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Could Change. A Word Composition: "Phantom Words" and the Aesthetics of Speech-Loops

Abstract: This paper investigates the aesthetics and cognitive effects of speech-loops in relation to my own word composition *Could Change* (2022) by means of artistic research in combination with a transdisciplinary approach including input from literary studies, media and sound studies, musicology and psychology. I relate my definition of a loop – a short repetitive cycle of identical material, iterated for a supposedly innumerable time – to my word composition which consists of textual fragments of news-headlines spoken by a tweaked synthetic voice. *Could Change* is based on speech-loop as its main structural feature, realized by a custom-made algorithm. To provide a context, I will also present and describe a few selected examples of works in the field of sound poetry that highly depend on loops. I will show that loops have a particularly strong aesthetic impact, because of its mechanical precision and its short-durational cycles: Loops exploit the aesthetic effects of extreme repetition to generate pounding rhythms and are able to alter the time-axis from linear to circular, resulting in an ambiguous state between vivid movement and deadlock. The aesthetic effects of speech-loops will be put in relation to sound and musicality, but also to the textual level and semantics. This includes the emptying of meaningful content of a speech-loop ('semantic satiation'), lexical hallucinations and apophenia effects like 'phantom words', a term and concept introduced by psychologist Diana Deutsch. In *Could Change* all of these features are highly relevant. I will therefore provide an insight into the original idea to compose this work, as well as into its production process. I conclude with the acknowledgement of the concept of a loop as a self-reliant, independent compositional feature that complicates the semantic level and enhances the musicality of sound poetry.

Keywords: Loops, Sound Poetry, Text-Sound Composition, Algorithmic Composition, Audiotexts, Digital Sound Processing, Apophenia, Pareidolia, Phantom Words

Résumé: Cet article étudie les effets esthétiques et cognitifs des boucles vocales en relation avec ma propre composition du mots *Could Change* (2022) au moyen de 'artistic research' combinée à une approche transdisciplinaire comprenant des apports d'études littéraires, d'études des médias et du sound studies, de musicologie et de psychologie. Je relie ma définition d'une boucle – un court cycle répétitif de matériel identique, itéré pendant un temps supposé innombrable – à ma composition poésie sonore qui consiste en des fragments textuels d'accroches de journaux prononcés par une voix synthétique modifiée. *Could Change* est basé sur une boucle de parole comme caractéristique structurelle principale, réalisée par un algorithme sur mesure. Pour fournir un contexte, je présenterai et décrirai également quelques exemples choisis d'œuvres dans le domaine de la poésie sonore qui dépendent

fortement des boucles. Je montrerai que les boucles ont un impact esthétique particulièrement fort, en raison de leur précision mécanique et de leurs cycles de courte durée: Les boucles exploitent les effets esthétiques de la répétition extrême pour générer des rythmes martelants et sont capables de modifier l'axe temporel de linéaire à circulaire, ce qui crée un état ambigu entre le mouvement vif et l'impasse. Les effets esthétiques des boucles de parole seront mis en relation avec le son et la musicalité, mais aussi avec le niveau textuel et la sémantique. Cela inclut le vide du contenu significatif d'une boucle de parole ("satiété sémantique"), les hallucinations lexicales et les effets d'apophénie tels que les "mots fantômes", un terme et un concept introduits par psychologue Diana Deutsch. Dans *Could Change*, toutes ces caractéristiques sont très pertinentes; je donnerai donc un aperçu de l'idée originale qui a présidé à la composition de cette œuvre, ainsi que de son processus de production. Je conclurai en reconnaissant le concept de boucle comme une caractéristique de composition évidente et indépendante qui complique le niveau sémantique et renforce la musicalité de la poésie sonore.

Mots-Clés: Boucles, Poésie Sonore, Text-Sound Composition, Composition Numérique, Audiotexts, Digital Sound Processing, Apophénie, Paréidolie, Mots Phantômes

Introduction

Since early on, cyclic repetitions – or loops – have had a strong impact on me: first as a listener of musical genres like techno or hip hop; later in my own artistic work with Institut für Feinmotorik, an experimental turntablist collective that explored and exploited the cyclical steadiness of record players; up to present times as a composer and researcher of sound poetry.[1] What fascinates me is the rhythmic drive that a loop can provide for speech material, intensifying a repeated audio-text's musicality and also the stupendous repetitiveness that can render an audiotext ambiguous – between change and perpetuation, movement and deadlock, difference and identity. This fascination made me compose the word composition *Could Change* (2022) which heavily draws on a loop-structure as its main compositional element. Loops, repetitions and cycles can be found in nearly all areas of our life and may therefore be considered a universal principle.

