

IM-OS

Improvised Music – Open Scores

Issue 17, Summer 2026

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Proposals from readers are invited

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EDITORIAL

Issue 17 gathers together a set of contributions that, in different ways, return to a persistent question in free improvisation and open form composition: what kind of “order” emerges when control is loosened, redistributed, or deliberately made unstable?

Across these pages, anarchic ideals and practical realities are held in productive tension. Carl Bergstroem-Nielsen opens a discussion on the limits and possibilities of musical “anarchy”, where equality, freedom, and responsibility coexist uneasily with the traces of structure that any score, instruction, or game inevitably introduces. The question is not whether hierarchy disappears, but how it mutates—how it is softened, relocated, or temporarily suspended in favour of shared attention and negotiated action.

This issue also continues IM-OS’s ongoing interest in the shifting boundary between notation and instruction, particularly through graphic and text-based scores. The new IM-OS SCORE EDITION highlights works that foreground visual, procedural, and open-ended approaches to composition. Here, the score is less a fixed object than a situation: something to be entered, interpreted, resisted, or collectively re-written in performance.

My contributions extend this line of thought into adjacent territories of perception, interpretation, and distributed agency. Whether through swarm-like models of musical emergence or through reflections on graphic notation as a form of “aural memory”, the emphasis remains on mediation: how sound becomes meaning through visual, conceptual, and social processes that are never neutral and never fully resolved.

Taken together, the materials in this issue suggest that “openness” in music is not a single condition but a field of practices—sometimes structured, sometimes anarchic, sometimes computational, sometimes deeply human. What unites them is not agreement, but a shared willingness to treat uncertainty not as a problem to be solved, but as the space in which music actually happens.

We hope this issue continues to provoke reflection, disagreement and, most importantly, new ways of listening and playing within that space.

Joe Scarffe

HOW ANARCHISTIC ARE WE? OR, HOW DO WE PRACTISE OUR ANARCHY?

by Carl Bergstroem-Nielsen

In free improvisation participants are “equal”, there are “no hierarchies”, and “no sound is wrong”. And on the other hand, participants are invited to listen carefully to the others, to think of the common musical good. This sounds surely like a description of an anarchic community. But one could also just call it informal - like the way friends and families may see themselves. There is both room for initiatives and a shared responsibility for the community.

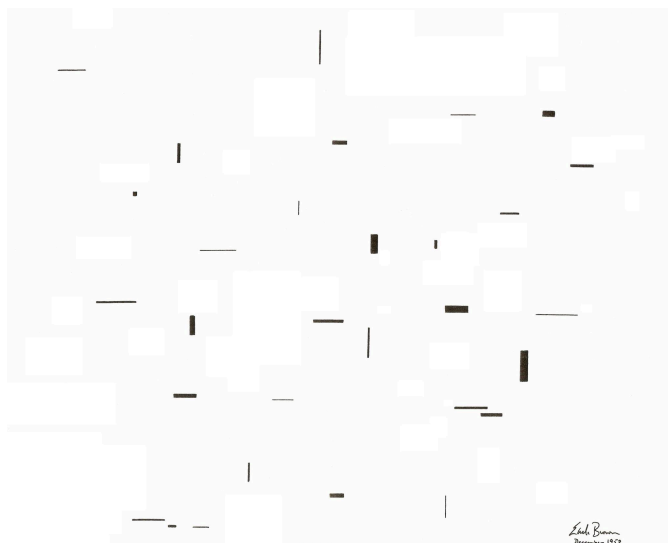
Improvisation in the context of music pieces involves some hierarchy - the composer has determined something. Or has (s)he?

Some pieces propose *suggestions* instead of commands. As is the case with this statement from the composition *Minima* (1970) by Max E. Keller:

These instructions are valid only in case the agreements can be realised in a reasonably uncomplicated way.

So simple. Do we think enough about this and similar possibilities? It may not just consist of stating that one could deviate from a seemingly fixed instruction, but also how musicians might possibly adjust to the situation. Ensemble size and desired duration may influence how many given elements the individual musician should play, just as one example. One could also ask the musician an open question. Or ask to choose between alternatives. In fact, when we abandon traditional exact pitch notation, ambiguity easily arises. The more composers think in terms of *textures* and *parameters* and *dialogic actions* instead of in traditional elements the more natural this can feel.

