



Vis Animae

Written component master thesis

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Short biography

Michal Marencik was born in Skalica, Slovakia. After Secondary Graphic school I moved to short study of chemistry at Bratislava Technical University, but after some health problems I decided to leave and to work as as screen-printer and graphic designer and photographer. After few years I managed to study philosophy on Masaryk University in Brno, later moved to Theory of Interactive Media and then to Video-Multimedia-Performance on Faculty of Fine Arts in Brno. During these parallel studies I also attended courses of electro-acoustic composition at the Janacek Academy of Performing Arts and dedicated me time to study and also to perform experimental electro-acoustic music and experimental visualisation. After finishing bachelor's degree I have moved to Art and Science department at die Angewandte. My work is oscillating between digital art, installation, video and experimental music with some portion of theoretical background.

Abstract:

The composition *Vis Animae* is based upon study of natural patterns, chemical and biological structures, psycho-physiological models in human behaviour and historical analysis of notation principles. The hierarchies of the structures that defines the matter are used as inspiration flow into music theory, but it is obvious that classical notation lack some features that better describes processes and structures used in contemporary electro-acoustic music. Therefore, one of main aspiration of this experiment is to create extended notation based on principles of classical notation scheme and graphic notation but shifted towards the actual needs of musicians, mainly mine own. The second effort is made upon structural analysis of various natural and computational subjects and its relation to musical patterns. My aim is to indite graphical score that can be reinterpreted.

The Logic of Capture – The Search for the Order

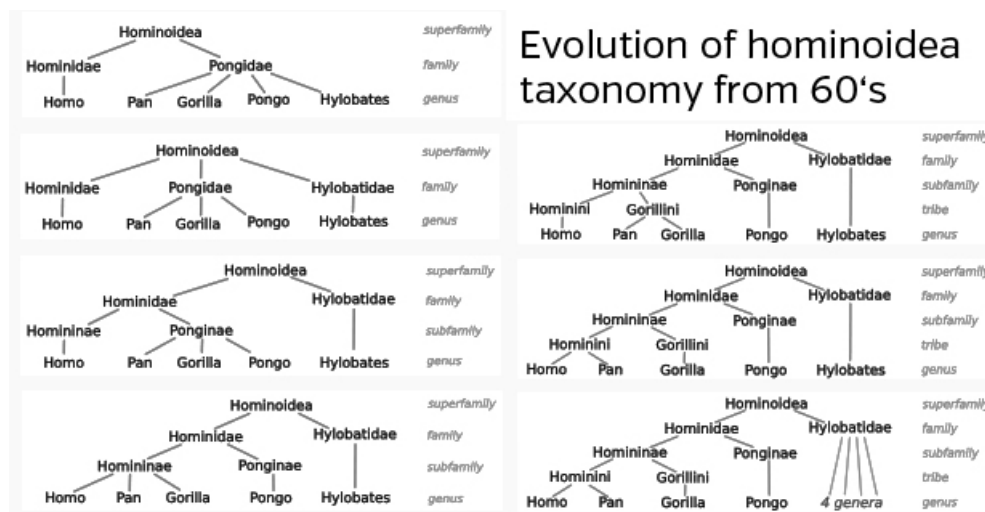
The Traditions

Human is very strange subclass of the kingdom Animalia. The word “strange” contains all the positive, but also all the negative implications. We as family Hominidae, genus Homo and species Sapiens are undoubtedly the only animal on this planet that has evolved its artistic expression. History of art teaches us about several ways of how to look on its progress. Human does believe in its traditions and have formed the culture upon it, but nowadays, it seems obvious that traditions could force us to pretend that we are something or someone else¹. On the other hand thanks to the traditions, we have inherited the memory of prehistoric times.

The historic memory, what is it? It is something that is static, or does it evolve? It is formed as type of literary prose or it is based on the principle of common sense with tendency to objective truth? Who measure this and who sets the rules?

All these questions are very important, but the answers differs mainly according to way how we understand, deals, interpret, or execute the traditions and how strong is our attitude to live according to principle of “meta-democracy”². The way-out point where I am heading to is close. That point is the notion that history and thus everything emerging from its knowledge as art, science, or religion is evolving. Moreover it is evolving with us, so we evolve it according to our presumptions and preoccupations inherited from traditions. Whether directly and consciously or indirectly and subconsciously.

This chapter is all dependent on what has been uncovered from the past and also on what is my interpretation of it. I don't want to present it as my scientific research and I don't want you to believe that it is all truth.



Change in the taxonomy of Hominoidea (ape). (<http://search.barebente.com/2012/04/02/hominoidea-morph-dna/>)

1 To clear out the averment that traditions force us to pretend that we are someone else I meant inherited and misinterpreted body of knowledge that sometimes evolved into something else that has no relevance with historical truth, however it is rather exceptional than usual.

2 By meta-democracy I mean the system driven by principles of objective truth, prove, and humanity without the economical aspects that are above these principles and influences them, whether positive or negative.

The Language and the Music

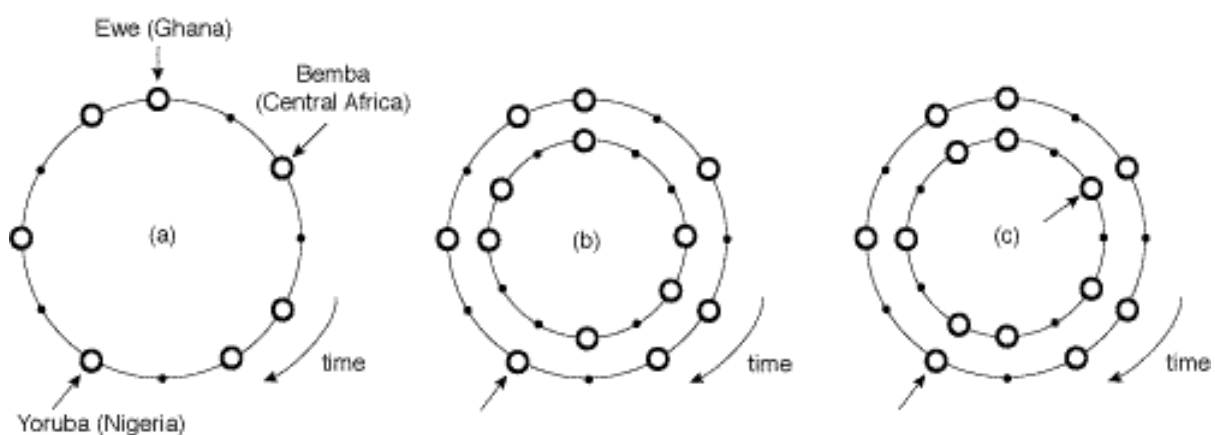
Expressions made by sounds precedes the invention of language. Bruno Nettl in his book *Primitive Culture* from 1956 writes about three stages of development of music: undifferentiated communication, differentiated, between language and music, where music was still in a highly elementary stage, and differentiated musical styles. If we consider, that evolution of music is analogous to evolution of language we can speak also about Noam Chomsky's domain-general theory, contrary to domain-specific theory. Domain-general means that we have some precondition to learn language independent to the behavioural theory of needed experience.

"The fact that all normal children acquire essentially comparable grammars of great complexity with remarkable rapidity suggests that human beings are somehow specially designed to do this, with data-handling or 'hypothesis-formulating' ability of unknown character and complexity" (Chomsky, 1959)

But how it is connected to the music and its language? I am not aware of specific theory describing the differentiation of primitive sound into language and music, but I think it was very long way from shamans or prayers repeating some syllables accompanied by diatonic music to some first rhythmical patterns. Basically we know very little about where it all begins. We have found instruments starting around 60 000 BC., but we can be sure that it began much much earlier.

Ancient Africa

I would like to start with my personal experience with African rhythm. It was big surprise for me how structural, complex and difficult to memorize the rhythm is. It all happened during my stay in Netherlands where I met an older African that taught me the basics and told me how locally differentiated the rhythm is. Basically every village, from every tribe has its own rhythmical structure that comes from prehistoric times. It was partially communication between tribes with own languages, partially art used for rituals and celebrations. African rhythm is thus never-ending source of inspiration, whether it was jazz, world, ethno, or other popular styles, it is inspiration also for experimental rhythm analysis. I can't forget to mention depiction of Nubian and later Egyptian music instruments, that were part of whole world ancient musical movement starting around 4000bc. I would call this period as cross-influenced, because of found similarities in instruments finds and also in traditional music forms that had spread across the whole planet.



Variations of the "Standard Pattern" demonstrate part (a) where G emphasizes the starting point of the Ghana pattern using the high bell. Similarly N is for the Nigerian starting point and CA for the Central African. Parts (b) and (c) using a bell for the outer ring and a drum for the inner ring. (Sethares, William, A. *Rhythm and Transforms*)

The Middle East

If we speak about the music it is not the same like to speak about the notation. There are many depictions of flutes and lyres, but there are very few depictions of ancient musical notation. The first piece of musical sheet discovered is written in Sumerian language. As mention in Civil (2010) this tablet contains earliest depiction of musical notation with text description of 23 musical instruments. Another music archaeologist Richard J. Dumbrill is describing the tablet written for a long-necked Babylonian four-string lute that is probably the oldest musical notation found. The tablet has numbered columns with depicted “intonation” and “incantation”. The commentary from the Schøyen Collection adds *“It further attests that frets were used, and that their values, tonal and semi-tonal, were purposely calculated. Most significantly, the discovery of this text attests of a music syllabus in educational institutions about 4000 years ago.”* Interesting founding is that it was written for four string lute tuned in C-G-D-A and the tuning was restricted to 14 tones. Later on there was discovered that their tuning system is based on perfect fourths and fifths, and that is analogous to and substantially pre-dates the Pythagorean tuning system of ancient Greece. So we can somehow date and locate the beginning of our traditional tuning system, as well as language to the ancient Mesopotamia.



The earliest known record of music and musical instruments in history (The Shoyen Collection)

India, China, Australia and the Rest

Ancient Indian and Chinese music has probably evolved from Mesopotamian music as well, the string lutes and wind flutes has evolved according to national needs and their music. Australia is well known for its Didgeridoos and ancient America for various instruments used for tribal celebration. Australian beginings of music is dated to about 1500 BC., whether American to about 600-1000Bc.