Everyday associations of loops are manifold and range from negative ones, for example the inability to progress, as 'being caught in a loop', to more positive ones, for example the inclusion in a discourse, as 'to keep someone in the loop'.

Literary research and poetological studies may have done extensive work on several forms of repetition (cf. Csúri/Jacob 2015; Mathey 2015; Groddeck 2010; Lüdeke/Müller-Bach 2006; Hilmes/Mathy 1998; Rimmon-Kenan 1980) but rather few particularly address loops (relating to the work of Gertrude Stein, cf. Delville 2013; to the works of W.S. Burroughs and Samuel Beckett, cf. Connor 2014; more general, cf. Rakusa 2016). A few

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transdisciplinary approaches examine the methods and effects of repetitive structures and loops in sound poetry (Suzuki 2015; Cussen 2015; Ellison 2020: 45-55). While Ellison discusses psychological aspects of loops and their potential to trigger 'phantom words', Cussen compares repetitive structures in poetry with those occurring in electronic and minimal music, as well as in more recent pop-music genres like hip hop and dance music in which loops constitute a 'basic principle of construction' (cf. Cussen 2015: 15). A seminal and extensive study on sound poetry discusses loops in an excursus of a single page's length only (Lentz 2000: 598-599), amongst others referring to a study on experimental radio plays that contains a sub-chapter on loops in which their potential for psychological auto-generation of perceptions (of speech) is already hinted at (Maurach 1995: 194-197). A more recent study on sound poetry in the 21st century briefly mentions repetitions as a compositional method in relation to redundancies and that the repetitiveness of a loop necessarily leads to a loss of meaning (Neves 2019: 21, 239). In loops, the signifier seems to count more than the signified, the gesture of 'again' and 'evermore', until what is spoken exhausts itself (cf. Rakusa 2016: 9). Loops can therefore be classified as a disruption (cf. Jäger 2010; Bolter/Grusin 2000) that makes the materiality and structure of language perceivable and allowing to semanticize the sign itself. When applying loops and repetitions as a structural element in literature and poetry, a repetitive structure of sounds bears significance in itself because a phenomenon of structure in artistic texts eventually proves as a phenomenon of meaning (cf. Lotman 1977: 104-136).

Repetitions and especially loops not only enhance the musicality of a work of sound poetry but may also influence the semantic level due to their ability to emphasize – but also to erode – meaning.

In this article, I will define loops in relation to sound poetry and will give an insight into the original idea and the production process of my word composition *Could Change* (produced with the assistance of Florian Zeeh). To provide a context I will also present and describe a few selected examples in the field of sound poetry. I will apply a transdisciplinary approach with references to literary studies, media studies, musicology, sound studies and psychology, combined with artistic research to write about my own sound poetic work. All of this will support my conclusion that a loop qualifies as a self-evident, independent compositional feature that complicates the semantic level and also enhances the musicality of poetry due to its steady rhythm.

A Definition of the Loop relating to Speech Material and its Cognitive Effects

I define a loop in relation to speech material as a distinct form of repetitive structure that iterates short and identical audiotext fragments (or speech-sounds) in seemingly innumerable cycles, "edited in such a way that when it reaches the end it returns to its beginning" (cf. Cussen 2015: 13 [my translation][2]). The brevity of the iterative cycles is crucial to constitute a loop by shifting the emphasis from the repeated material to the loop structure itself. In addition to that, a loop has the aesthetic ability to turn a fragment

of speech into a musical 'beat'. If an iterative cycle is too long (approximately more than a few seconds) the loop's rhythm gets lost because the cyclical structure is no longer dense and coherent enough – but may still be recognized as a repetition by human short-term memory; if an iterative cycle is even longer and exceeds short-term memory (approximately more than a few minutes, depending on the textual level of the speech material and the pronunciation) it may even loose the repetitive character.