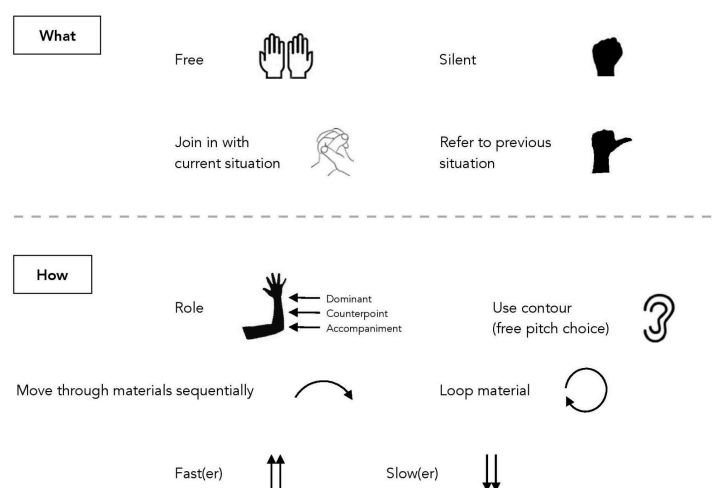
A classic way to avoid being too definite in performance can be for the composer to just not make any statement concerning what to do and how. Many free-looking graphic notations are created this way, but not all. For instance, *December 1952* by Earle Brown has detailed instructions. Even if they do not pin down what to do, serious reflection must occur. Fluxus text scores may do something similar, as for instance “*this piece is little whirlpools out in middle of the ocean*”, being the entire text of *La Monte Young’s Composition 1960 #15*. Both by proposing a metaphorical picture and by using language in a poetic way one can avoid being too definite.



Earle Brown: *December 1952* from *Folio*. © Earle Brown Music Foundation.

Beware of just playing it from immediate impressions - read the instructions!

Moss Freed is a composer who has taken a radical standpoint for his *Micromotives* series. Aligning his compositions to the needs of improvisers were important throughout the portfolio presented in his PhD. He declares: *“Improvisation must be the default scenario in performance”* - *“Players must always retain choices regarding when to play, what to play and who to play with”* and *“There must be no obligation for performers to do anything at any time”*. His solution is to state a catalogue of possible actions, which are to be used or not ad libitum. But most presumably, they need to be at least studied.



Excerpt from the series “Micromotives”, in: Moss Freed: Composing for improvisers: information flow, collaborative composition and individual freedom in large ensembles. PhD from Hull University 2019, Appendix 8. <https://hull-repository.worktribe.com/output/4222576>. According to the general instructions, the gestures can be obeyed or not for the individual musician.

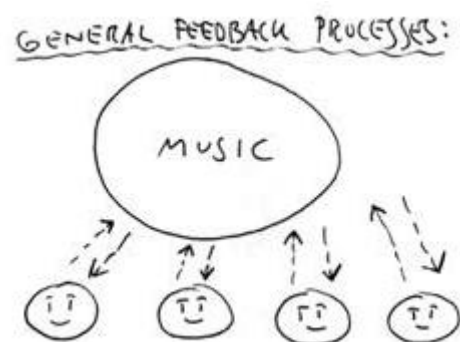
Let's take a look at *group processes*. *Cobra* by John Zorn is a so-called *game piece*. Without going into the intricacies of this piece, it can be said that there is a conductor, called a "prompter", who can react to initiatives from the musicians and choose which to follow up. And a special feature is the option of "guerilla strategies" in which players can seek to go contrary to the prompter. As apparent here, there is, like in so many games, an element of conflict and competition. Anarchy is not just idyllic!

The ideas and wishes of individual players can be diverse indeed. Emotional outlet, building up one's own continuity in playing, personality, experience in improvisation and how well one knows each other and not, very different orientations in music backgrounds and more may contribute to possible clashes. Unpleasant clashes may be counteracted by curiosity and empathy and possibly become funny and productive. It is encouraging at this point to think of the success of Derek Bailey's Company Weeks for invited free improvisers which took place annually from 1977 and during 16 years more. This meeting celebrated exactly encounters between musicians who did not know each before.

Composer Alexis Porfiriadis holds the opinion that not individual details during playing, but the entire *overall form* is the decisive element for letting musicians feel ownership for the piece they play. Therefore, his scores usually demand a common discussion by the group concerning the details of how to arrange it. Neither persons outside the group nor random procedures can do justice to this. In my experience, it works indeed - what we do then can feel "familiar" to us in a special way.

