LIP OF THE REAL version II: Composing the noise of mind

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Abstract

This article reports on the creative process of the piece *LIP OF THE REAL* version II for flute/voice, percussion and live electronics from 2013. I introduce the concept "noise of mind" interlacing the definition of "mind" within contemplative practice with a scientific perspective on "noise". My project observes the structures of the thinking process, reverting the noise/signal duality. Amplifying and "composing out" different levels of mind's performative states, I draw on Baroque music. Prompted by the hidden polyphony of Telemann's solo pieces, I define a five-tiered system for the solo part, on a scale from the internal monologue to extroverted vocality. I develop techniques, such as using a throat-microphone to capture composed "mental noise", or using text as timing device. Voice extends into instrumental performance and is supported by a percussion part; via microphone and live-electronic improvisation, "noise of mind" is exploded into a "spatial basso continuo". As an improvising performer I interact with the meta-identity of composed parts, inviting disturbance as ingredient of my compositional plan.

Driven by a lifetime's experience as a performing musician, I have made the observation of "mind" during performance the subject of my recent compositional projects. The working process for my piece *LIP OF THE REAL* version II, for flute/voice (soprano) with a throat-microphone, percussion, and live-electronics from 2013[1] originated from several starting points; some of

1 *LIP OF THE REAL* version I was composed and performed in 2012 along a similar concept, but without a flute part.

these were rooted in my musical practice, others in disciplines and areas aside from music.

In performance and improvisation practice I use both electronic and mechanical instruments, experimenting with new combinations of these, and looking into technologies and their backgrounds. The voice and possibilities of extended vocal performance in composition and improvisation are of particular interest to me; I explore ways of infusing vocality into instrumental performance. I have also been studying and performing Baroque music with the recorder, and since 2007 a newly designed contrabass-recorder – an innovative extension of historic models – is my main instrument. Accumulated experience in these fields contributed to the compositional form of *LIP OF THE REAL*, including live-electronic improvisation as part of the piece.

Additional starting points have formed in fields outside music. Buddhist philosophy provided insights by presenting detailed studies of mind and meditation; here I was inspired by the inclusive view of the mind and the multi-layered structure of mind activity. I found corresponding themes covered in recent artistic work by contemporary authors Anne Waldman and Margret Kreidl. The scientific concept of "noise" as found in technical disciplines such as physics or machine learning contributed to a deeper understanding of the evaluation of mind's activities, and fundamentally helped to define my own creative approach. I wanted to interweave contemplative concepts, scientific perspectives and personal experience to re-create the performative qualities of the mind, with a focus on its "noisy" aspects.

Another pivotal point was meeting the outstanding flute and percussion duo Teyssier/Hepfer, for whom the piece was written. Flutist Alice Teyssier also is an excellently trained vocalist (soprano). From the perspective of my research, this unique combination suggested a multi-layered sonification of "composed mind". An extensive solo part for voice/flute would provide a platform for showing layers of inner states – fields of vocal production interacting with and diffusing into instrumental and electronic performance. Social and historic aspects of vocal proclamation with drums prompted a percussion part.

The noise of mind – a contemplative exploration

I began by observing the activity of the mind during performance to explore its performative and compositional potential for my piece. The spontaneous and continuous display of inner worlds has been noticed and investigated by numerous performers. However, it is largely seen as a disturbance (Gordon, 2005, p. 16). Apparently the "internal monologue" does not contribute anything of relevance to performing music. The pianist and composer Stewart L. Gordon describes an instant where he performed a piano recital in a state of great anxiety and heightened mental activity; after the performance it became evident that "the hell I have gone through simply didn't come across" (ibid., p. 122). On the other hand, musicians hold continuous thinking activity responsible for distortion, blockage or stage-fright. An effort is made to avoid interference and reshape the mind through training and exercises, such as strategies of concentration which focus or narrow down awareness (ibid., p. 99). While heightened adrenalin production in performance stimulates mind activity, it is acknowledged that the internal monologue is ongoing and not reduced to

performance situations only. It accompanies activities in daily life as well, but here it remains unnoticed or is taken for granted (ibid., p. 15).