Following the definition of sound loops by media theorist Tilman Baumgärtel, I consider the cyclical and mechanical repetition of *identical* material as constitutive (nowadays mostly achieved by electronic or digital technologies). I therefore acknowledge loops – particularly speech-loops in the context of sound poetry – as an independent and self-contained aesthetic feature, an ambiguous structure turning ennui into transcendence (cf. Baumgärtel 2016: 22) and intensifying the musicality of the (sound) poetic material. Because "[t]he musical sound of poetic speech is a means of transmitting information, that is, transmitting content", loops as a form of utmost increased poetic musicality bear significance in itself, foregrounding its form as a self-evident sign and turning a phenomenon of structure into a phenomenon of meaning (Lotman 1977: 120). By making use of audio-technologies that enable *exact* and *identical* repetitions, human limitation can be bypassed, such as the inability to repeat without variations or aberrations. This supports the sameness of the iterations resulting in a higher grade of tautology (cf. Cheie 2015: 403) and redundancy, inducing an ambiguity that can hold sense and meaning in suspension.

That is why listening to a loop can result in a paradoxical state of perception: the repetition of short segments of speech, like single words or fragments of phrases, triggers the brain's urge to search for order and can lead to disorientation concerning the textual level (cf. Ellison 2020: 51), intensifying the musical aspect of speech-loops by pushing the ear to the nearest tonal interval, emphasizing the tonal and micro-tonal aspects of speech by means of repetition (cf. Scott Johnson cited in Suzuki 2018: unpaginated). The aesthetic and cognitive effects of looping can therefore lead to highly diverse states such as soothing regularity and order, hypnotic mesmerizing, as well as unnerving impatience and chaotic disorientation. Loops rely on repetition as a signifying element, creating meaning through its distinct form and not on a hermeneutic mediation of its content, oscillating between cumulation and emptying of meaning. Loops can also be considered tautological, overturning a perceived pattern and emerging into a variation of the repeated, thus subverting the concept of identity (cf. Cheie 2015: 403).

A Brief and Selective Overview of Loops in Sound Poetry

Specific works in literature and poetry, for example by experimental authors like Gertrude Stein or in the field of concrete poetry (e.g. *Four-Directional Song of Doubt for Five Voices* by Emmett Williams, 1964) use repetitive structures that resemble loops. Especially in the experimental poetic practice of sound poetry, which is considered to

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have a continuing relation with loops (cf. Ellison 2020: 50), speech oftentimes crosses the border into music – not least because of loop-structures – by combining "the exactness of literature and the time manipulation of music" (Hanson 1982: 16). Sound poets like John Giorno, or Charles Amirkhanian deployed magnetic tape technology to achieve actual loops of speech material, as did composer Steve Reich in some of his early compositions (*It's Gonna Rain*, 1965; *Come Out*, 1966). The steady repetitiveness of single words or short phrases is exploited by Amirkhanian for its sound and musical qualities; his dense and hypnotic sound poem *Seatbelt Seatbelt* (1979) solely consists of the energetically intonated word "seatbelt", featuring overlaps and percussive clusters of speech particles resulting in a high grade of musicality and rhythmic vividness. Loops of speech material that structure whole pieces are deployed by Anne-James Chaton (*Evénements*, 1999– ongoing); using prominent names, slogans, or terms of political origin extracted from news headlines. Simultaneously to the playback of these loops, Chaton recites fragments of everyday-texts (receipts, shopping-lists, subway tickets) in a monotonous and fast-paced manner. Also, at least at times, resembling the pounding rhythms of techno music is the sound poetry of Felipe Cussen, therefore calling forth the musicality of speech elevated by repetitive structures such as loops. In pieces like *quick prayer* or *quick psalm* (2015), Cussen loops tiny snippets of speech, including gradual developments of structure and sound characteristics, resulting in stuttering rhythms resembling techno music, not unlike my own work *Could Change* (discussed below). Highly inspired by musical repetitions, he considers repetitive methods like loops of highest importance not only in sound poetry, but also in electronic and minimal music (cf. Cussen 2015). Drawing mainly on the musicality of speech loops is cris cheek under the pseudonym cl0v3n (e.g. the album *dark dad*, 2021); mechanically looping and manipulating small live speech segments in live sessions – in the case of the album *dark dad* the two words of its title – the musical sound character of these speech loops is predominant , creating a kind of dense and rhythmical voice music which still enables the emergence of 'phantom words' due to their short-durational cycles and the exact iterations.