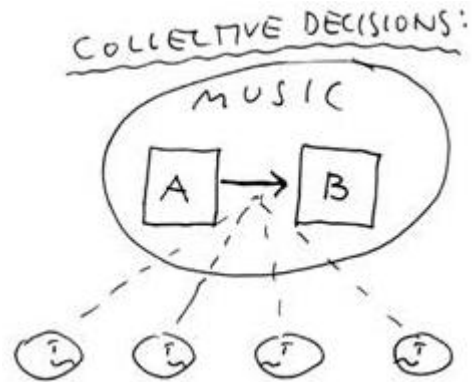
For my own compositions, I like to challenge the limits of this view - to imagine situations in which collective decisions are nonetheless possible also during playing.

The figure to the right shows a rather standard situation: players individually interpret what could be a graphic score. They listen currently to the resulting whole and how it develops. One can call the situation a collective one, however: adjusting to the musical common good is not focused as such, but connected to individual observations along the way.



Group processes - the "standard" situation.

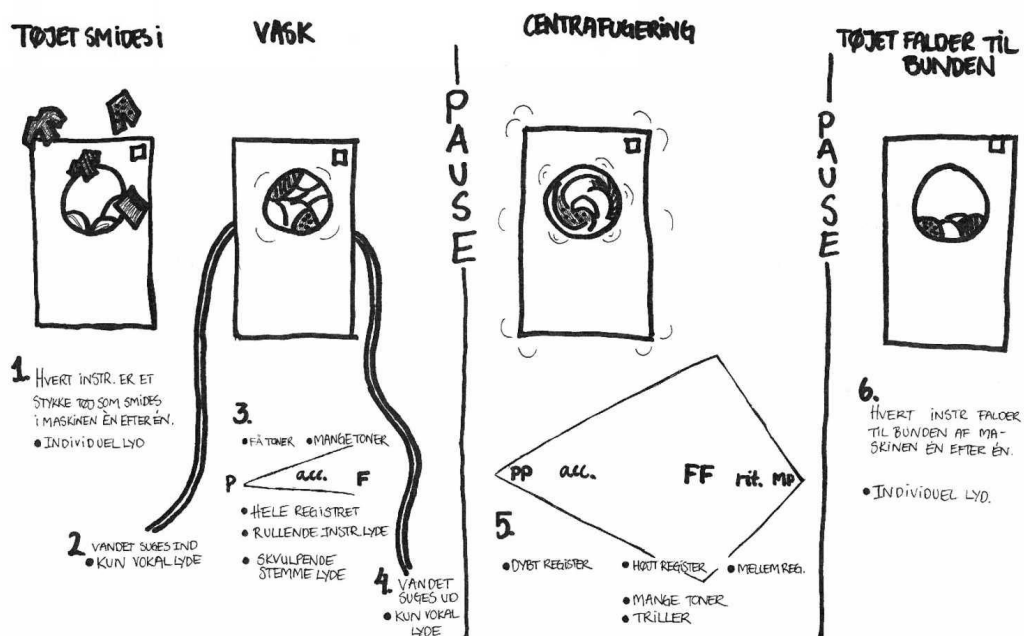
In the model to the right, there could be two contrasting main parts, A and B, and a transition from one to another. This could be a more focused way, worthy of the designation collective decision. With a general pause between the parts it could be possible to have a sudden, collective decision action for starting the next section - provided no one tries to conduct it. Conducting would of course be an easy way out, but it would take away the tension and be more mechanical. *decision*



Group processes - collective

In the below example from a student of mine, there are pauses between the main parts. Musicians have the task to end each part - this could be a challenge encouraging disciplined actions to do so avoiding the cliché of lengthy diminuendos.

KULØRT-VASK 60° Margrete Bach Madsen 2002 Impro. oplyg intuitiv musik.

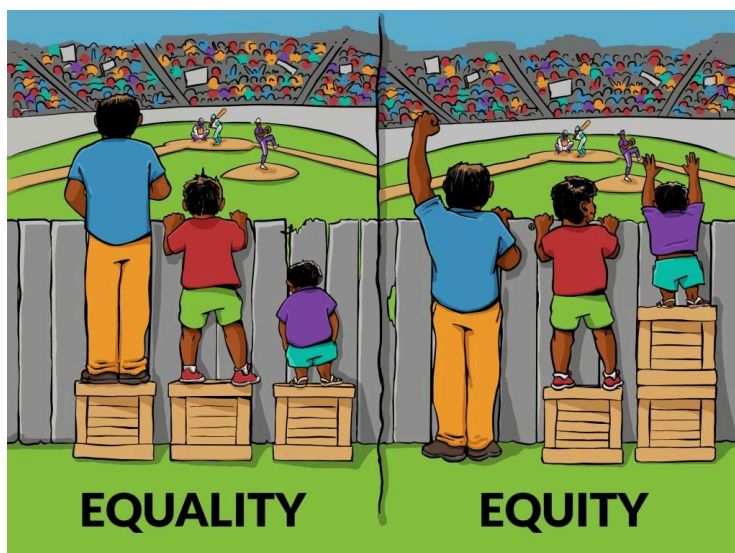


Margrete Bach Madsen: Colour wash 60° (2002)