In my performance practice I take a different, inclusive view that is equally workable: whatever appears in my mind is already an ingredient of performance and even potentially enriching. This attitude is inspired by contemplative practices, and is a key aspect of Buddhist meditation (Katagiri, 1988, p. 48).

I wanted to understand the discrepancy between the foregoing view and the inclusive perspective about working with one's mind. I found it helpful to turn to the concept of "noise" as used in science. Noise has been simply and clearly described by the information scientist, electrical engineer, and attorney Bart Kosko as a "signal we don't like" (Kosko, 2006, p. 3). In his scientific history of noise, Kosko looks at the phenomenon of noise from a variety of perspectives, linking mathematical and physical implications with social aspects. For my work the interesting point is that the concept of noise implies value judgements: preceding decisions determine what is relevant or wanted and what not. In scientific disciplines, part of the available information is labelled as noise in order to reduce and preselect the amount of data. By discarding unwanted data the focus on the desired aspects of an investigation is strengthened. The relative role of noise results in the noise-signal duality: "one person's signal is another person's noise" (ibid., p. 6). The border between noise and signal can be shifted to follow a change in values. This then leads to additional relevant information, data, or energy, and can result in new findings. Noise returns to a constructive role (ibid., p. 7).

From this perspective, mind activity not directly connected with any performed action can be labelled as noise, an unwanted by-product generated by mind. This explains why the border between mind activity considered as noisy or as welcome is shifty: it depends on (personal) values. For my own creative process, I find the noisy areas of mind particularly interesting. Disturbances spark my creativity. Their ambiguous and interfering potentials challenge me as a performer and composer. I apply the noise-signal duality: I re-evaluate "noise of mind" as a constructive component of my compositional work. What I find interesting is that the scientific definition of noise makes the border between mental signal and noise clearly visible. I can now deliberately shift it to increase a flow of mind activity as material for composing.

In order to design a compositional structure for my piece, I returned to closer observations of my mind. These are linked to my own experience practising Buddhist mindfulness and awareness meditation. I consider the movements of my mind as a biotic[2] process: I experience fluid fields of consciousness layered upon each other, and activity jumping between those layers as the focus of attention shifts. My mind's movements involve vivid changes of energy and texture. Sometimes my mind appears to be more at rest, at other times restless. My experience further suggests that there are levels of engagement with the perceived "outer world". My innermost part appears to be the monologue; thinking activity extends to the "outside" through non-verbal, verbal, and vocal communication; and finally extrovert expression of my mind results in physical action.

2 Of, pertaining to, or produced by life or living organisms, from ancient Greek **βιωτικός** (biōtikos, "of life"), from **βίος** (bios, "life"). Available at: http://en.wiktionary.org/wiki/biotic. [Accessed 11 August 2013].

As a form of supportive material, Buddhist philosophy provided me with analytic insights about the mind that are shaped by a meditative practice, accumulated over generations of scholars who were also practitioners. It contains observations about pursuing a practice in general that also apply to my creative and musical practice. In Buddhist philosophy "mind" (Sanskrit: *chitta*) denotes the "totality of mental processes and manifestations". The thinking and discriminating mind, and all emotions and sense perceptions are included in this concept (Fischer-Schreiber, Erhard, & Diener, 1991, p. 47). The mind is said to have no shape or form of its own; it is devoid of any substance and, "basically speaking, somewhat blank" (Trungpa, 1993, p. 32). As the renowned Tibetan scholar Tashi Namgyal (1512–1587) wrote, formless mind brings forth unceasing appearances:

> All things appear as perfect reality to the mind.
> Apart from the mind no reality as such exists. (Namgyal, 1986, p. 7)

All phenomena are thus considered to be dreamlike and transitory creations of the mind (Suzuki, 1985, p. 96). This directly corresponds with contemporary philosophical concepts inspired by modern physics, especially radical constructivism: thinking may be conceived as a biological function creating its own reality (von Glasersfeld, 2005).