Barbara Ellison's *Cybersongs* (2021) feature "hypnotic textures of vocal utterances through the intensive and extensive use of repetition"[3]; some pieces (like *Wanseets kussa*) exclusively consist of densely looped words uttered by a synthetic voice, resembling the word-loops that psychologist Diana Deutsch used for her psychoacoustic experiments (see below). Ellison points out that her series of loop-based compositions, *Vocal Phantoms*, oscillate between the "'semantization' of sonic elements that were initially meaningless and would remain so in the absence of repetition–a clear example of apophenia", and the opposite effect of the "dissipation of meaning by 'semantic satiation'" (Ellison 2020: 46). Ellison's compositions are therefore examples for the ambiguity of loops and their ability to erode meaning and at the same time generate lexical hallucinations like 'phantom words'.

Many sound poets used and use media technologies to create exact and mechanical iterations typical for a loop, thereby outstripping human limitations that would lead to variations in tempo, volume, or pronunciation.

Diana Deutsch's 'Phantom Words': Emergence phenomena of Speech-Loops

As we may already suspect, the relation of speech-loops to the textual content is complex and somewhat paradoxical. A mere repetition may emphasize the repeated content, but this effect flips to the opposite in a loop: when a repeated element is stoically iterated in seemingly innumerable cycles for a longer duration, the semantic content tends to dissipate more and more, eventually leading to a discharge of meaning, also known as 'semantic satiation' (cf. Jakobovits 1966).

To complicate things even further, the emptying effect of loops concerning the semantic level may even have the opposite effect if listened to long enough, generating new 'text' – but in an unpredictable manner. Especially in short loops (one word or a short fragment of a sentence), after the emptying effect of semantic satiation, sense and meaning may be multiplied when lexical hallucinations, or apophenia effects like 'phantom words' appear: speech that is not actually spoken but only subjectively perceived in the listener's perception. Short loops with relatively little speech content seem to work best for the emergence of these 'phantom words' because the human brain, always keen find patterns and produce meaning, is be not challenged enough and may therefore produce imaginary text that is not actually spoken – an effect already suggested in a study on experimental radio play (cf. Maurach 1995: 194). The longer one listens to identical, tautological iterations of (speech-) loops, any differences only occur in the perception of the listener and the more lexical hallucinations and apophenia effects emerge (cf. Ellison 2020: 45-55). It was the psychologist Diana Deutsch who coined the term 'phantom words' for these perceptions. In her experiments with loops of two monosyllabic or one bi-syllabic word(s) distributed in a stereo-field, Deutsch investigated "how our knowledge, beliefs and expectations create illusions of speech" (Deutsch 2019: 103). The short words she selected for her self-produced tracks to be used in the psychological experiments benefit from a limited semantic value by leaving more space for the lexical hallucinations to create 'phantom words' in the listener's mind; because of this, Deutsch sometimes uses names (such as "Boris") as base material for her tracks because they only refer to themselves and not to an external concept or signified. The less original meaning or semantic content the deployed words may have, the more space for lexical hallucinations there is. But words that refer to external concepts and therefore bear a higher semantic value still prove fruitful for generating 'phantom words' in a listener's mind: When Deutsch played the sequence "nowhere" to a class at University of California, San Diego, among the 'perceived' words were: "window, welcome, love me, run away, no brain, rainbow, aincoat, bueno, nombre, when oh when, mango, window pane, Broadway, Reno, melting, Rogaine" (Deutsch 2019: 107). She thereby

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proved that 'phantom words' are not intersubjective (contradictory to a suggestion from sound poetry research, cf. Lentz 2000: 599) but depend on what is on a listener's mind, on temporal mood or emotional stress, "but also by our knowledge, beliefs, and expectations" (Deutsch 2019: 104).

The psychological effect of 'phantom words' can be exploited in a poetical context by deploying tight repetitions and loops to provoke the appearance of – however subjective and indeterminant – words and phrases in the listener's perception, thereby creating poetry with deliberately unforeseen content. This constitutes a highly exceptional and challenging aspect of speech-loops: not only the interpretation of a text is open, but also the very production due to a loop's ability to generate 'phantom' texts in the listener's cognition is unpredictable! Therefore, the poetic paradigm concerning the alleged intention of the artist/composer radically shifts: phantom words add a whole new level to the meaning of a sound poem by not only featuring the text which is intentionally produced by the artist and actually spoken, but also the hallucinatory level of unpredictable words and phrases that may appear in a listener's mind. This enables unforeseen possibilities for (sound) poetry that can hardly be overestimated; a poetry that triggers a listener's mind depending on the listening situation, mood, or expectations, generating ever-new and varying texts for each listener, increasing ambiguity – widely considered a key feature of poetry – to the utmost degree. In the case of 'phantom words' the subjectivity of the listener may be much more relevant for the poetic experience than the subjectivity of the author. The phenomenon of phantom words also sheds new light on the famous definition of poetry by Ezra Pound, that literature (and poetry) is "language charged with meaning to the utmost degree", even enabling an 'excess' of meaning (Pound 1961: 28).