Imagine a social situation in which someone tells a joke and there is common laughter. This is truly a collective, spontaneous action. Indeed, something similar can happen in improvised music. There is an unexpected element in the joke - so shifts in the music may be a first requisite if one is hoping for this as a composer. Improvisers appear persistently to talk about "having fun" when the music succeeds. Composing fun directly is of course not imaginable, but just as humouristic literary and theatrical genres exist, we should have a chance.



Group processes -
spontaneous agreement



Source: Interaction Institute for Social Change. - Artist: Angus Maguire

Read more:

Max E. Keller: *Minima* - <http://intuitivemusic.dk/iima/mk.htm/>

Earle Brown: *December 1952* from "Folio". N.Y. (Associated Music Publishers, nr. AMP 96 124-3), 1961.

Freed, Moss: *Composing for improvisers: Information flow, Collaborative Composition and Individual Freedom in Large Ensembles*. PhD, University of Hull, 2019.

<https://hull-repository.worktribe.com/output/4222576> - quotes are from p.19

La Monte Young: *Composition 1960 #15* quoted from La Monte Young and Jackson McClow: *An Anthology*, cop.1970

John Zorn: *Cobra*: see the special sections in my bibliographies G2.3 -
Experimental Improvisation Practise And Notation. An Annotated Bibliography - I and II /Addenda) :
<https://intuitivemusic.dk/iima/legno1uk.htm> and
https://intuitivemusic.dk/iima/legno1uk_add.htm
and search the net

Alexis Porfiriadis: <https://intuitivemusic.dk/iima/ap.htm>

Carl Bergstroem-Nielsen: *Sharpening the Process* - article
https://intuitivemusic.dk/intuitive/cbn_comp.htm

Margrete Bach Madsen: *Colour wash 60°* quoted from Carl Bergstroem-Nielsen: *Sound is Multi-dimensional. Parameter Analysis as a Tool for Creative Music Making* -
<https://vbn.aau.dk/da/publications/sound-is-multi-dimensional-parameter-analysis-as-a-tool-for-creat/>

NEW! IM-OS SCORE EDITION - PRESENTATION

What is new about this is in fact the name - and a signal to the world that we see our score publishing just like publishers traditionally do: to ensure availability of the material, beyond short-lived appearances. However, ours are shareware and copyright remains with composers.

The Edition focuses on: *scores with graphics and/or text, with a preference for non-pitch bound signs and visual phenomena. We also have a preference for concise works* - one A 4 page or slightly more is fine. Exceptions to these principles may exist. The Edition continues what was our habit for a long time: *IM-OS 13* brought a *list* of 30 previously published "Compositions presented as separate contributions (with instructions, if any)".

We will continue to *quote* scores in different ways and along the way on our pages without the extended formal apparatus. But **IM-OS Score Edition** scores are especially featured ones. They have been conferred with the author, and we provide *full information* - Author, birth year, country, source, web presence where applicable, we mention the author with possibly a few more keywords in the contributor list at the end of the issue - and what one may feel to be missing in a number of cases: are there any instructions? and if so, what is the full wording of them? And if instructions are not relevant, one should also know.

We hope the Edition will be useful for composers and performers alike!

IM-OS SCORE EDITION

Treya Nash: The Sound of A Weekend (2023)

For 2+ players.

"We must break at all cost from this restrictive circle of pure sounds and conquer the infinite variety of noise-sounds." - Luigi Russolo

Performance notes:

This piece is a guided improvisation combining players interpretation of instructions with the participation of one audience member. The instructions are based on Luigi Russolo's six categorizations of sound, as described in *The Art of Noises*¹.

The players become "noise machines" controlled by the "conductor". Both players will play the same instructions. The aim is to blend and combine as a single noise machine. The audience member will control the form and duration of the piece, but the players are responsible for every other musical choice, such as dynamics, technique, silence, timbre, etc.