Contemplative Buddhist practice does not exclude certain mental activities as unwanted phenomena. Disturbances in mediation practice – as well as in any other activity, including musical performance – can be integrated in the totality of the mind's creations. Tashi Namgyal's advice to meditators is:

> Do not view anything as being faulty.
> Perceive everything to be nonbeing. (Namgyal, 1986, p. 248)

He emphasizes repeatedly that the mind should not be modulated:

> Ordinary awareness is simple in its own mode.
> Let it remain unblemished by any contrived ideas and images,
> for the mind's innate purity does not need any modification. (ibid., p. 270)

This view is different from the development of strategies of concentration to narrow down thought activity. Here, de-contextualization and relaxation work together:

> If the mind is under pressure, it succumbs to bondage;
> if it is released, distortions will clear by themselves. (ibid., p. 268)

Some schools of Buddhist philosophy describe the process of the mind bringing forth all phenomena as happening in layers of consciousness: at the base is the so-called *alaya-vijnana* (Sanskrit), the innermost "storehouse" of all impressions; further layers contain the fields of sense-perceptions (Fischer-Schreiber, Erhard, & Diener, 1991, pp. 253–54). "Objects" of the sense perceptions, although being insubstantial, can be considered as "outside phenomena"; there is discussion about this in the various schools of Buddhist philosophy.

I would distinguish between "inside" myself and an "external" world outside my perceived body, that is, my skin. In my observation of performing, there is a flow from the innermost layers of my mind to the outside world to communicate sound, and back inside again through hearing. If I look closely at my creative process in the context of improvisation, there is a "first thought" accompanied almost simultaneously by a vague sense of longing to communicate (Trungpa, 1996, p. 106). This wish and longing seems to contain high emotional energy and precedes the actual expression, whether vocal or

instrumental. Specifically when improvising my innermost layer radiates outside through the production of sound – which can be quite far physically, especially if electronic equipment is involved. There is immediate feedback via listening: through my ears the outward projection of the "first thought" returns back inside. Building on these investigations, I implemented the formation process of noise of mind as a composing principle.

Role allocations of voice, throat-microphone, and mechanical and electronic instruments

The central role in *LIP OF THE REAL* version II is assigned to the soprano/flutist. The voice sonifies the activity of the mind, expressing an oscillation between "inside" and "outside". I planned to multiply the voice as a platform to show layers of mind activity, starting from the innermost layer to the more extroverted. One of these layers incorporates the flute as an extension. The percussion part adds an aural texture and supports the soloist.

The concept guiding the electronic part corresponds with the idea that all phenomena originate in the mind. Here, the innermost noisy activities are used to generate a vast sonic environment. For the technical setting I looked into microphones that would pick up sound from the voice without recording the flute. I decided to use a throat-microphone that is worn by the flutist around her neck. This gadget was originally developed for military use, for communication in loud surroundings such as during combat or inside a tank. Vocal sound is picked up by two electret membranes that directly touch the skin at the throat. Signals can then be transmitted between persons via radio. Throat-microphones are currently also used by gaming experts or paintball-

fighters for a realistic experience during game sessions. Discovering this microphone, buying it, and talking to specialists in shops about what I planned to do with the device was another interesting story that sparked ideas for my composition.