Deutsch's experiments have gained some popularity outside the academic field by the publication of a CD containing a selection of phantom words that were used in the original experiments (Deutsch 2003). These tracks, originally produced by Deutsch for her psychological experiments, can be considered compositions with an artistic value, especially if transferred to musical contexts. Tracks of this CD have been played by open-minded DJs in recent years, experimental music groups have been inspired by Deutsch's research[4] and her work on phantom words was part of sound-based exhibitions.[5] Hence, I see myself in a line of artists who have been inspired by Deutsch's psychological experiments for their (sound) artistic work.

Could Change. A Word Composition

For my word composition *Could Change. A Word Composition* (2022) I have been inspired by Deutsch's work to a degree. In this sound poetic work, an algorithmically generated loop-structure is the sole and superordinate principle of composition. It features speech-loops as its material, uttered by a tweaked synthetic voice. Gradually shifting the loop's start- and endpoints with utmost precision only achievable with digital technology, it features a custom-made algorithm coded by Florian Zeeh in SuperCollider,

a software environment and programming language for algorithmic composition and real-time audio synthesis. The duration of *Could Change* is about 24 minutes and has been released as a single-sided vinyl album by the label Futura Resistenza[6] featuring an exclusive cover artwork by Sylvan Lanz. The brief liner notes on the backside of the album's cover give an insight about the origin of the word material and the production process of the work, as well as its inspiration by Diana Deutsch: "Text material manually selected from news headlines. Arranged in gradually shifting loops created by a custom algorithm. Dedicated to Diana Deutsch and her work on 'Phantom Words'." (liner notes to *Could Change*)

On a material level, *Could Change* consists of short text fragments that I selected from headlines of news websites (such as google news, or the online version of The New York Times) between 2019 and 2021. The whole piece consists of sixteen word-pairings (or in a few cases quadruples) structured in eight different segments of the exact same length and containing four to eight syllables each. These short text fragments of a few syllables are steadily looped throughout the piece and subsequently and gradually replaced by a following section of the exact same length, resulting in pounding iterations displaying cut-up aesthetics and excessive editing.

The audible loop-structure provided by the custom-made algorithm is based on iterations with a duration of 0.8 seconds per cycle, pulsating at about 93 bpm – a velocity somewhere between the average tempo of hip hop and techno music. During the compositional process, we have tried various velocities between about 70 and 120 bpm to find a matching balance between the intelligibility of the speech, the rhythmical qualities of pounding beats, and the relatively slow and gradual shifting of the cutting points of the algorithm, exactly 19,94 milliseconds (approx. a 50th of a second) with every second iteration. The cuts are rather abrupt and only micro-fades have been applied to prevent clippings. It is also important to mention that only one audio-track is present at all times – no overlaps or layering of the voice – even if listening experiences may suggest otherwise. Another suggestion that arose, including comments and feedback from audiences, is that more than one voice is featured in the piece, which is not the case; this impression is most likely based on psycho-acoustic effects, a possible result of our electroacoustic treatment of pitch-shifting the voice to dissociate it from a perceived heteronormative gender attribute.

Because of its abrupt and automatized cuts, *Could Change* resembles a cut-up aesthetic and reveals the excessive, albeit mechanical editing automatically executed by the custom-made algorithm. The strict and utmost precise gradual process that cuts into words, revealing new text-loops over and over again, turns it into a kind of 'speech-music'. At times, the cut up and rigidly looped speech material sounds like a technologically enhanced phantasy-language – including mechanical stutters and glitches as para-linguistic elements. The process of slightly shifting start-and-end-points is at first hardly perceivable but becomes more and more recognizable throughout the piece, finally

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standing out as one of its main formal structures. Another formal aspect is the realization in stereo with slight variations throughout the piece to enhance the musical and sound-based aspects; this is also inspired by Diana Deutsch who made use extreme of the stereo-field in her 'phantom words' tracks used for her experiments. In relation to the concept of 'phantom words', *Could Change* invites listeners to let words or sentences associatively appear in their perception. It deliberately mixes an openness of interpretation with the urgency and determinacy of news headlines, opening up the discourse of news with all its political and social implications to a potentially infinite reflection.