The oldest musical notation, written for a long-necked Babylonian four-string lute (The Shoyen Collection)



Transcription of above tablet into modern music notation according to Dumbrill (2005)

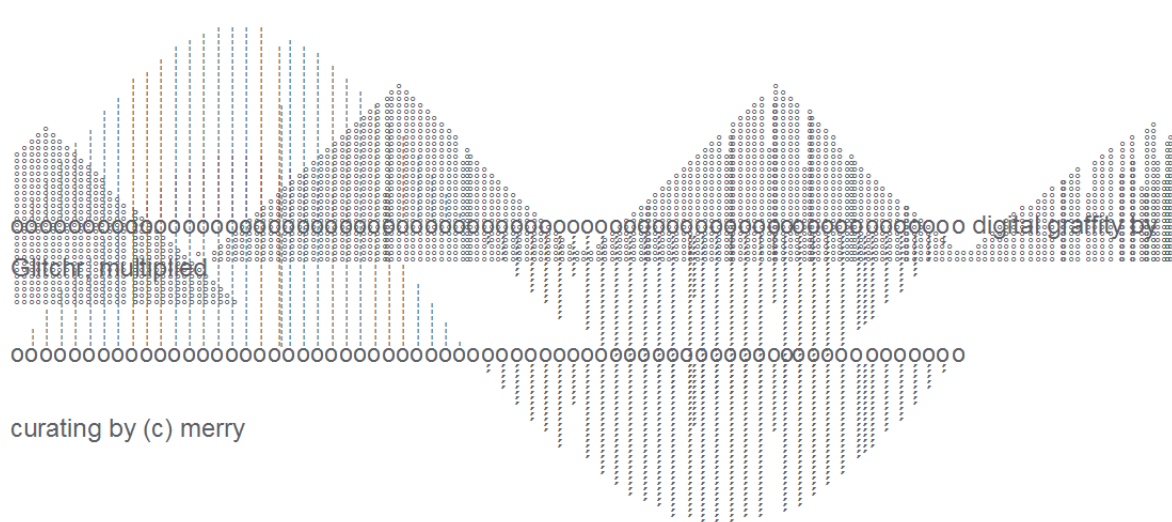
The Order and the Archetypes

Improvisation

The way how we think about music, how we perceive it, our expectations, our critique, everything arise from our subconscious feelings or rational brain processes. Whether we feel emotions or we think about some puzzle or quiz, we have some precondition to understand it. What does it mean to improvise? It is pure rational, emotional or conceptual movement, or is it some kind of natural decoding of inner schemes? I think there is no clear answer, but there is for sure simple question. Improvisation and music, it is the same? It could be some shamanic ritual, or poetry like super conceptional and freezing emotion less piece. The point is that it is direct and unforced way how to express our nature through making sounds, how kind alike to ancient times.

The Frictions and the Clashes

Natural processes as we know are always circular. There is no linear progress in nature. There exist just shortage in our time reconnaissance and perception. We live in a loop, but life can not be looped or tweeted so we must dream, perform, or just perceive. Everything is partially or fully reusable. Every aspect, every single protein or dead atomic structure. It is part of us and we are all part of it, so there must be simple way how to understand it. We just need to learn how to explore and find tools and instruments to proceed deeper into the natural structures and processes that creates it. It was few years ago when it came to my mind. Small structural chemical equation saying that if we are from chemicals, our brain, memory, the way how we think, that all must contain similar principles in organization. Now I would say that it is rather encoded in live matter than in dead universe compounds, but at that abstract level it could be similar. Micro-cosmos is the mirror of macro-cosmos, so in one small sample we can explore the principles of creation and destruction of the biggest ones at the same time.



Mary Meixner, Glitchr, netart

Musica Enchiriadis

The music notation has evolved from Babylonian cuneiform scripts written in early semmitics. During the “dark times”, through the Middle Ages, most of the information was still inherited verbally. However, there were few important writings describing shift from the beginning through Daseian notation to Modal notation and further, that helped to develop the rhythm and harmony structures into actual notation form. During these long-lasting and slowly forwarding shifts from the middle of nowhere, few important historical milestones happened.

“Symphony” is here used with its ancient meaning of “Consonance”. Thus, the interval boundary encompassing the entire gamut of 18 [= 4 * 4 + 2] notes is the most extreme consonance of the “15th” [= “double octave” = 4:1 ratio]. The only way the whole scale presented here can fit within a “15th” is by arranging the mode-final tetrachords in *conjunction*, then adding the final two tones above by *disjunction*, as follows:

The diagram illustrates the construction of the 18-note scale from tetrachords. It is divided into five groups: graves, finales, superiores, excellentes, and ultima. Each group (except the last) consists of a tetrachord (four notes) and a final (two notes). The notes are labeled with letters A through a', and their ratios are given below. The ratios are: A (n⁰), B (3²), C (3¹5⁻¹), D (3⁻¹), E (3¹), F (5⁻¹), G (3⁻²), a (n⁰), b (3⁻¹5⁻¹), c (3⁻³), d (3⁻¹), e (3⁻²5⁻¹), f (3⁻⁴), g (3⁻²), and a' (n⁰).

Excerpts from the unpublished paper Monzo 1996, A New Look at the musica enchiriadis

I already wrote about the Babylonian script. In European context, the first text about the music notation emerged in 9th century. The Musica Enchiriadis was not the first polyphonic description of music as is written in Wikipedia, but it is for sure important work depicting the basics of tonal distribution according to Pythagorean tuning theory that as we now evolved from Babylon and spread through the whole ancient civilization.

Ex.1

The example shows a short musical piece with two voices. The top voice is labeled 'vox principalis (cantus)' and the bottom voice is labeled 'vox organalis'. The notes are connected by lines, and the lyrics are written below the notes. The lyrics are: Te hu - mi - les fa - mu - li mo - du - lis ve - ne - tan - do pi - is.

Organum paralelo modificado - Musica Enchiriadis

The Neumes

So how we moved forward and where we found the rhythm, intervals breaks and other elements known to every contemporary musician? It came subsequently during the Middle Ages. First monophonic tunes has developed into neumes, that were first tonal transcriptions of voice movement. First signs were acutus “/” and gravis “\” that represented rising or lowering of the voice. These two signs later transformed into Virga, Punctum, Podatus, Clivis that represented single tone movements and into Scandicus, Climacius, Torculus, Porrectus, Podatus subbipunctis, Torculus resupinus, Porrectus flexus, Distropha and Tristropha tone groups accompanied by few special symbols used to alter the tempo, length or pitch of a note or group of notes. These later transformed into musical notation as we know it. Interesting is that it has evolved more thanks to technical possibilities of reproduction inspite of musicians needs.

The Neumes



Phil Taylor. All rights reserved. © 1998 (<http://www.barfly.dial.pipex.com/bfgregorian>.)

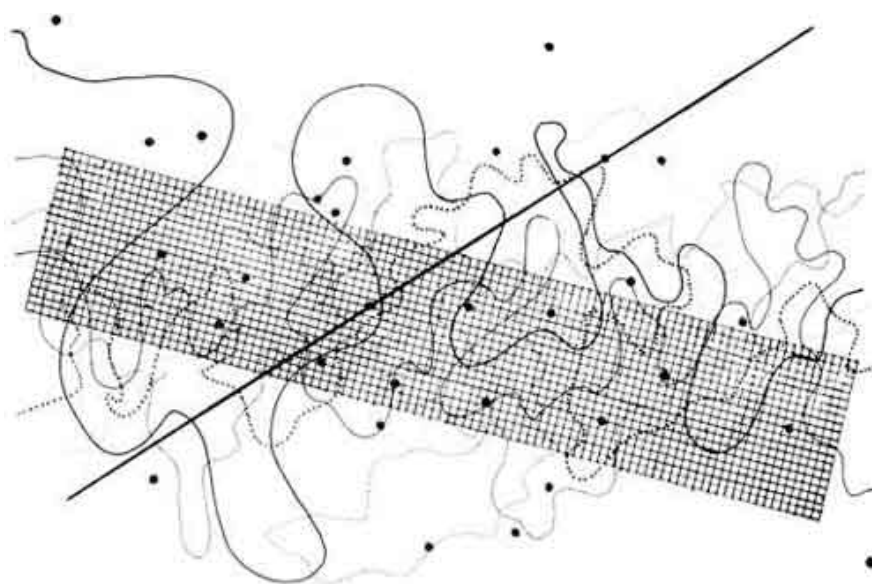
Graphic Notation

These signs were the predecessors of the note scripts like we are aware of. I won't describe actual musical notation in a detail, because it is well known. Main focus of my research was build upon the need of extension. It is not anything new, neither unique. I would shortly introduce several examples of extended or graphical notations I was influenced by. The reason why I omit classical authors and jumped to the world of experiment is as simple as understanding John Cages 4,33”.

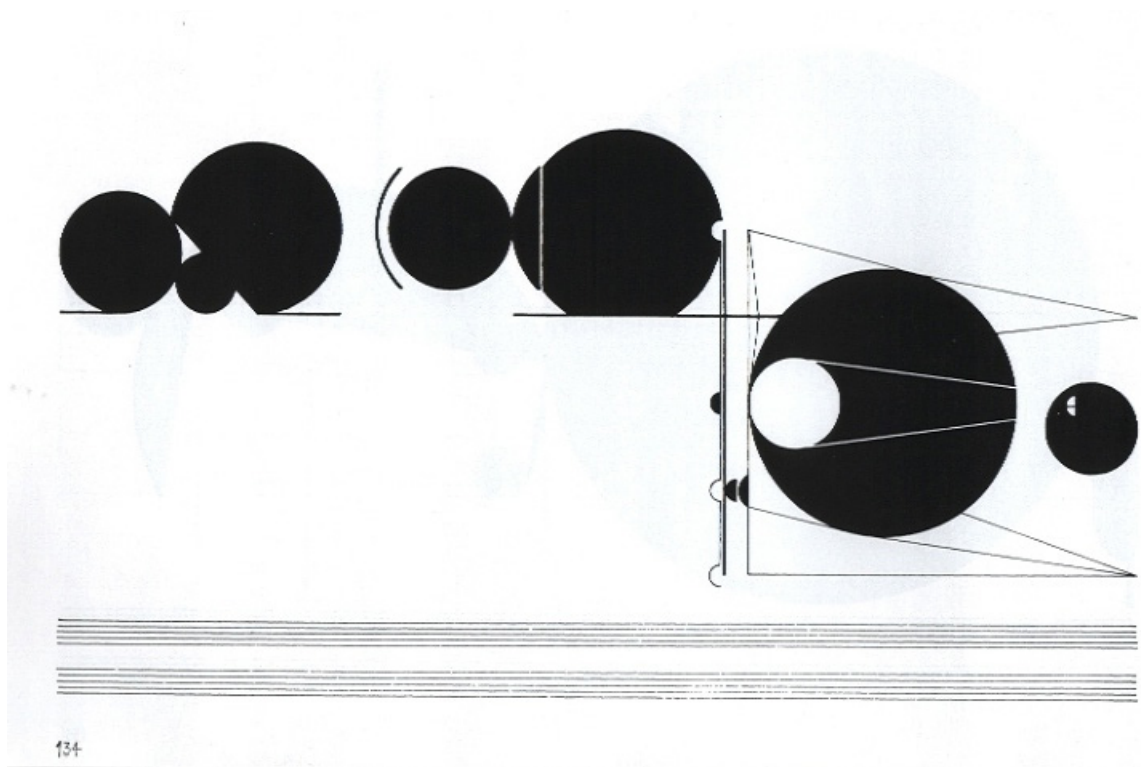
It is the poetry that feed us, or it is the magic of aesthetics, or it is pure concept that open our eyes and minds to be more human than animal? We are still loosing the game, but we try, at least. Asmus Tietchens, german experimental composer wrote: "Karlheinz Stockhausen claimed that after fascism, Hiroshima and the death camps, music shouldn't be allowed to be emotional anymore. He wanted a new objective music that could not be misused by whatever dictatorship." Something similar claimed also Adorno about the poetry. So is this variant of new objectivity focused on object without the emotion possible, or it is just a dream of a pure form, something that is ideal like Plato's pure form emanating the imperfect reality. Arvo Part is comparing his music to prism. "I could compare my music to white light which contains all colours. Only a prism can divide the colours and make them appear; this prism could be the spirit of the listener." These two composers, Part and Stockhausen might have same vision about the purity and objectivity, but if we compare their music, it is very differentiated and practically contradictory. Where is then hidden the meaning, that form of information that we gain from the artwork? How we process the information? It is possible to be emotionless? I think not. We know that we are loosing the sentience, but is it really like that. Is this world reliant to lose all of its sentiment, or it is just flux, something like mezzanine. Are we going up or down. Who knows, but for sure, future will show us ...