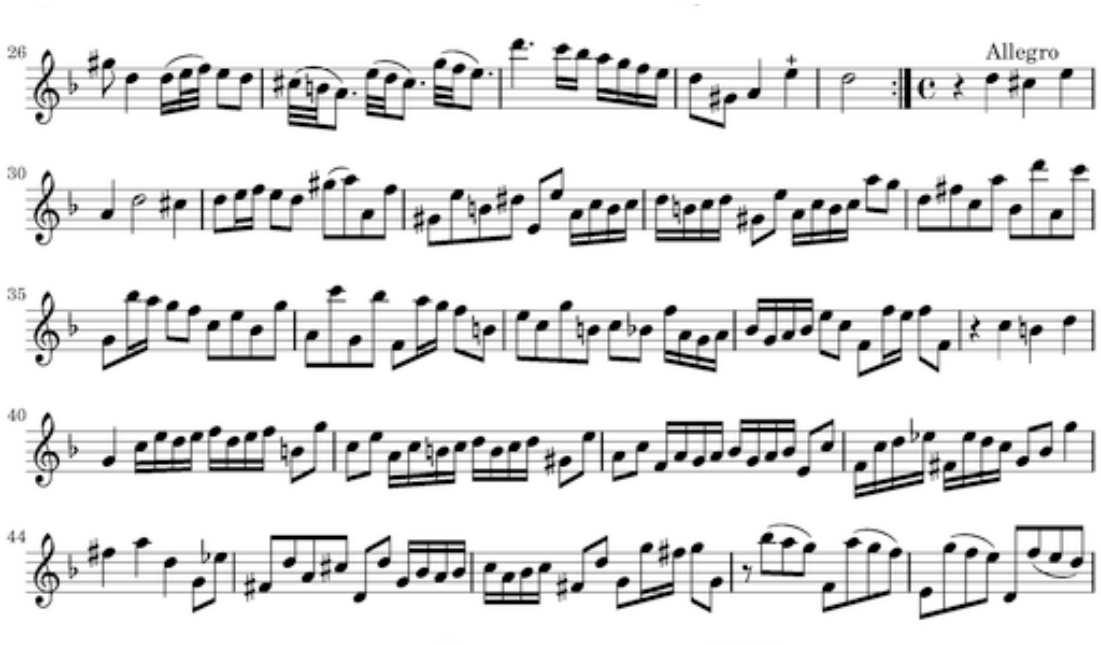
A PTT (Push-To-Talk) button was positioned on the floor, in front of the flutist so that it could be easily pressed by her with the tip of a foot. When the PTT was activated, sounds from the microphone were radio-transmitted to a receiver linked to my live-electronic setup and used for further live manipulation with my computer and an array of analogue machines. Finally, the sounds were spatialized among six precisely positioned speakers and two subwoofers.

I added a percussion part that featured the bass drum as the main instrument. The historic context of the big drum evokes and symbolizes proclamation: news was heralded by voice and drum. I wanted the earthy presence of the bass drum on stage, to provide a visual and aural balance to the electronic part. The percussion setup was positioned behind the soloist, to the right side of the stage. In the piece the drum also serves as a resonator for other percussion instruments such as selected Balinese gongs and bowls.

Baroque structures – an inspiration for the solo part

The compositional architecture governing the combination of flute/voice was inspired by techniques found in Baroque solo sonatas for melodic instruments. Johann Sebastian Bach and Georg Philipp Telemann, in their works for solo instruments such as violin and flute/recorder, enriched the texture of a melody with so-called “hidden” or “implied” polyphony (e.g. Bach, BWV 1006–1006

and Telemann, Zwölf Fantasien TWV 40/2–13), such as can be seen in example 1. Two or more independent voices are condensed into one solo part. Respective voices are fragmented into particles interlacing with each other. In performing these pieces the soloist switches between layers while playing (Bukofzer, 1948, pp. 304–6); additionally Telemann used rapid jumps between registers on a recorder, creating the illusonary perception of two or more voices sounding at the same time – today this effect is easily confirmed by spectrograms (Clarke, 2005, p. 188).