Before starting the piece, ask for a volunteer from the audience to "conduct" the piece. They will be given some instructions (see below). Seven pieces of paper will be placed for them on a music stand or table. Six will have shapes, and the last will say "end". Cutouts for these can be found still longer below.

There is no specific order in which the six shapes should be placed.

Each shape represents a different instruction for the performers to follow. The performer instructions, on page 2, correspond with the shapes.

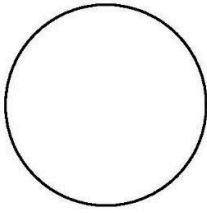
The "conductor" will be able to switch between shapes as frequently as they choose by holding up one of the shapes. They may reuse shapes as many times as they like. They will decide when the piece is finished, by holding up the "end" instruction.

Players should begin when the first shape is held up. The transition between sections should be discrete (disconnected), players should change sections as soon as a new shape is held up. When they hold up the ending paper, finish the piece, in a way that seems fitting.

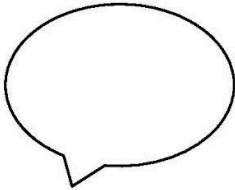
This piece aims to disrupt the concert experience by engaging an audience member and giving them control over some of the compositional elements. When they begin, they will have no idea what each section sounds like, but as they continue, they will be able to make more personal aesthetic choices.

Performers may use any technique, body part, their voice, or part of the instrument to achieve their sound. They may incorporate objects if they choose, but it is not a requirement. It is most important that the performers have fun while interpreting the prompts together.

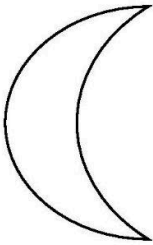
¹ Luigi Russolo, *The Art of Noise: Futurist Manifesto 1913* (New York: Something Else Press, 1967).



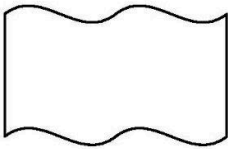
Play as if you are having a lighthearted moment in a kitchen, making percussive sounds with wooden spoons and hands on pots, pans, your body, and wooden boards.



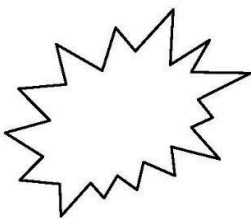
Play the human and animal sounds of the county fair; the talking, shouting, laughing, mooing, oinking, crying. Begin on your instrument then begin to integrate your voice.



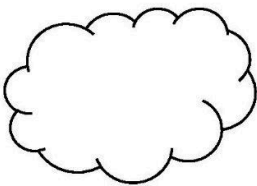
Play as if you are in a fitful slumber whilst riding on a horse moving at a slow pace. Mix your own snores and snorts with the horse's complacent airy grumblings.



Play the sound of leaves in a deserted hallway, of a ghost rave, the sound of putting one more plastic bag into the plastic bag of plastic bags. Play each sound with the utmost attention to detail.



Play a sound that makes you feel a buzzing sensation. Transform it from a lone electric toothbrush to a hive of bees, to the shrill hum and scrape of power tools. Every so often, break the sound, as if encountering something rough.