The Examples of Graphic Notation

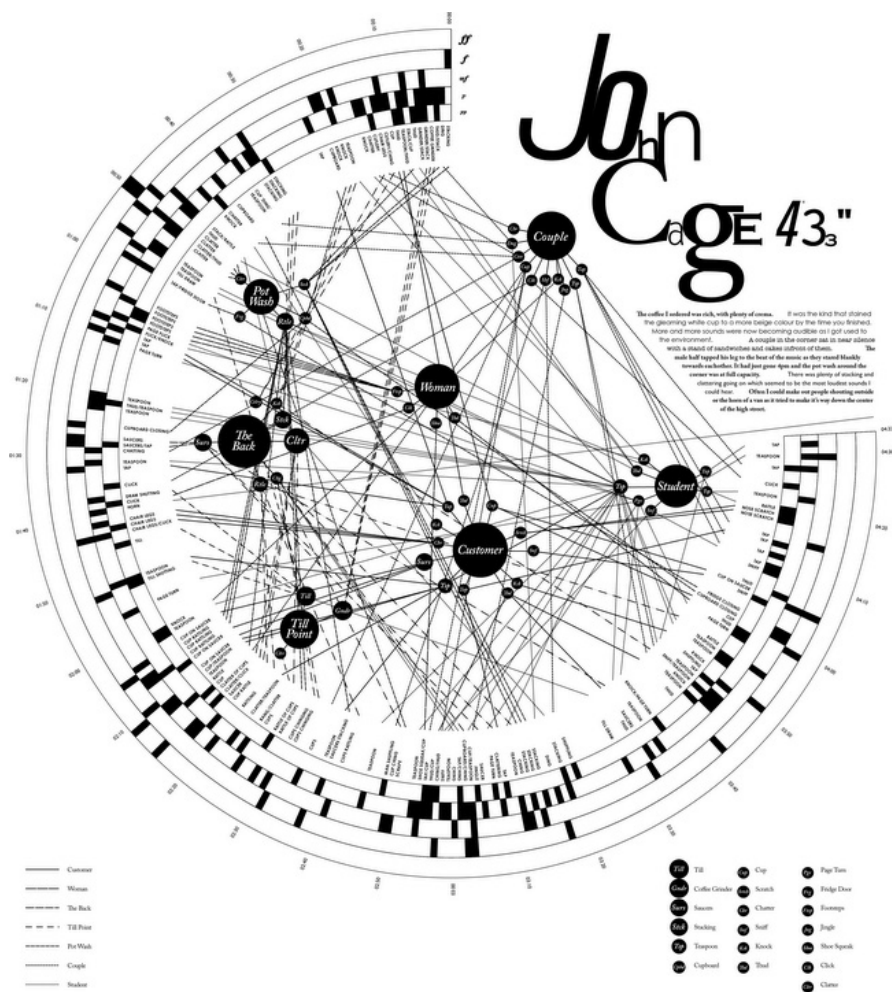
Before I proceed to my own experimentation, I would like to shortly, just visually point to some types of notations that interest me. At the beginning of my journey there were two names, John Cage and Cornelius Cardew. Both opened my untouched mind with their graphical notations. Just after few years of my own experimentation with sound I found many other artists that I would mention. Most of them oscillate between three dimensions. The aural dimension, visual world and notations using just simple textual instructions. Thanks to inter-school project in Brno, where I started to study the composition courses at the Janacek's Academy I met composer Jaroslav Stastny whose pseudonym is also Peter Graham and Marketa Dvorakova who helped me to dive deeper into the music notation. Jaroslav Stastny's flower compositions showed me an alternative to the way how we process the ideas into the music. Before I met graphic scores, I could not imagine the translation built just upon very simplistic approach. How can someone play just according to visual hints. It is real, or it is just a game of interpretation.



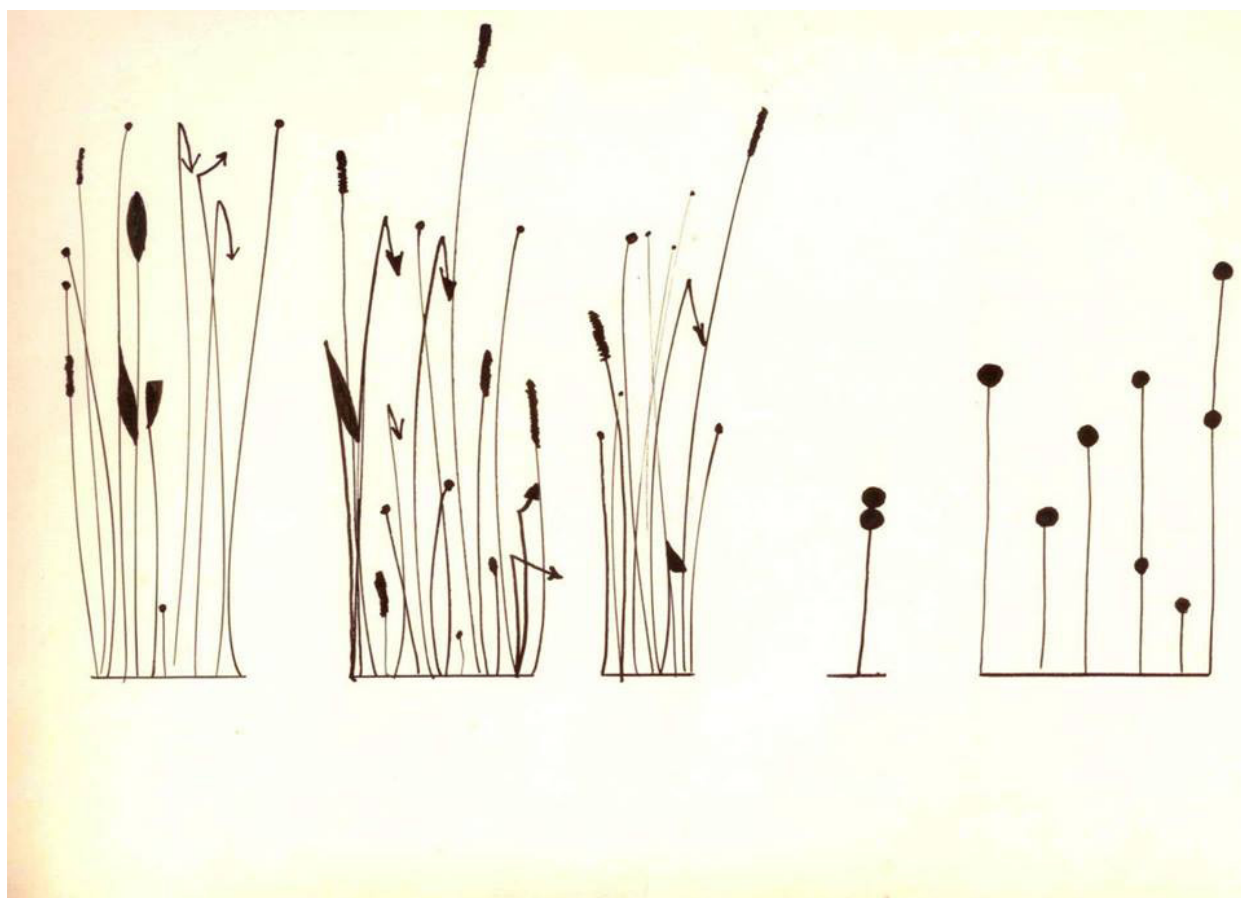
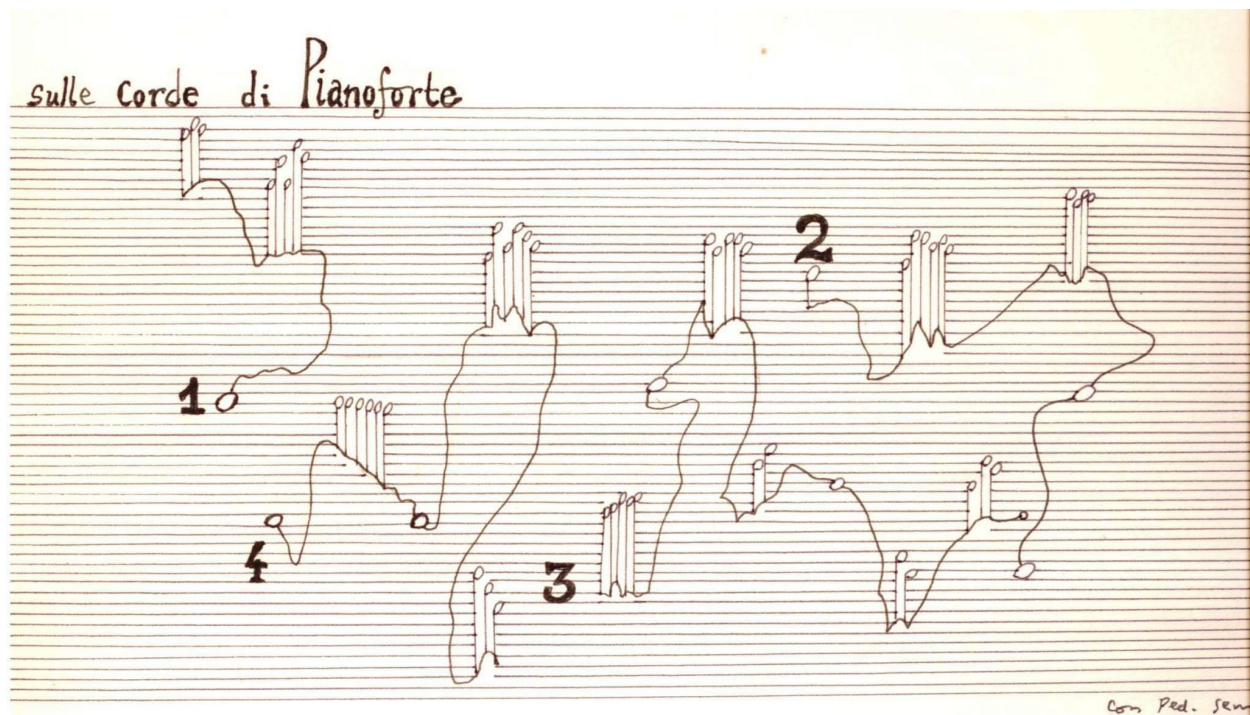
John Cage, Fontana Mix