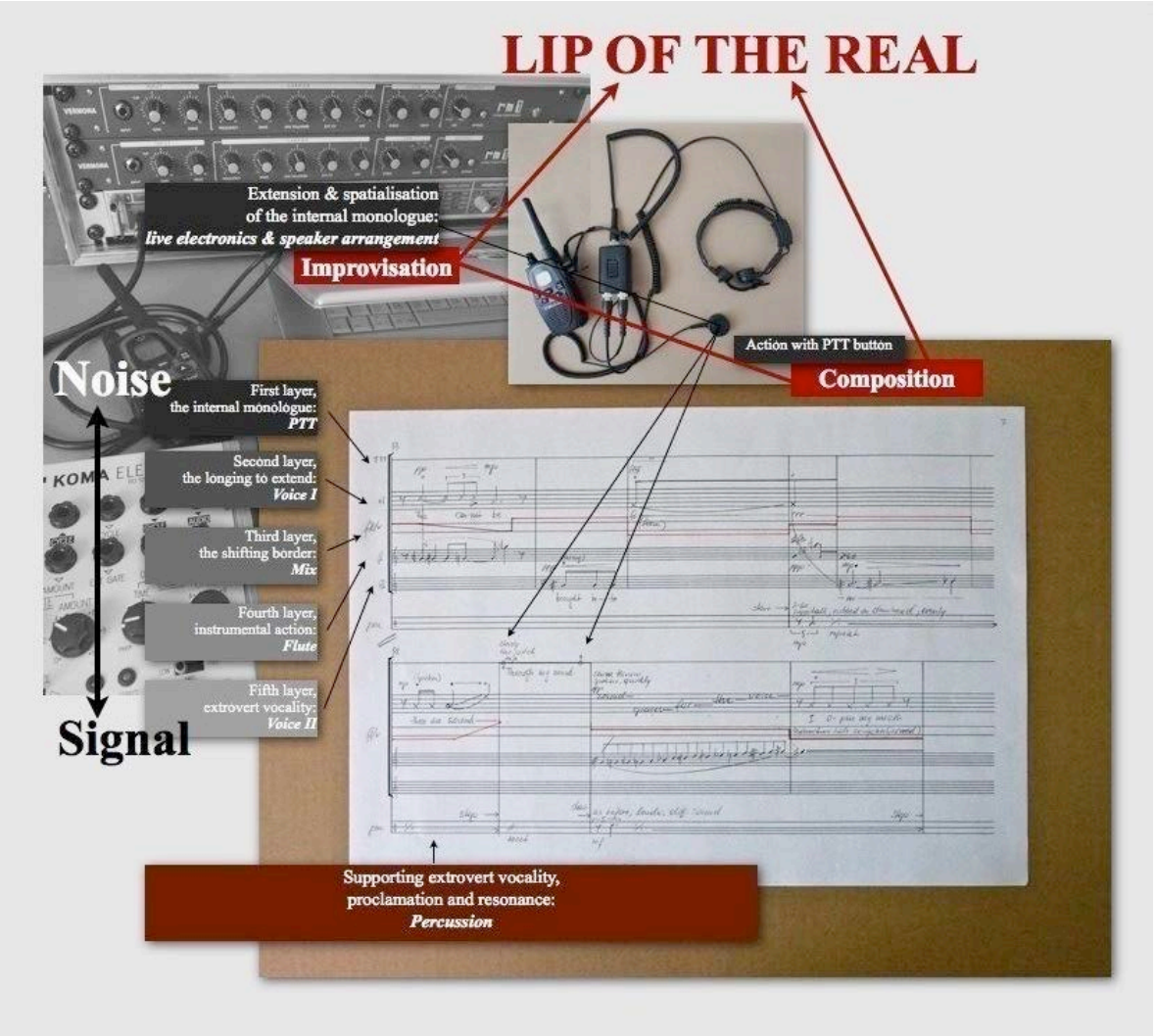


Example 1: Excerpt from Telemann (2011), Fantasia No. 2 for solo recorder.

Baroque performance in general pays detailed attention to colouring the timbre of a movement, a passage, or even a single note according to its emotional content. In the case of implied polyphony this requires precise, well timed, and immediate switching between timbres, articulations, and expressions linked to respective voices (Quantz, 1789, p. 106). Such sudden

changes of emotional content were of particular interest for my work, as they require switching between inner states, similar to what I had in mind.