What fascinates me about news-headlines is their extreme brevity, which according to Roman Jakobson (1960) qualifies as a poetic function Keane, David; as well as the use of specific, somewhat standardized terms that in many cases direct the attention to the language itself, qualifying as an additional aspect of poetic function. A news-headline also reflects the time and place of its appearance, thus containing an aspect of 'realism', or more specific, of 'mediatized reality'. For example, the two words that are part of the title and also appear in the first third of the piece, "could change", derive from a headline that read "climate could change faster than expected", the words "around the world" derive from a headline that read "corona cases increase around the world". These two examples contain an implicit reference to global phenomena that occurred at a specific time in history, although the use of mere fragments of the headlines decreases the connection to the original context and its implications: through my process of selection, fragmentation and re-contextualization, the headline-fragments are discharged of their original associations but at the same time reset for poetic associations in the new context of the composition. The remaining hint in the liner-notes on the sleeve of the vinyl album – that the text material was selected from news headlines – may (or may not) induce associations with the original context in which these words appeared, or at least nudge the listener into the direction of its original context, connotations and meaning. In other projects (*Nachrichtentstellt*; or *Again As*, together with Andreas Bülhoff) where I (and we) also used fragments and single words from news, I learned that the knowledge of the origin may trigger certain associations – or rather provides a specific context for possible interpretations – without limiting the space for associations and interpretations too much.

To enhance the musicality of the work, the synthetic voice – generated by a deep neural network based on a (nonspecific) human voice and being the one and only actor in the piece – has been tweaked in several ways: after selecting it for its clarity in pronunciation and for its general sound qualities, it has been pitch-shifted to dissociate it from a recognizable gender attribution (the original TTS voice that we selected seems to be modeled after a female voice attribution) and also to make it sound a little bit more inhuman (the voice of the computer HAL 9000 in the movie *2001 – A Space Odyssey* has been an inspiration for this feature, although HAL 9000 has been voice acted by a human male voice and is still recognizable as such). The down-pitching also has the intended

effect of increasing the low frequencies and – combined with some filtering – to provide a kind of bass-line throughput which also constantly moves and changes throughout the piece due to the gradually shifting cut-up algorithm. Further filtering has been made to enhance middle and high frequencies to sharpen the general sound shape of the synthesized speech with the aim to have it sound more percussive, to enhance the overall rhythmic qualities.

In the release-info, written by Angela Sawyer, the fact that the looped speech material becomes the music is acknowledged, as well as the possibility to perceive 'phantom words' when the attention shifts to the text level:

> As this piece begins, you'll notice how little audio material is really needed for your brain to start turning things into things. The merest slice of a plosive becomes a beat. The notes buried in every vowel are a bass line that nobody's fingers can reach. And of course the lyrics are the music. Sometimes you'll catch one of the English newscaster phrases Marc picked out, or the robot voice he chose to read stuff to you. But if you give your brain permission to not understand, then in the middle of all those fades, wipes, and scissor cuts, a flickering and drunk Jim Morrison will arise, spouting nonsense phrases like 'back no match around the worm'. Will your ears follow Jim into his meaningless twilight, or won't they? (Angela Sawyer, release-info to *Could Change*)

Sawyer's association with the voice of Jim Morrison is completely subjective, as are the perceived phrases she mentions in the text. But she strikingly describes the character of speech turning into music, that in *Could Change* "the lyrics are the music", and also the process of emerging phantom words if "you give your brain the permission to not understand". Explicitly inspired by Diana Deutsch and her 'phantom words', this piece invites listeners to let words or sentences associatively appear in their perception which are actually not spoken in the piece:

> If you do take the ride with Marc's GPS to the center of your mind, there's a particular reward. Because even after the rhythm of speech is pulverized to the point of nothing, even once you can no longer tell whether the cut-and-paste is coming from the end or the beginning or the middle, there is a synthetic voice, stripped of its humanity, that will relentlessly call to your brain like a siren and beg you to make sense of what doesn't. This piece isolates your perceptive abilities in the audio realm the way an optical illusion works on your eyes. Its melody is the amount you'll struggle to turn sound into sense. That's the room that opens up after the speech is gone. (Angela Sawyer, release-info to *Could Change*)