Corneliu Cardew, Treatise



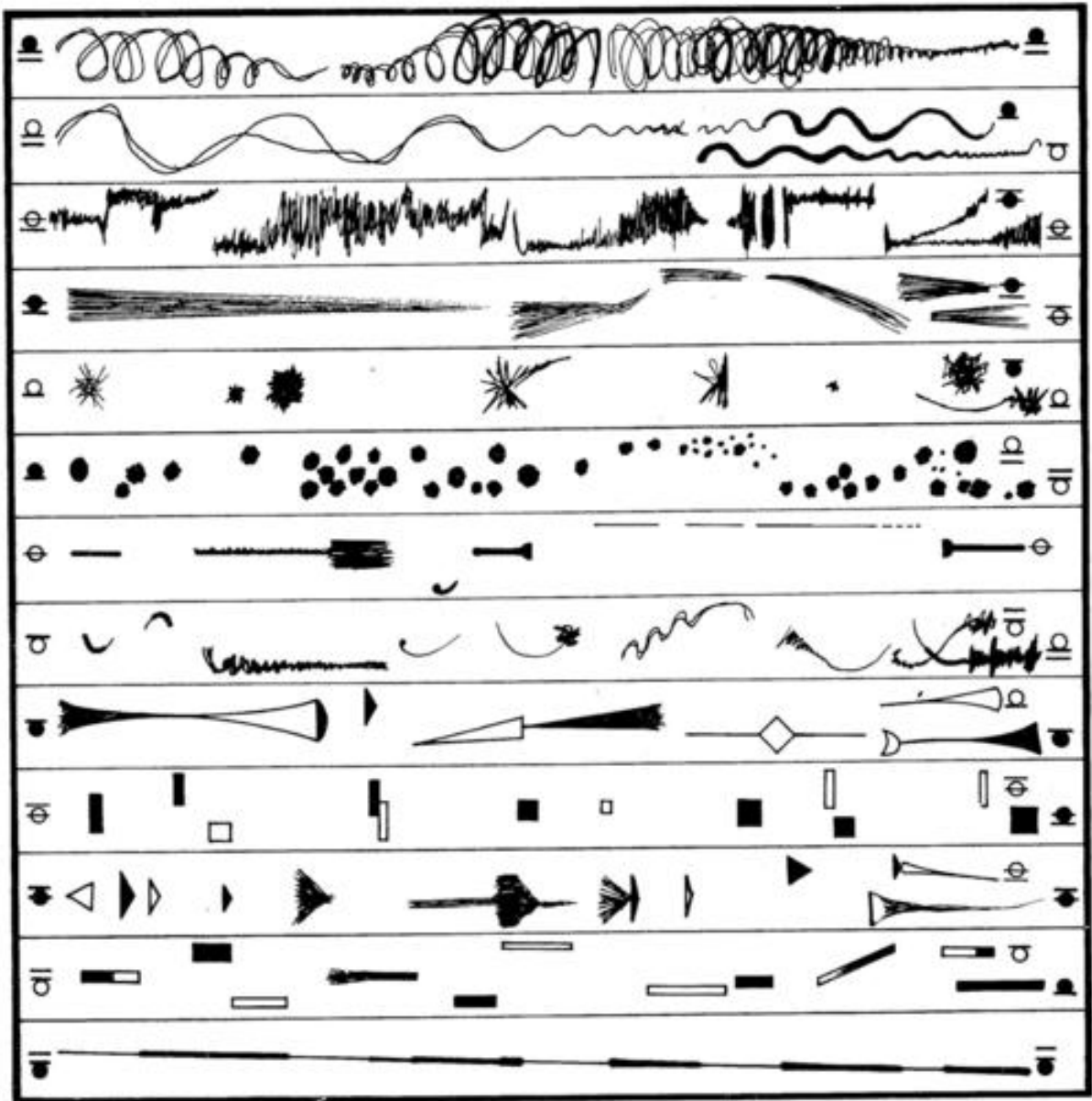
John Cage, 4,33''



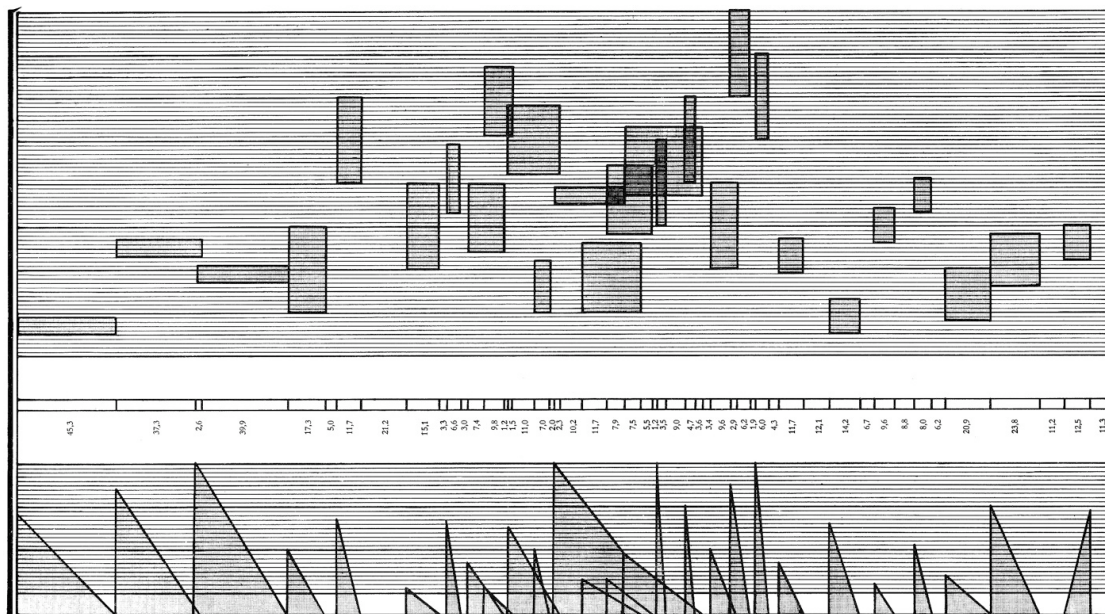
Jaroslav Stastny (Peter Graham)

Dispersion

Anestis Logothetis
64/2



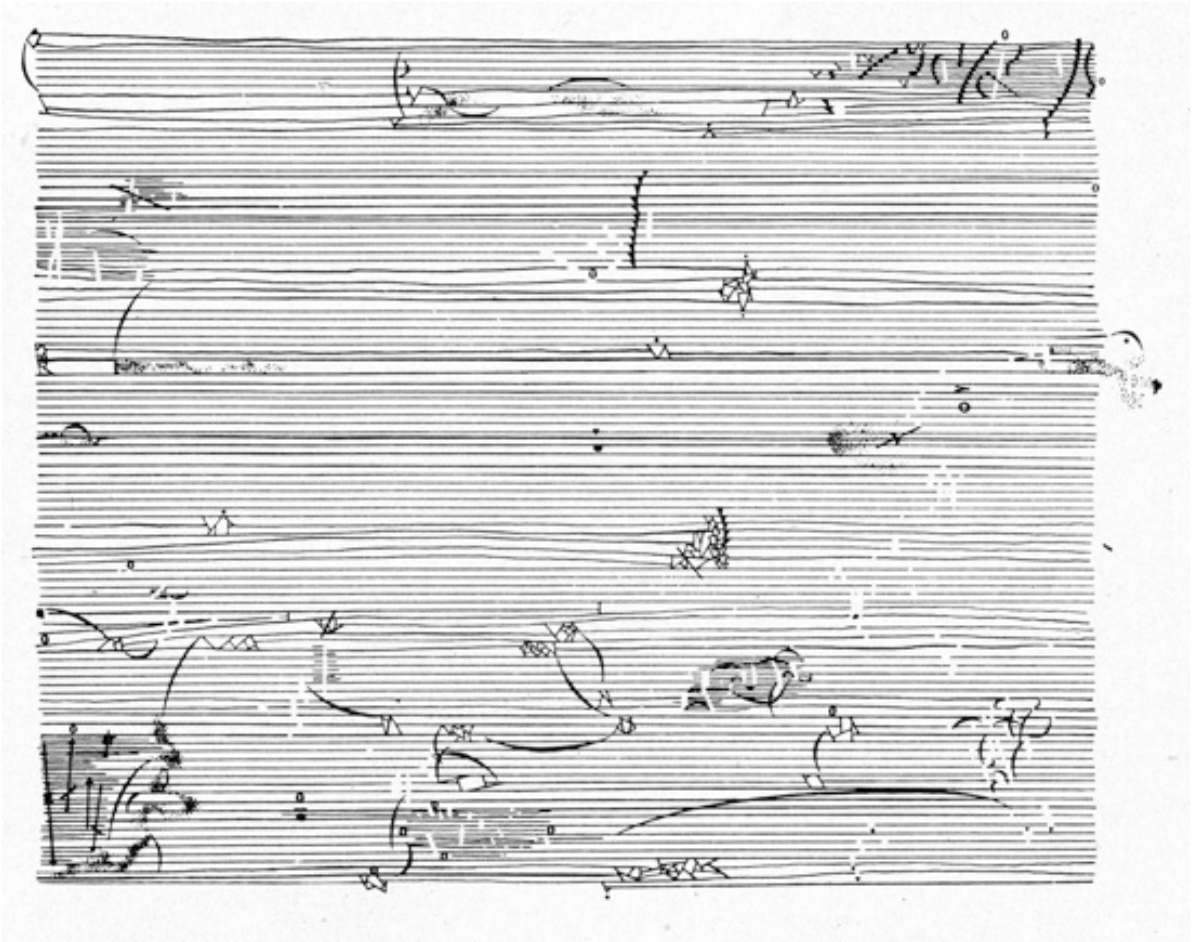
Anestis Logothetis, Dispersion



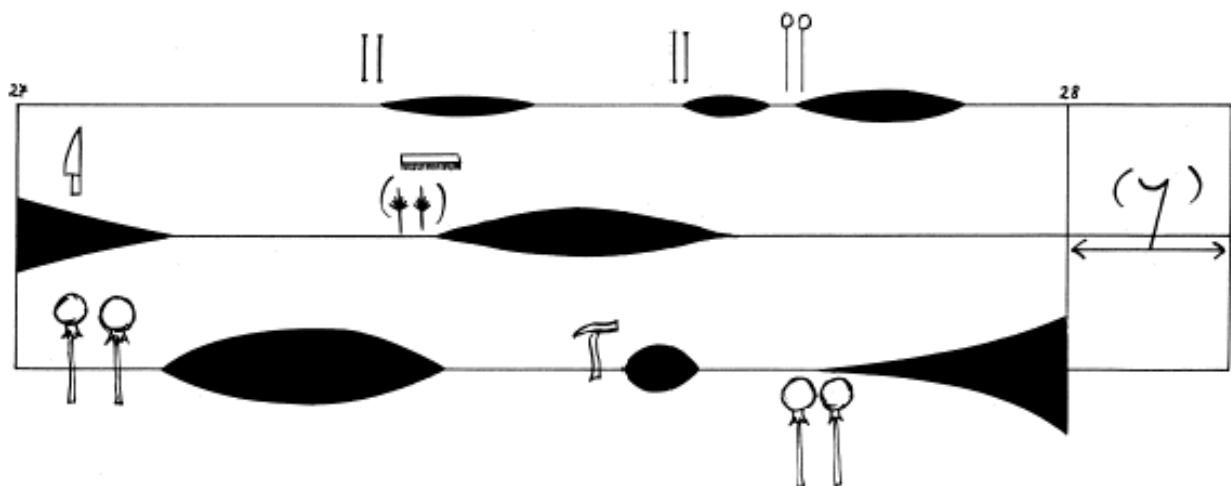
Karlheinz Stockhausen, Studie II, p.15, 1954