For the solo part of my piece I explode this Baroque structure of implicit "voices", spreading out the flute/voice score over multiple staves in order to create an explicit polyphony. I chose five staves corresponding to layers of mind activity: each one notates a different layer of consciousness and its textural content (see example 2). Changing visually from one stave to the other describes a change in inner attitude and activity. Usage of multiple stave systems is prevalent in a notation that opens up a "terrain of multiple possibilities" (Paddison, 2010, p. 218), and foregrounds the decoupling of instrumental and vocal gesture. What I aim at is a decoupling of dimensions of internal textures and emotional layers, rather than layers of physical actions. For my piece, the five-tiered system denotes the flow from "inside" to the "outside world", reading from the top down to the bottom stave. The visual image of levels of the mind becomes directly apparent, and the sense of movement between different qualities of awareness in jumping from one layer to the other is highlighted. I use vertical lines for division; these lines are not bar lines in the usual sense. Here they signal the precise moments when awareness shifts or emotions flip. A vertical line in the piece denotes the "composed" mind jumping from one layer to the other, like the switch of levels in a computer-game or edit points in a film.



Example 2: Diagram of the compositional form.

Notating layers of the mind

In my notational system for the piece, the top stave of the flute/voice part represents the "watching activity" layer of consciousness, the mind reflecting on and watching itself. This intimate and hidden aspect of the mind seems to monitor every other activity, resulting in an ongoing surveillance and commentary. It has been thoroughly investigated by meditators over thousands

of years. The Tibetan scholar and meditation teacher Chögyam Trungpa Rinpoche describes this mechanism as "the watcher's game", explaining:

> You have projections and a projector set up, and both projections and projector work together to try to point out their own existence as a valid thing. So each situation confirms its own existence. (Trungpa, 1991, pp. 39–46)

I decided to link this layer with the function of the throat-microphone and the live-electronic part. Here I draw on the military background of the microphone and the idea of surveillance. The first stave consists of one line representing actions with the PTT button, and is labelled PTT. Written underneath is text that corresponds with those actions. All sounds and words that are notated here are to be performed with a closed mouth. Pronunciation should nevertheless be clear and distinct. Changes of pitch, tempo, and dynamics are indicated. Text is always spoken with the PTT button pushed to transmit sound via radio; the flute is usually held at a distance from the mouth.

The second stave, labelled Voice I, represents a more outgoing vocal expression. The music notated on this five-line stave recomposes the wish and longing to communicate rather than the actual content of communication. It illustrates the raw and immediate emotional quality of vocal exchange. Expression here remains somewhat diffuse, therefore, like a primordial breath out. Sounds or single words surface like raw ideas popping up from deep down. The main timbre is a highly energized, intense whisper. Here I largely use proportional time-space notation; vocal productions are to be performed at different relative pitches and dynamics, and in different colour domains.

The third stave, Mix, is a two-line-stave that regulates the distance of the mouth to the embouchure hole and thus affects the mixture of breath/vocal sound versus flute/instrumental sound. The two lines indicate a range from the extremes of "holding the flute at a distance with breath not directed towards the flute" to "completely covering the embouchure hole with the mouth, the airstream completely directed into the embouchure hole"; a flexible line moves between these two extremes. The mix defines the fictitious extent of exchange and communication between inner and outer aspects of re-composed mind activity. It may be seen as the shifting border of the world of the imagination and the so-called real world.

The fourth stave, Flute, is an ordinary five-line system for the instrument. The deployment of the flute uses the instrument's unique physical qualities to contribute additional form and shape to the breath. Touching the environment – in this case an instrument – literally with the lip and fingers is perceived to be an extension of the activity of the mind. Technical issues and instrumental skilfulness enrich the sonification of the thinking process, and sometimes demand a life of their own.

The fifth stave, Voice II, is located at the bottom of the system. Notated as normal, this part features pitched vocal production as yet another vocal expression. Here, the human voice appears in a complex form, combining pitched, voiced sounds with words that carry meaning. This structure guided the selection of texts for the piece.

