a person of another colour or identity for speaking the text.

## Aesthetic patterns of postmodern theatre[17]
applied to vocal expression:

16. Features of Alfonso de Toro's, Hans-Thies Lehmann's and Patrice Pavis' analyses have been adapted as indicators for vocal performances.
17. The selection combines techniques mentioned by Alfonso de Toro, Hans-Thies Lehmann, Patrice Pavis and adds techniques of digital editing.

**Theatricality**: Use of different media of the theatre – change from one mode of expression to another, from speaking to singing, pantomime, dancing etc. – work with ready-mades – use certain patterns, samples.

**Virtuality**: Express the text in different media using the voice with loudspeakers, tapes, beatboxing, digital editing, and the body with cameras, video, digital editing, virtual reality, augmented reality, artificial intelligence.

**Intermediality**: Define the character through the technique of vocal expression – switch from speaking to singing, spelling, translating, writing, performing – change from speaking to singing, with vocoder, echo, digital editing – use sensors and sounds of databases[18] – use a digital voice changer to modify your voice – use a text to speech editor[19] to present your text in different, even historical voices and various languages – use an AI voice generator[20] and choose voices such as conversational, narrative, explainer, children's, character, emotional, training voices, voices with local accents – in different languages and accents, etc.

**Performativity**: Together with the voice form a (coherent or different) meaning with the body, by means of the environment, microphones, loudspeakers, tapes, CDs, pictures, cameras, videos, DVDs – spread the text among different speakers – interact the meaning of the next word or sequence.

**Discontinuity**: Break the lines, phrases, modes of pronunciation and expression, switch to different vocal techniques, switch to different musical styles, etc.

**Heterogeneity**: Combine opposite forms of vocal and physical expressions and of theatrical media to create complexity – use an AI voice changer to transform your voice to the sound of a historical voice, etc.

**Interculturality**: Use different vocal techniques like belcanto, diaphonic, change of formants, throat singing, overtone and undertone singing – alternate your vocal presence with references of a different culture – combine your vocal utterance with inserts or underscores of voices of different cultures – use an ai voice generator to switch to different languages and cultures.

**Montage**: Combine different vocal styles like folksong, opera, jazz, ethnic, pop, rock – use technical equipment.

**Intertextuality**: Use intertexts, references to related sources, quotations, to add new aspects to the text.

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18. In his virtual opera *Heptameron* Gerhard E. Winkler worked with sensors and sound databases. He created more than 300 samplers of body sounds including sounds of the heartbeat, blood pressure, swallowing, digesting etc.. For *Braindance / Brainmusic* Thilo Hinterberger and Otmar Gendera developed a technique to transform rhythms of the brain into sounds: the actions of the dancer's brain creates and controls the sounds which accompany the body movements. In dancing the dancer composes the density and intensity of impulses while the computer technician calls the corresponding sound colors up. Cf. Susanne Vill, "Spielräume zwischen Medienkunst und Virtueller Realität", in: Henri Schoenmakers et.al. (eds.), *Theater und Medien / Theatre and the Media. Grundlagen – Analysen – Perspektiven. Eine Bestandsaufnahme*, Bielefeld: transcript: 470f.

19. Various text to speech editors with different voices and languages are available, e.g. https://filmora. wondershare.de/video-editing/text-to-speech-software.html [last accessed on August 27, 2023].

20. *The AI Powered voice Generation Platform* offers an "expansive library of 900+ voices" such as conversational, narrative, explainer, children's, character, emotional, training voices, voices with local accents – "in 142 languages and accents", https://play.ht [last accessed on August 27, 2023].

Floating in the universe of the voice, releasing one's imagination and observing the development of physical and technical materials lead to finding further means of expression, artificial creation and composition.

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