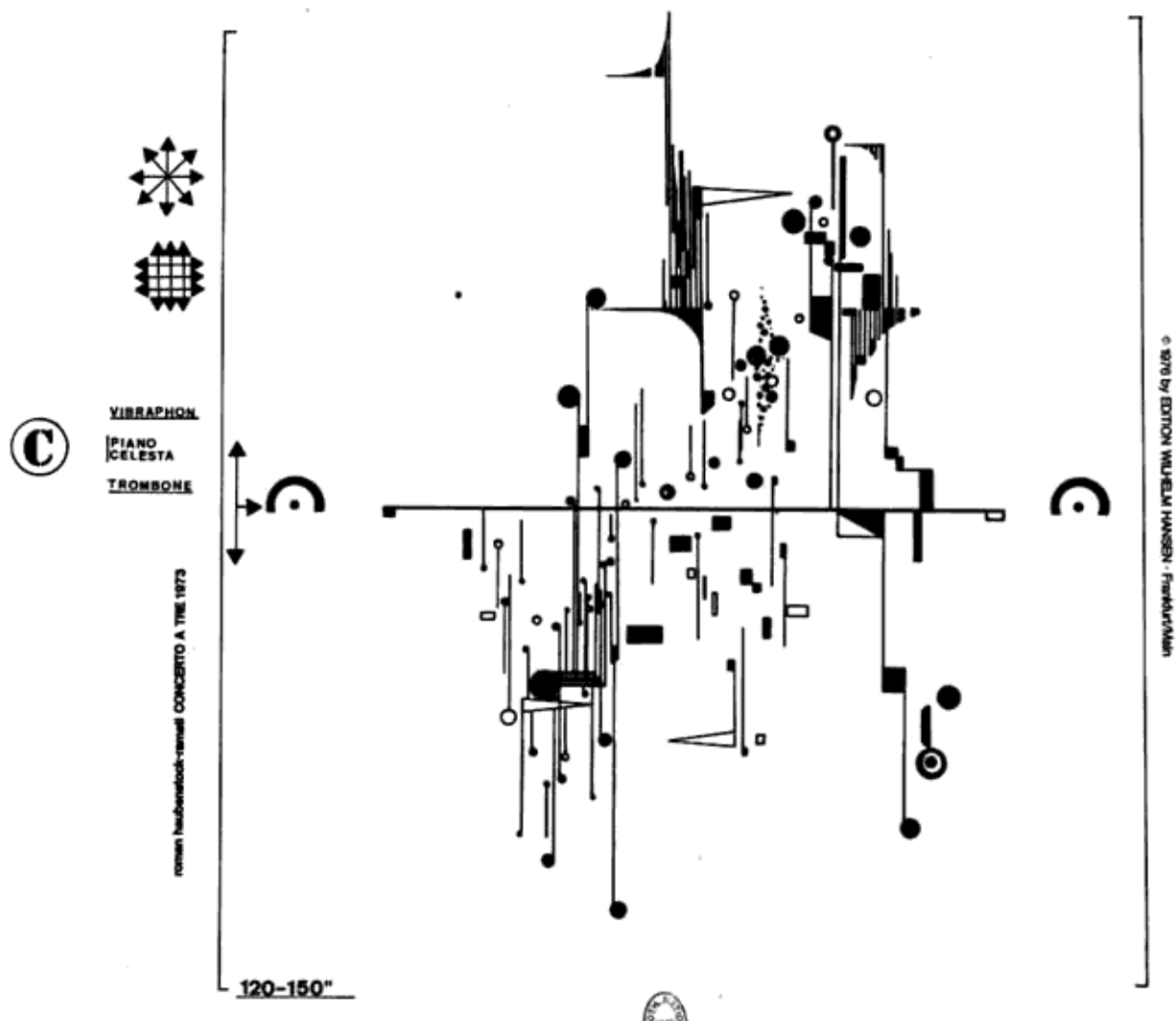
Milan Adamciak, Cycle for four,



Sylvano Bussotti, Piece for David Tudor, 1959



Ladislav Kupkovic, Maso Kriza (The Meat Crisis), 1961-62



Roman Haubenstock-Ramati, Konstellationen, 1971

STUDY FOR VIBRATION

tempo—possibly slow

play on strings

[8 bass]

duration

pedal

keyboards

pizzicato

strong

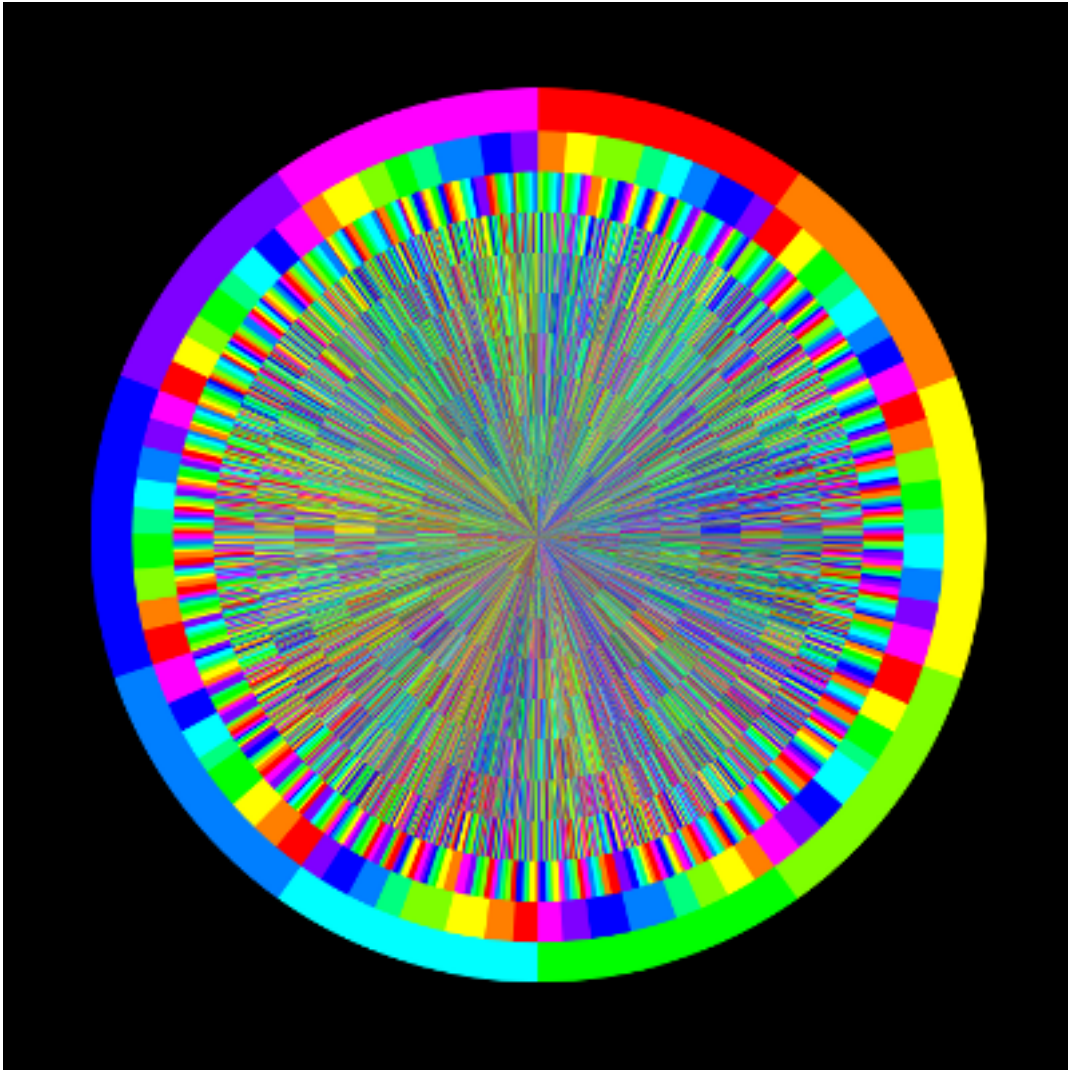
soft

slide with finger

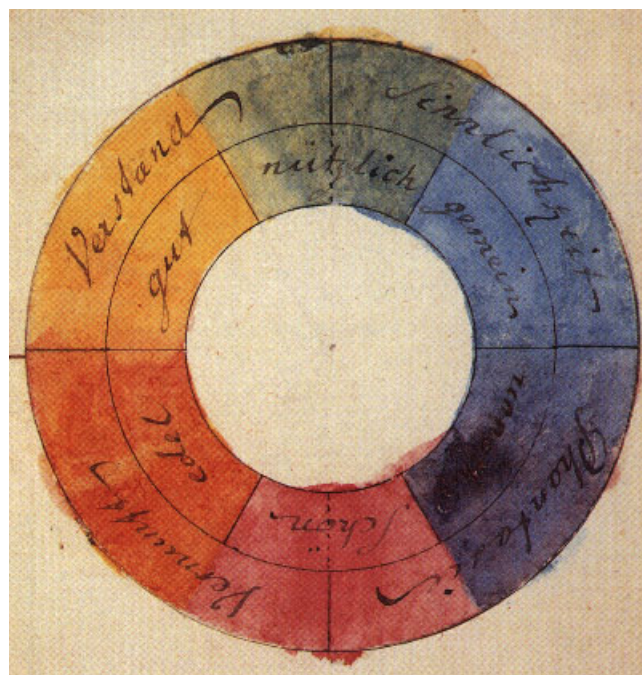
glissando with wood, rubber or metal

continuous glissando with rubber or metal

Toru Takemitsu "Corona for Pianist(s)"