Altogether, the two bottom staves for flute and voice respectively carry fragmented musical material spaced out in time, while the two top staves

notate the recomposed noise of the mind. The arrangement of the staves from top to bottom corresponds to a transition of fictitious mind activity from noise to signal, that is, from disturbance to regular sound production. The third stave, the Mix, regulates the interaction between the two ranges. By means of the PTT stave and the arrangement of the microphone triggered by the performer only the most intimate noise of the mind is processed in the electronic part.

Creation of the libretto

Following the construction of the score, I selected texts to represent different layers of mind activity. The complete libretto was created from texts by three authors: Anne Waldman, Margret Kreidl, and myself. This work formed an important part of the compositional process, during which the conceptional structure of the piece guided the selection, fragmentation, and "recomposition" of the texts. I deconstructed the texts into particles of different lengths, and condensed them during the compositional process – in a way similar to Baroque implied polyphony – into an entirely new libretto, that is, "recomposed" mind activity. This treatment of texts was conducted with great respect and gratitude, although it appears as a violent intervention.[3]

The title of the piece is taken from Anne Waldman's book *Iovis*. It hints both at vocal production and the flutist's embouchure. "Lip of the real" is the title of a section in which Waldman describes meeting an old colleague of hers (Waldman, 2011, pp. 385–92). I also chose a passage from this text for the final

3 Through personal exchange and explanations of my intentions I gained permission from the authors for this kind of work; I sincerely appreciate their generosity.

part of the piece. Here, the author refers to the dreamlike essence of reality originating from mind, one of Waldman's recurrent themes in writing:

> Exhaust appearance
> & get the so-called real
> the what-was hidden or what's so-called real
> hit list like lisp
> got written gets written
>
> Lip of the heart
> Lip of the poet
> I saw your ghost
> voice
> for it was all voice
> old voice of mountain (Waldman, 2011, p. 385)

The texts for Voice I and Voice II are translated fragments by the Austrian author Margret Kreidl. Her booklet "Meine Stimme" is based on her perceptions and inner comments while singing, and thereby documents another type of personal "noise" (Kreidl, 1995).

I wrote the texts for the top stave in English, as a result of my observations of the mind. I continued to document my mind's activities surrounding the composition of *LIP OF THE REAL*. In this way I verbalize mental noise as a by-product of the composing process. These texts are audible, but cannot be understood by the audience, as they are recited by the flutist with mouth closed. A second function of these recitations is to control timing, which leads to a discussion of aspects of performing.

Performance aspects – timing by noise, improvisation and flow

Many composers seek to control performance as completely as possible in order to prevent disturbance; performing a composition may create another type of "noise" from the point of view of the composer. I wanted to re-define performance interferences as a further layer of artistic material.

Composed "performative noise" serves as a tool for timing. I decided against writing longer periods of precisely defined rests for the solo part, which would imply the counting of beats or seconds. The mind's activity seems to be ongoing; I actually play with the notion of "mind stopping" in my own text:

> Does it fade out? At times it seems to be less dense than at other times.
> Almost so thin, worn out, that I can see through the fabric of the monologue.
> The fabric of mind.
>
> Touch it.
> Echoes and counter-echoes of thoughts.
> Going on and on.
> Dancing lines of consciousness. Cheerfully going on and on.
>
> Does it ever stop?
> Stop!
> Stop!
>
> There are gaps.
> Or I think there are gaps, after all.
> Sometimes it seems to stop: when something strikes me.
> Surprises me, touches me deeply, at a moment.
>
> How long does it stop?
> I do not know.
> I just notice afterwards.

That there was a gap.
In the inner monologue.

Nevertheless, the spacing of the musical material over time needs to be facilitated. Here, I turn internal noise into a constructive way to time other components of the solo part: instead of counting longer periods of rests, the performer has to recite – and sometimes repeat a certain number of times – pieces of texts with a closed mouth. When a text is finished, the soloist moves on and switches to another form of mental/musical texture.[4]

The solo part largely draws on the idea that awareness focuses on one thing at a time; all notated actions should be executed as precisely as possible. In daily life multitasking creates an illusion of parallel threads of thinking activity.[5] Looking closely I have noticed that my awareness fixates on only one thing at a time; it quickly oscillates between concurrent thought operations.