And that is precisely the room that can be filled with what Diana Deutsch coined 'phantom words'. My own experience of listening to the piece numerous times proofed her thesis that you can hear – or rather hallucinate – different words or phrases each time,

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depending on the subjective mood or listening situation. I have listened to the piece alone at home as well as in public presentations and it would be rewarding to systematically take notes of what I hear each time I listen to it, like Diana Deutsch had asked test persons in her experiments to show that each person hears different words, proving that these 'phantom words' are not intersubjective. What has been extensively discussed throughout the working process of *Could Change* is the overall duration of the piece and the appropriate medium for its release – two aspects that are somewhat interrelated. We have considered various possibilities from a sound installation in a physical space to an online version in the form of an app or a website; these would allow long (in the case of a physical installation) or even extreme (in the case of an app or an online version) durations, including much slower gradual shifting of the loop-structure and also meta-loops if the overall structure itself would repeat again (and again). The decision to release it on a physical sound carrier – as a disk – is based on the round and cyclical physical form of vinyl records and CDs, which bears a direct association with a loop. The association between a loop-structure and a vinyl disk seems even stronger because of the visibility of the record while playing, opposed to CDs, hidden in the tray of the CD-player while running. A CD would have offered more playing-time (up to 74 minutes) than a vinyl disk (limited to about 25 minutes on each side to prevent a decrease in sound quality, resolution and volume) but we still decided to adapt the overall duration of *Could Change* to the length of one vinyl side, because a flipping of the disk would disrupt the coherence of the piece as one long entity and may even suggest a hierarchy between one side of the disk over the other. The release of a one-sided vinyl disk also increases the coherence and uniqueness of the piece by leaving one side of the vinyl disk intentionally blank – instead of filling it with another version of the same piece, or even other, unrelated compositions.

Could Change has been presented in live situations as well, but just as a playback of the stereo-file, with a few adjustments of volume or frequencies according to the space and sound system at the most: it should be played relatively loud to make the 'bass-lines' (generated by the slightly filtered speech pattern) and rhythmic features audible and to highlight the musical character of the piece. A 'spatialization' of the material over multiple loudspeakers (as for example in 'acousmatic music' or other multi-channel works) does not make much sense because it is intended and produced as a stereo-file instead of a multi-channel composition. Florian Zeeh and me have discussed how a live-version of *Could Change* could work, possibly adjusting more aspects of the piece in comparison to the version on the vinyl disk, but decided that it is more consequent to play the work as is and not artificially change parameters just to do so and with no benefits for the piece. This may also be a result of the highly detailed working process with a lot of fine-tuning of various parameters to the point where it seemed utmost consistent. It is nevertheless important to point out that *Could Change* is originally based on live improvisations with some of the speech fragments later used in the final version, already deploying loop-structures of the elements, although manually played on the drum-pads of an Akai MPC

sampler and without the gradually shifting cut-ups. Based on these live improvisations, early ideas for the overall structure still featured a more conventionalized structure – intro, middle-section, end – with increasing and decreasing density of the material and possible overlaps and layering of the voice. But once we reflected more deeply on the implications of the loop structure, once we took the loop seriously enough to accept it as the one and only structural element of the whole piece, we were convinced to skip all meta-structure or any structural development, and stick to the cyclical structure of the loop and the steady and gradual shifting of the cuts as the sole structural elements.

Applying digital technology and algorithmic composition realized with a software increases the aesthetic potential of *Could Change* due to the extreme precision of the gradually shifting cuts. It can be considered an example of a composition as 'gradual process' where a set of rules is pre-defined and then played out without further action by the composer, rather running itself once the process is set up (cf. Reich 2004: 34). Digital technologies and software, as well as online resources are key factors in the making of *Could Change*. Digital audio technologies offer an extremely high grade of precision in editing and looping because the position of a cut and the length of a loop can be determined with an exactness down to the granular level (about 1/24.000[th] of a second, depending on the resolution). This allows to precisely and gradually shift the loop-points, impossible to achieve by mere manual editing. Although the impression of varying gaps between the cuts may occur while listening closely to the rhythmic structure, which is a result of the specific sound shape of language material that features quick shifts in volume and intensity, as well as tiny pauses between some syllables or speech sounds. While the gradual shifting loop-structure of cuts is utmost precise and steady, the impression of slight variations of the loops' durations or gradual shifting is caused by the very structure of spoken language.