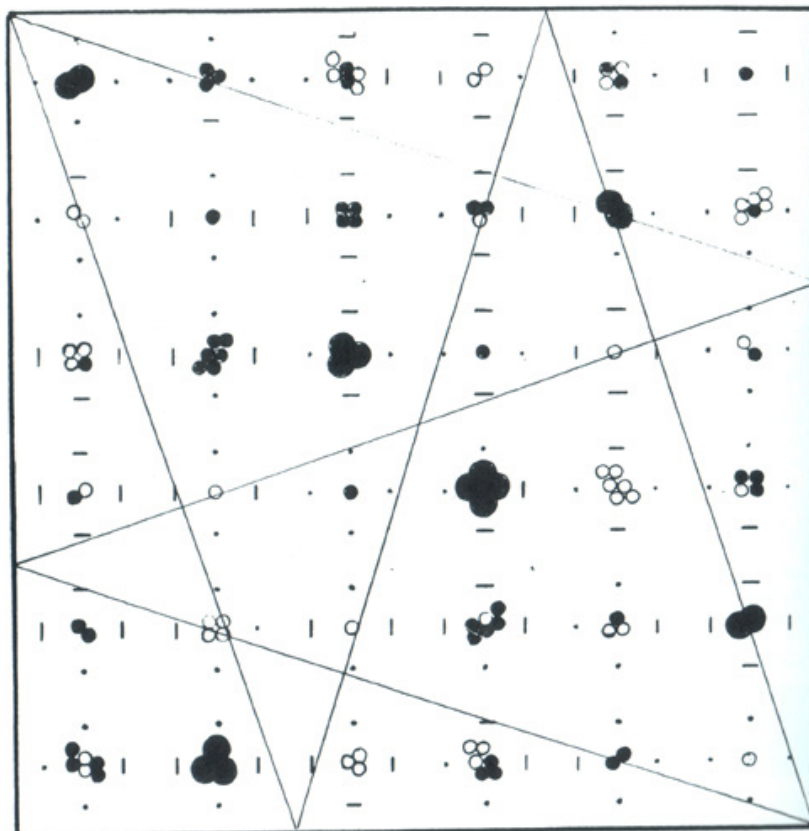
Milan Guštar: Abacus, 2002



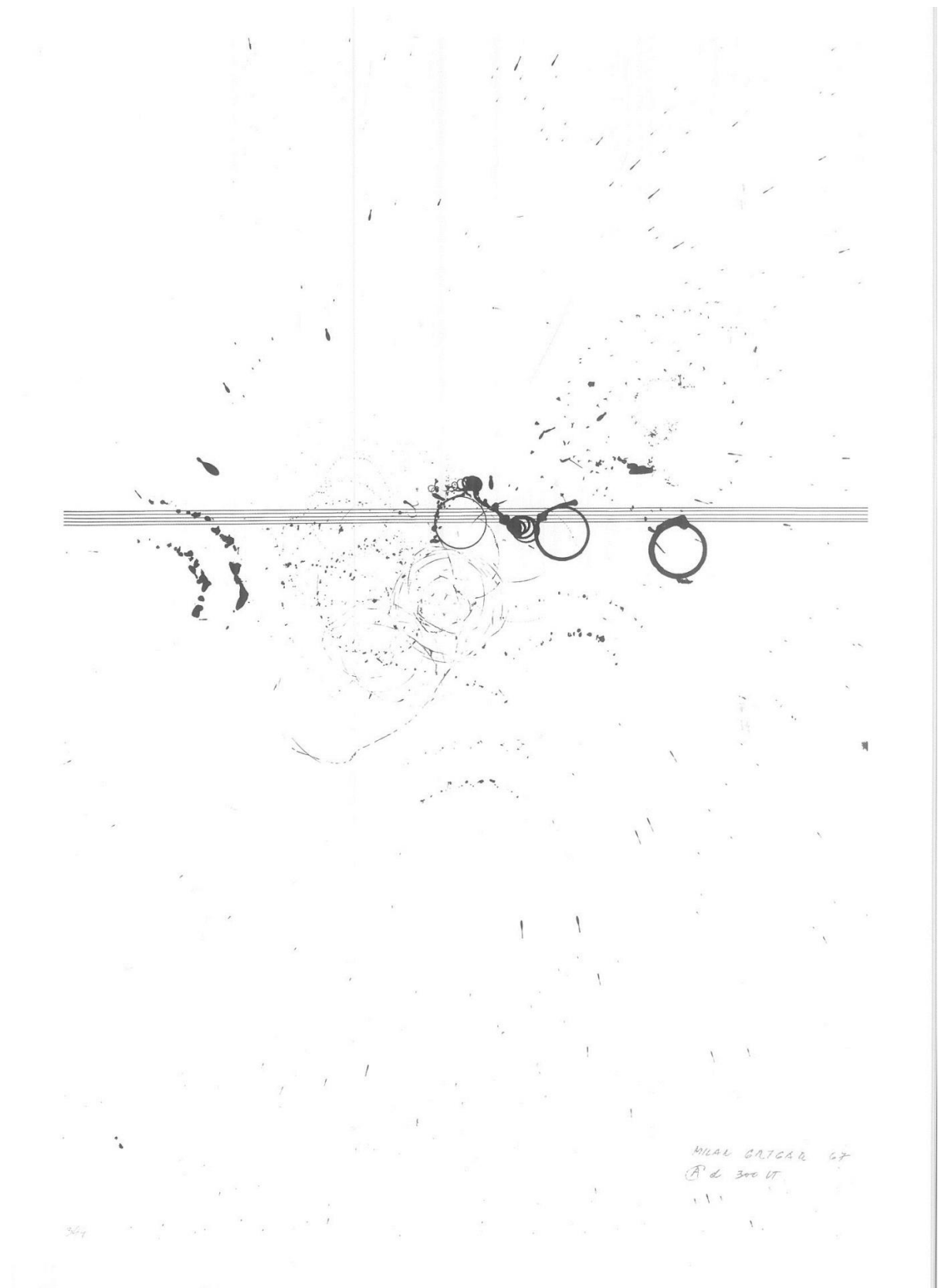
Kleurenwiel, John Wolfgang von Goethe



Marcel Duchamp, Partition for "Erratum musical", 1913



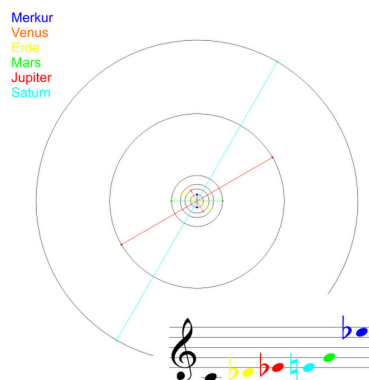
Udo Kasametz, Timepiece for a Solo Performer, 1964



Milan Grygar, Acoustic Drawing Ad, 1967

Harmonia Planetarum omnium seu universales Generis Mollis.					
Ut h concordet.			Ut c concordet.		
In Tensione Gravissima.		Acutissima.	In Tensione Gravissima.		Acutissima.
Sc.	Pr.	Sec.	Sc.	Pr.	Sec.
de Gij	379.20		de Gij	379.20	
b Gij	284.32	292.56	c Gij	316.5	325.26
g Gij	237.4	244.4	g Gij	237.4	244.4
de Gij	189.40	195.14	de Gij	189.40	195.14
Ven ^o de G	94.50	97.37	Ven ^o de G	94.50	97.37
Tet. g iij	59.16	61.1	Tet. g iij	59.16	61.1
b iij	35.35	36.37	Mars g iij	29.38	30.31
g iij	29.38	30.31			
Jup. b j		4.55	Jup. c j	4.56	5.5
h b	1.13		Saturn. G	1.51	1.55
h G	3.51	4.55			

Johannes Keplers, Harmonices mundi, part 1, (1619)



Johannes Keplers, Harmonices
Mundi, transcription,
Wikipedia

Extended Notation

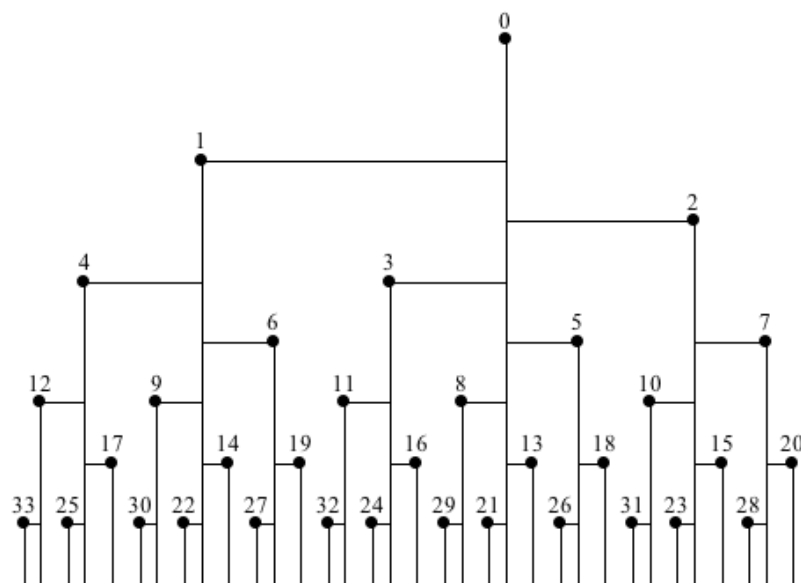
My approach vibrates between two worlds. One direction is to create visual poem that will steer the interpret into some mood, some emotional state of mind, an island of the subconscious presence where your brain starts to generate the tones through your hands. The second variant is based upon the tendency to create experimental notation that will be simply repeatable, as much as possible. Classical music notation was created for this purpose, to repeat. My approach is to create the bridge between these two parallel islands. Create the visual poem that can be repeatedly interpreted but slide to more concrete shapes and forms to be understandable and echoed.

Inspiration From the Nature and the Computation

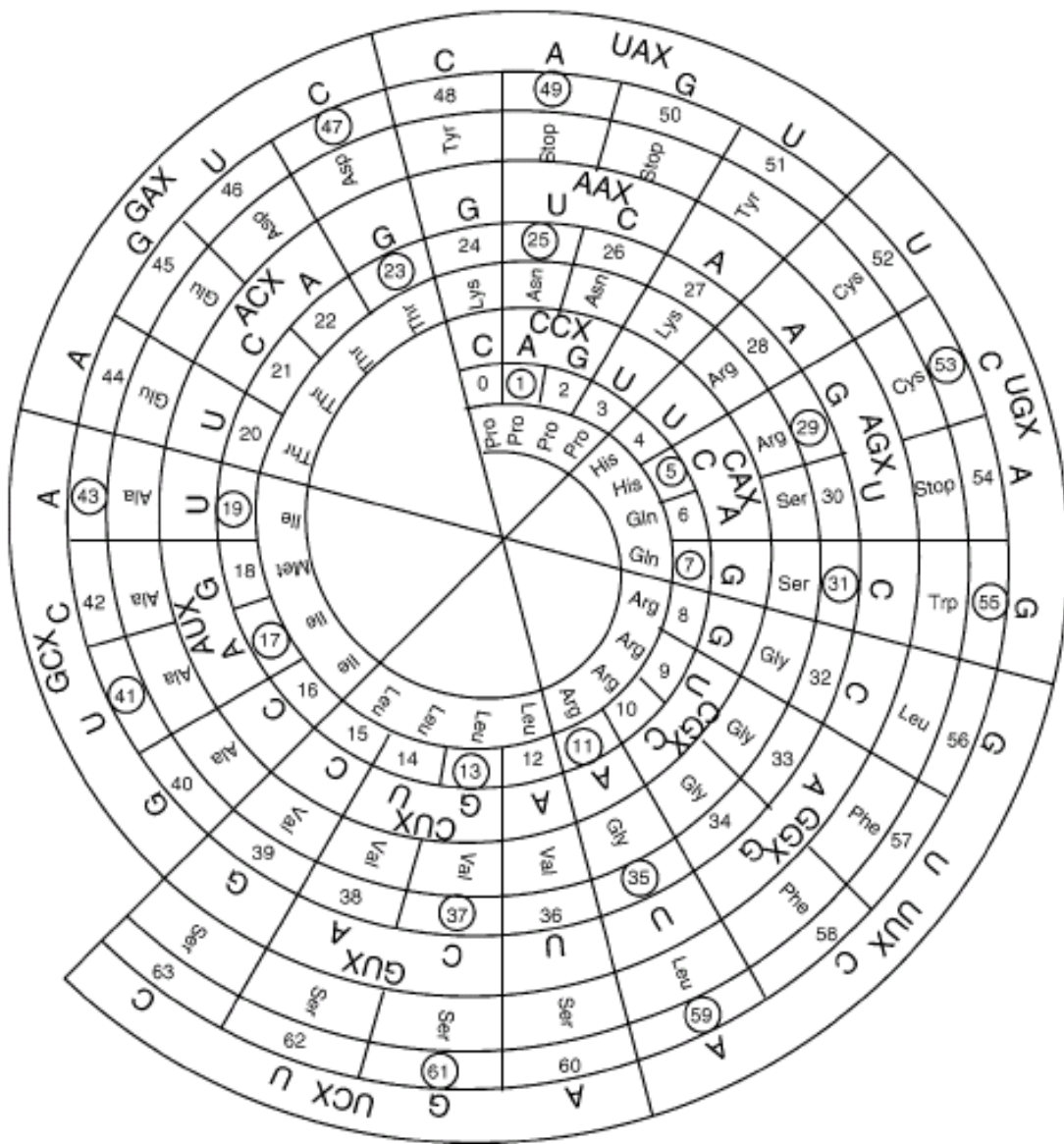
Science in mind, mind as a reflection of nature, harmony and uniqueness, this is the base of this experiment. There are several parallel processes emerging through the sound piece. When we look on the history of 20th century music, we can see burst of ideas deconstructing and reassembling the formal language. By shading off the conceptual attitude in creative processes we open waste empty spaces good for loosing the mind, but also for reestablishing the new grounds. As in *Thousand Plateaus* of Deleuze and Guattari, or some other theories coming out of the notion of the philosophical parallelism, I would like to propose several different approaches that helped me to grasp the sound dimension of the nature's language.