Deploying the PTT button transmits sounds during periods of recitation; through this setting I not only achieve an organic way of dealing with time and space, but also gain a steady flow of raw material for further manipulation with the computer and selected analogue machines. These machines are controlled manually by turning knobs or optical sensors. The quality of fuzziness in operation here acts as a noisy contrast with the instrumental performance.

4 The use of text recitation for timing is common in Buddhist mediation practices. For example, to signal the start of meditation practice in the morning a certain number of strokes of a gong are spaced out by reciting – silently and inwardly – a contemplative text between each strike. This method is simple and effective, and can be done without a watch.

5 Recent research results in neuroscience seem to confirm this observation, as Prof. Dr. Torsten Schubert, psychologist at the Humboldt-Universität Berlin, argues. See: http://dasgehirn.info/aktuell/frage-an-das-gehirn/sind-wir-wirklich-faehig-zum-multitasking?searchterm=multitasking. [Accessed 23 August 2013].

In this piece, I invite improvisation to interfere actively with the ordinary performance of a composed piece. I chose to improvise the live-electronic part, which is not notated. I have a clear aural image of the emerging piece and the electronic part, and in performance I improvise the live-sound with that image. The piece itself starts with the inner monologue from the soloist; electronic live processing branches off from the first vocal sounds. In the beginning, electronic sounds are largely controlled in order not to cover the sound of the flute. Precisely placed noisy outbursts sharply disrupt this balance. My intention was to punctuate the sonic flow from the two instrumentalists with an aggressive disturbance demanding immediate attention. Interfering noise was heavily panned to shift the focus of listening to the surrounding space, and to provoke the "solitary experience of the listener" (Voegelin, 2010, p. 46).

Viewing musical improvisation as a performative act reveals a structural model for the creative process as a facet of the mind's activity. The mind unfolds from internal sparks into the surrounding space of the concert hall, and reaches out to communicate with an audience. The process is immediate and direct; immediate feedback is also returned through listening. This aspect separates the process of improvisation from my compositional work; in composing, there is no simultaneous aural feedback for me from an "outside world". Here I install improvisation as an ingredient of my compositional plan. For the audience, the composed and improvised musics merge – or interfere with each other – to create *LIP OF THE REAL*. My improvised part adds a random factor to the piece. I improvise as a composer while listening to the composed parts of my piece; a cycle seems to close here.[6]

6 Nevertheless, it would be possible for others to play the improvisation part. However, in this case I would notate necessary aspects of the electronic part.

Conclusion

Adding the concept of noise into the compositional process marks a shift in how I define my work. The noise–signal duality works to clarify my understanding of the role of mind during the creative process, in improvising, performing and composing. Here, it is entirely my own decision to evaluate what I discard as noise and what I accept as signal. I can actively shift the border and turn internal and external contextual phenomena into ingredients of the creative process.

The concept of "composing the noise of mind" is effective in terms of structural and timbral definition, both in composition and improvisation. It has also helped structure and enrich the texture of the baritone solo part of my recent opera *ABSTRIAL*. Now I am using it to create a long-duration live performance/installation improvisation with the contrabass recorder, in which I use four microphones and a five-tiered "improvisation score" following the principles of *LIP OF THE REAL*. I plan to further extend the concept of "composing the noise of mind" into ensemble music. Here, aspects of control might play a pivotal role; degrees of wanted/unwanted control or interaction between performers could be re-evaluated: what defines the "noise of collectivity"?

A live-recording of the premiere of *LIP OF THE REAL* version II in St. Paul's Hall, University of Huddersfield with Alice Teyssier, voice and flute, Jonathan Hepfer, percussion, and myself performing live electronics is available at my website: http://piapalme.at/works/lip-version-ii/

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