Conclusion and Prospect

Sound poetry, with its at times dense structures, vivid prosodics and para-semantic vocal gestures – especially when additionally manipulated by sound-effects, excessive editing, or layering of speech – may in general allow a high grade of interpretative openness, thus increasing the degree of ambiguity, one of poetry's key aspects. In this context, the 'looping' of speech material can be considered a specific and distinct artistic method. A loop in sound poetry qualifies as a self-reliant, independent compositional feature that not only enhances the rhythmic quality and therefore musicality, but also complicates the semantic level, involving psychoacoustics as well. A loop explores and exploits the aesthetic effects of extreme repetition, resulting in an ambiguous state between stasis and movement and enabling associations with different aspects of meaning up to tautological accordance of form and content.

In a loop, the relation between sound and meaning is very particular and unique: while a mere repetition may emphasize the repeated content, this effect flips to the

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opposite in a loop listened to long enough and results in an emptying of the semantic content, or 'semantic satiation'; but when listened to a particularly short loop with exact and mechanical iterations for even longer, the psychoacoustic effect of ´phantom words´ may appear, an apophenia-effect of aural illusions experimentally proven by psychologist Diana Deutsch.

I have shown how I implemented the aesthetics of loops as the main structural feature in my work *Could Change* to trigger such phantom words. A sound-poetic loop-structure thereby enables the emergence of ´virtual´ texts that are highly subjective, rather depending on the subjectivity of the listener than of the author. Therefore, the production – or emergence – of text shifts, to a certain extent, from author to recipient. While the use of found text-material as a basis for *Could Change* already challenges the concept of authorship, phantom words (and texts) triggered by loops in the listener's mind do even more so: they cannot be foreseen by the author at all, because they depend on the recipient's individual listening-situation and subjectivity. Phantom words not only leave the interpretation of a work to the audience, but the creation of the very text itself! A potential of sound-poetic loops that cannot be emphasized enough. Hence, *Could Change* not just addresses the contingency of the mediatized world by cutting-up and deconstructing fragments selected from news-headlines, but also the contingency of poetic texts by triggering hallucinatory words and texts in a listener.

The possibility of words and texts generated in a listener's head – rather than being objectively present – also sheds new light on the para-semantic branch of sound poetry (oftentimes classified as 'non-semantic' or 'asemantic'): Abstract voice utterings may lack strict (or referential) semantic meaning, but may trigger phantom words (and texts) in a listener if structured in specific ways such as loops.[7] This creates an extreme textual contingency – rather than randomness, because phantom words still depend on psychoacoustics and the knowledge, expectations and psychological state of the listener. A theory and analysis of sound poetry may therefore highly benefit from the inclusion of psychology and reception theory.

All this enables unforeseen possibilities for poetry, generating ever new and highly subjective texts with a shift from author to recipient, increasing poetry's ambiguity to the utmost degree, up to the level of total unpredictability. Challenging the paradigm of intentionality, the apophenia-effects of phantom words bear an unimaginable potential for the emergence and 'creation' of text(s), but they also pose questions about accountability and responsibility: Who – or *what* – may be responsible when a listener 'perceives' phantom words that are, for example, hurtful or trigger traumata?

In any case, these new insights from psychoacoustics concerning relations between compositional structures such as loops and the sound shape of language, subjective processes of cognition and the generation of 'phantom texts', and finally between authorship, aesthetic experience and interpretation, bear a striking potential for analyzing as well as for composing sound poetry.

NOTES

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[1] This article can be read in pairs with my contribution `From Repetitive Structures to Loops in Contemporary Sound Poetry´, *Journal for Comparative Literature and Aesthetics*, special issue `Intermedial Poetries: Alternative Methods and Practices´ (Winter 2023/Spring 2024).

[2] In the original: "loop […] está editada de modo que cuando llega al final vuelve su inicio."

[3] Info-text on *Bandcamp* https://barbaraellison.bandcamp.com/album/cybersongs-2 (7/02/2023).

[4] Presumably the album *Ooga Booga Bongo Music* (2016) by Lucky Dragons.

[5] E.g.: *The Sound of Distance*, HKW Haus der Kulturen der Welt, 2021.

[6] And an online-version as stream or download available at Bandcamp: https://futuraresistenza.bandcamp.com/album/marc-matter-could-change (26/05/2023)

[7] Other compositional structures that bear a potential for 'sonic phantoms' in relation to spoken word are, according to Barbara Ellison, layering and persistence; cf. Ellison 2014: 23-27; Ellison 2020: 66.

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