Fibonacci's Sequence

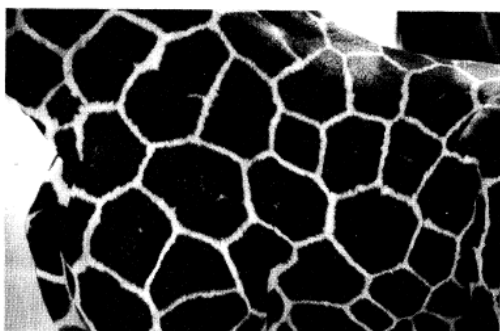
At the base ground of my explorations there are patterns. The recognition of patterns is never-ending inspiration, but how to integrate and how to process it. Thanks to great mathematicians and astronomers of the past, we have several theories, that can help us to translate the natural patterns into some shapes or number flows. These could be later used as an input into the variety of functions. First of all, I would mention Fibonacci's sequence. It is the simplest sequence of numbers that could be counted "*ad infinitum*". It became the base not just for the theory of natural patterns organization, but humans subsequently used this sequence also for the basic aesthetic composition rule named the golden ratio. Now we can see widespread of theories and analysis that works with this rule. I will use it in my composition as well.



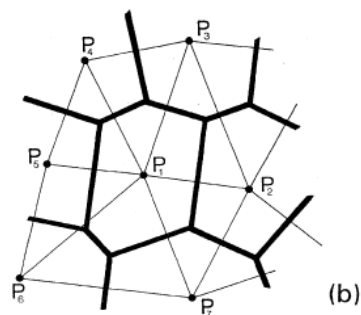
The Fibonacci sequence division



DNA codons, arranged in 16 groups of four along the number spiral, in sequence of their 4-ary Gray-code equivalents, from CCC=0 to UCC=63. Numbers on the prime cross are circled. Amino acids coded for by each triplet are shown alongside of the Gray code numbers. (Khandelwal, Sahni)



(a)



(b)

Analogy of giraffe pattern and Dirichlet domains.(a) side of a giraffe (b) Dirichlet polygon (Khandelwal, Sahni)

Titius-Bode's law

Another great formulation that I will use is Titius-Bode's law. It sounds like magic to people unaware of this principle. It was discovered in 1766 by Johann Daniel Titius and published in 1772 by Johann Elert Bode. Another example that not every discovery is assigned to its inventor. Similar to the Fibonacci's sequence Titius-Bode law works with sequence of numbers and was used for the predictions of planets distances. So is it that magical rule that Pythagoras coined as the "*Music of Spheres*"? Probably yes, but how could this work? These two theories are perfect evidence that god speaks math and science is something like religion or at least magic school. Without humor we are witnesses of absolute miracles that after some time became common. If we imagine that not so far ago we believed, that planet is flat, we are now uncovering the basic principles of life, mass, or creation of our universe.

The original formulation of Titius-Bode Law was $a = (n + 4) / 10$, where $n=0,3,6,12,24,48 \dots$. The modern formulation is that the mean distance a of the planet from the Sun is, in astronomical units ($AU_{\text{Earth}} = 147.597 \cdot 10^6 \text{ km}$) $a = 0.4 + 0.3 \times k$, Where " k "=0,1,2,4,8,16,32,64,128 (sequence of powers of two and 0). The following table compares the law's predictions with the actual distances, where the addition of Pluto is a modern modification.

Planet	n	Titius-Bode Law	Semi-Major Axis
Mercury		0.40	0.39
Venus		0.70	0.72
Earth		1.0	1.0
Mars		1.6	1.52
asteroid belt		3.0	2.8
Jupiter		5.2	5.2
Saturn		10.0	9.54
Uranus		19.6	19.2
Neptune		-	30.1
Pluto		38.8	39.4

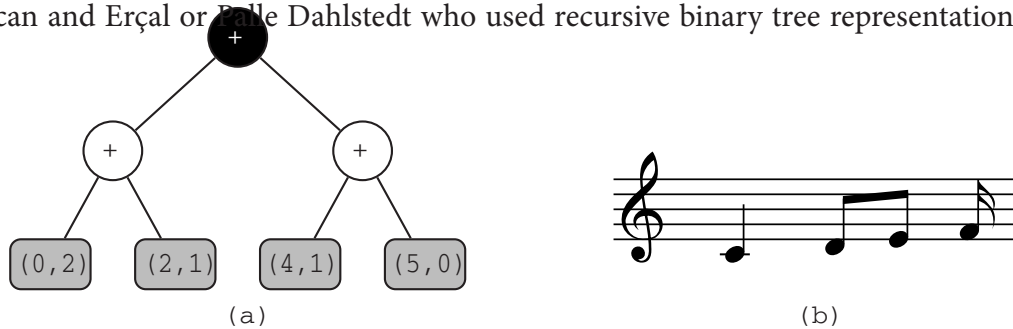
Genetics and Chemical Structures

Another great influence for my composition are structures defined by chemical compounds or generated by algorithms inspired by evolutionary processes. I situated it in one paragraph also when it might look like a totally different approach and different way of processing the data. But as we could see in chapter about the Fibonacci's sequence, we are still moving on a similar, maybe collateral platform. There are many parallels between the genetics, mathematics or chemistry in general. I would particularly mention just two of my own. The first is using genetic algorithm to generate the rhythmical and tonal structures, basically called contours, the second is to use chemical structures as formal guide, where tones override the compounds. Steve Roach created in 1983 famous ambient album called "*Structures from Silence*" that I actually found more accurate than tons of descriptive words.

Now, I would like to widen the insight into the genetic algorithm, as it is one of the main vehicles that carries this experiment. In my variation of genetic algorithm I used process analogous to natural evolution that help me to evolve the tone structures. This artificial evolution uses basic facilities of GA. These are reproduction, mutation, and genetic recombination. Main pupose is to "evolve" the harmony, contour and the rhythm. Using the evolutionary computation in music is

not any new approach. “Evolutionary Music Composition (EMC) is the application of evolutionary computation for the task of creating (generating) music. In EMC systems, the genotype is typically binary (GA) or tree-based (GP). The phenotype is the music score – sequences of notes and rests that make up the composition.” (Jensen, 2011)

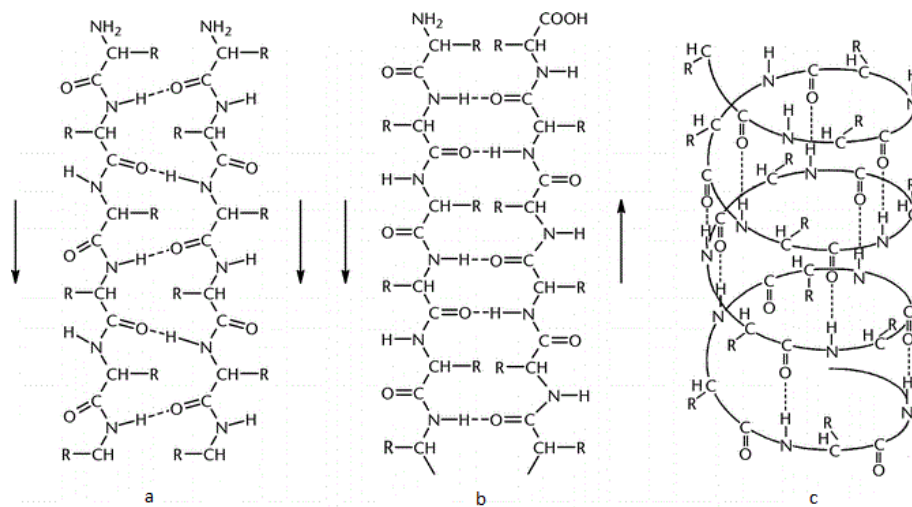
One of the first experimentators were Horner and Goldberg in 1991, Johanson and Poli in 1998, Özcan and Erçal or Palle Dahlstedt who used recursive binary tree representation to create



An example tree genome (a) and the resulting music score (b). (Jensen, 2011)

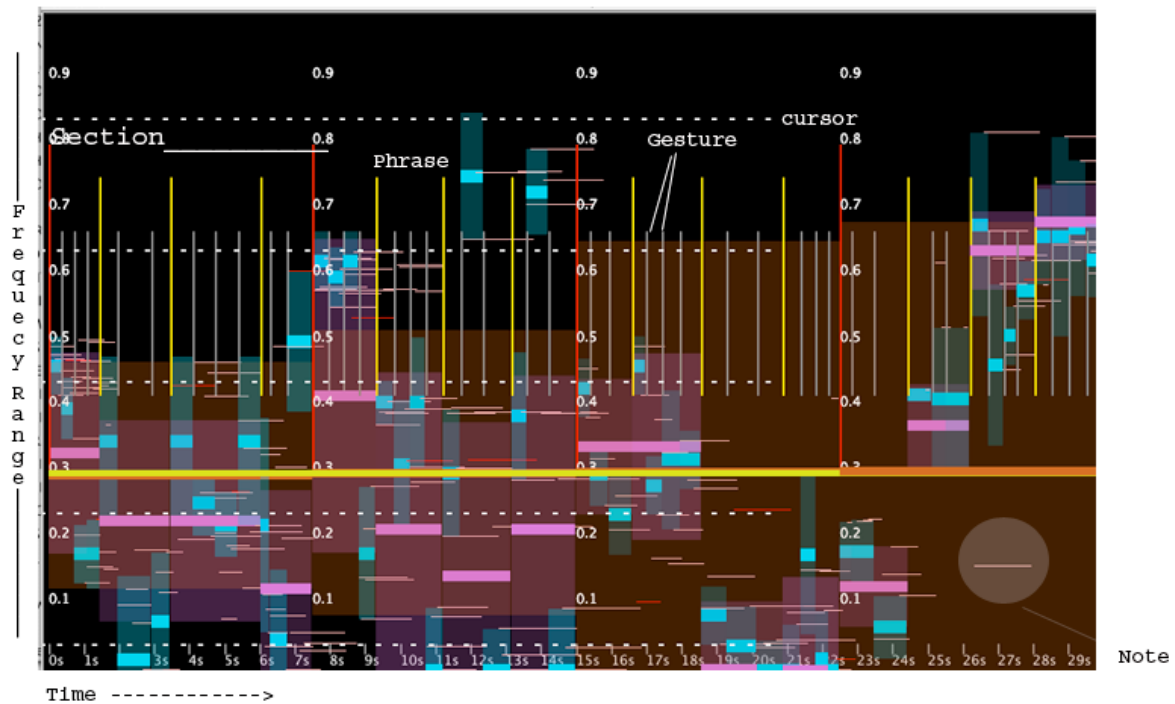
complete piano pieces. Thanks to these artist or better engineers, the genetic algorithm has slowly settled in the context of music composition. My own approach here is to use genetic algorithm to generate tonal sequences. I am shifting the fitness, mutation and probability to evolve the scheme into another patterns that are then used as tones.

Chemical structures are another great source of inspiration, it is upon every musician which



Secondary structures. a: parallel beta sheet, b: antiparallel beta sheet, c: alfa helix. (Lorenzen, 2013)

part or what type of chemical structure to use. If you choose DNA as your source, you have 22 proteogenic amino-acid R-groups that forms the proteins. If you assign pitches to these amino acids you can create variety of sequences resembling serial music. If you go more deeper into proteins you have primary, secondary, tertiary and quaternary structures that forms it, so you can create varieties of variations.



Mock-up of a score generation. One section in length. This example clarifies how certain aspects of the score appear. Large blocks indicate bandwidth of a gesture, phrase, or section.. (Esler)

Theory of the Computation

Another principle that influenced my way of thinking is theory of computation and computational formal logic. My monadic approach to the element creation is inspired by simple programming language - Prolog. It is language of the logic consisting of several constructors. One of its components is the atom, which I used as inspiration for creating simple basic elements. In my variation, it is composed from a sequence of tones, rhythm definition, or just verbal description of elementary movement across the scheme. In Prolog, atoms are words, in my notation, atoms are not so strict and could be combined into compounds. Again inspired by the Prolog, I built compound schemes from Atoms cross-influencing each other. As a tool I am using the program MAX/MSP that use visual objects to represent the code. With some hyperbole we can call it atoms, too.

The Symmetry and the Contour

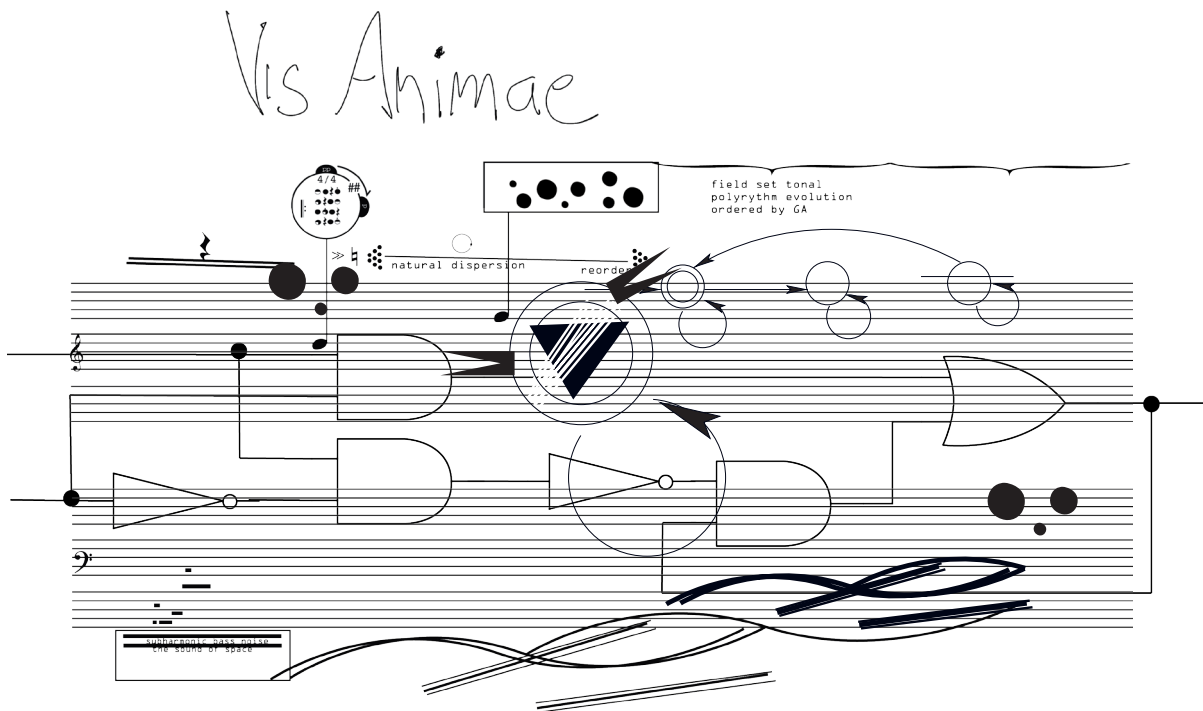
So is it the symmetry that creates the feeling of beauty, or is it its losing? I think that way how we deal with the symmetry varies through cultural habits and can be differentiated inside one small subculture as well as across the big main stream official culture. So does the worshipping of stable unchanging rules in aesthetics as we know it ended? Or it is pointless question, and we are just watching the evolution through the magnifier? We now see, that symmetry and contour of composition are so variable, that we are no longer able to grasp it. This undefinitiveness gave us great possibilities and freedom in what we want to do. It is just matter of finding the right audience to present something that is worth some attention, but unaware of all of this principles we are still somehow subordinated, whether we want or not, we feel and think. It is harmony that carries the emotion, symmetry and contour just shape our ideas.

Composition Vis Animae

Elements that are used to build this notation comes as inspiration from different studies mentioned in this text. I tried to avoid mindless copying of things that are not somehow connected to my own research. Sometimes, when you reduce the geometry, you come to the basic shapes like triangles circles and squares. As I wrote in paragraph about the computation, I named these basic elements Atoms. Atoms varies by its content. They are divided into three main groups. The first group are circle based atoms. These are connected to instructions that describes the rhythm or is somehow connected to time base. The second atom is described with help of square shapes and they contain information connected to fields. Fields can contain recordings, or some algorithms that are connected to polyphony, harmony or contour movement. Last shapes are triangles. One could assume, that thanks to its sharp vertices they can contain supplementary information that is important for that region. Triangles may be combined with variety of symbols that if not recognizable must have some introductory description. Symbols are free to input into any element.

In spite of these three basic shapes I will use several different elements that are used for better visual imagination of the music, like sine waves, multi-hashed structures, blobs, algorithmic structures or other elements accompanying the classical music notation scheme. I am also combining classical elements with new ones, or classical elements together to form new signs or better sign groups with combined or progressive denotations.

Inspired also by graphic notations introduced earlier, I would like to use some elements just for enforcing the poetic parallax of form. I won't allow total perplex or confusions, but at some point a little bit of chaos could widen the emotional patterns of reception. Time base is written in seconds, minutes, hours, or in a classical way. I won't use BPM coming from computer programs. Another factor are the colors. I would use the colors for differentiation and also for variation of elements but they are not necessary in primary composition. Instrumentation is described by using the symbols. Voices and subharmonic frequencies are free to describe. Into atoms we can write also simple logic and programming operators and sentences.

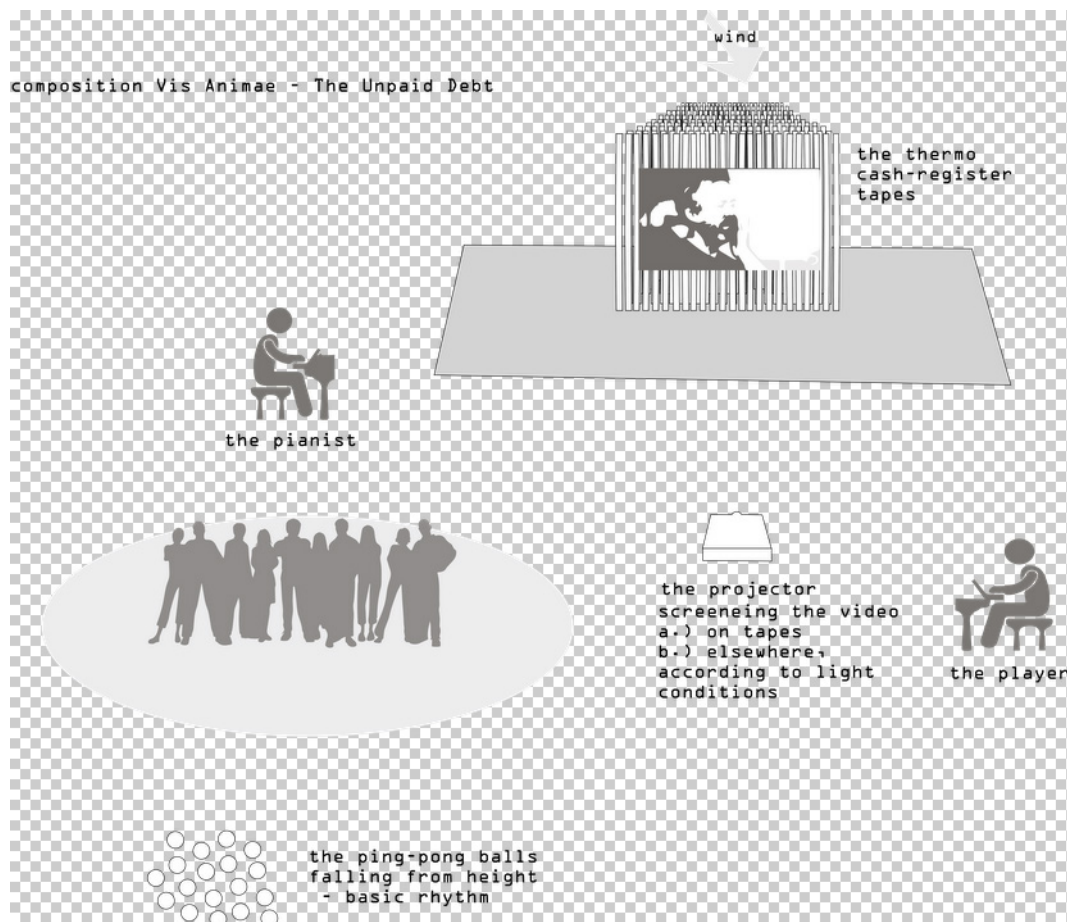


Example elements from the composition Vis Animae

Vis Animae – The Unpaid Debt (elaborate description)

Performance based on the Vis Animae composition has suffix “The Unpaid Debt”. The realization of this piece will occur as an improvisation between two musicians and few objects. I don’t want to describe the composition in a details because of possible curiosity loose, that is always essential substance of every performance. I can unveil just several proportional details and maybe the realisation of the object. The video will also be added in a transferable form after the performance on the same medium like the composition. Composition will be also part of the performance in printed form.

The unpaid debt is work about something that is touching everyday life. It is experiment on psychological and also on musical level. The object from the cash register bills will take the role of an instrument but will also stay as an object denoted with its own significance. The video will add the psychological human dimension. Raw aggression versus love. Everyday struggle of every human being on the background of floating debt. How it is connected with natural inspiration and processes used in composition? Everyone should answer for themselves. I tried to be as simple as possible to be readable, but I refuse to be descriptive. Neither in paper, neither in work. In my version of reality, art is more process and result than the artefact itself, so am I unsuccessful, and continually without money, but not poor, neither miserable.



Vis Animae – the Unpaid Debt (Performance, Extended Notation, Video)

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