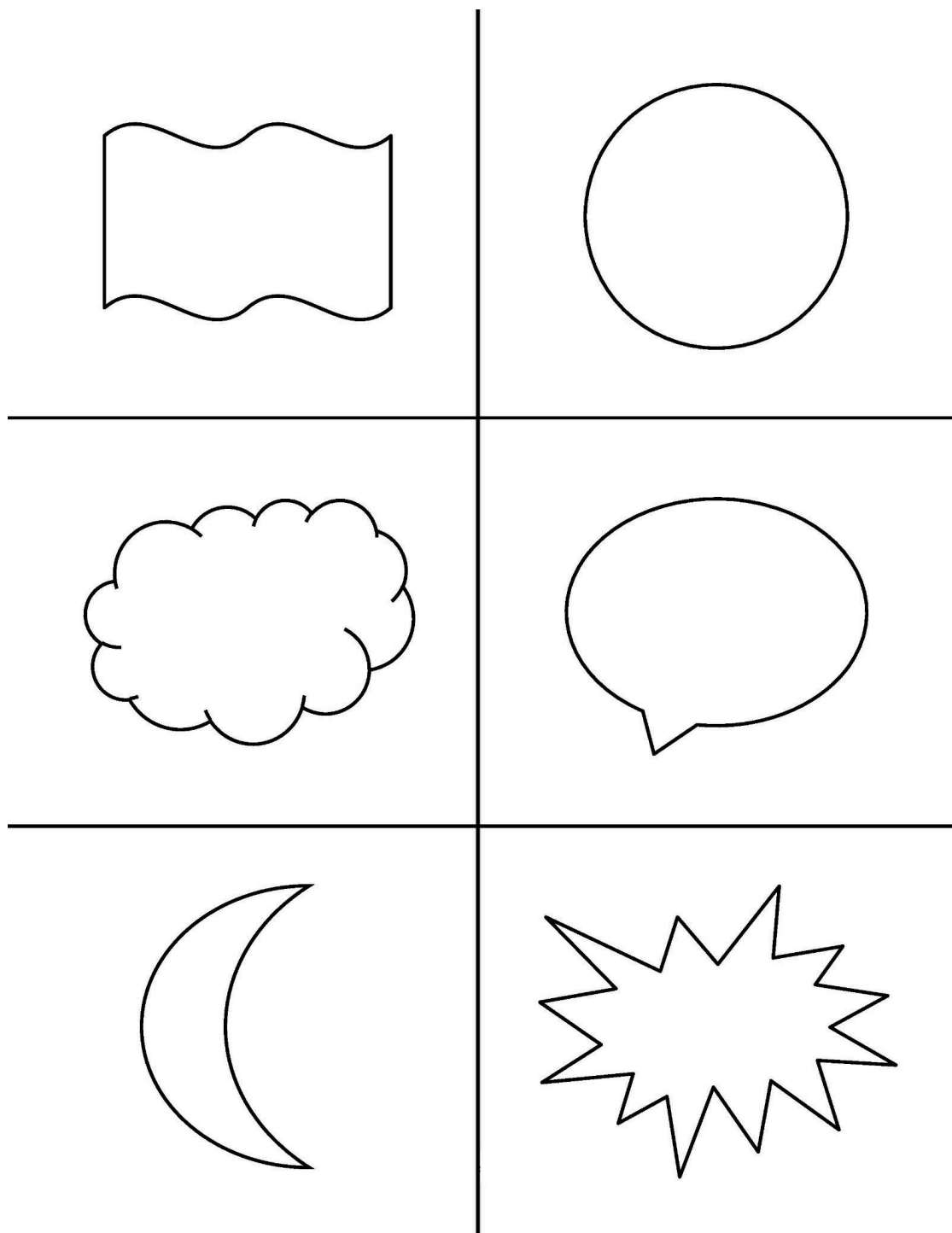
Play as if you are at a bus stop in an epic thunderstorm. You hear the roar of the rain, the cracking booms of the thunder, getting closer and further away. Despite the storm, you are happy to be here.

Directions for the “conductor”

In front of you, you will see seven pieces of paper. Six have symbols, and one says “end”. The six symbols represent six musical sections, for which the performers have instructions.

Begin the piece by holding up one of the six symbols. When you decide, you can change the symbol. Only one symbol may be used at a time. You can change the symbols as often as you like, and as many times as you like, and you may reuse the symbols. You will be in control of the sections of music and their length, but you do not need to worry about controlling anything else.

When you “feel” that it is time to end the piece, hold up the paper with “end” on it.



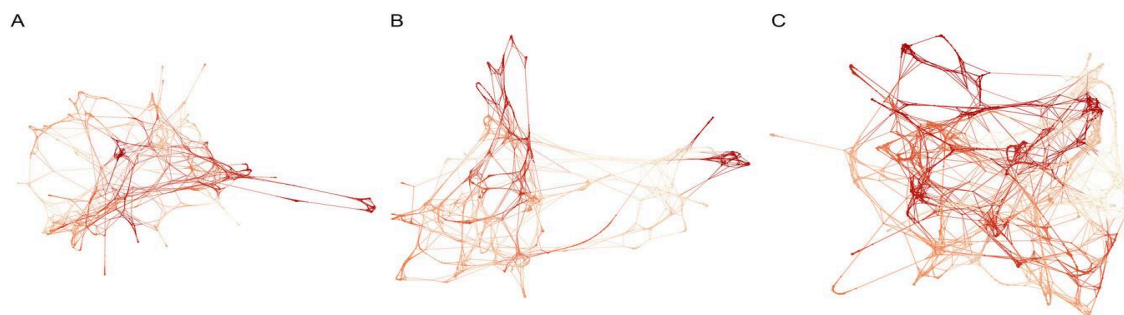
END

VISUAL PERCEPTION SHAPING INTERPRETATION

by Joe Scarffe

Starting-point here is a recent article published in *arXiv*, a journal from Cornell University dealing with physics and a number of related disciplines, including computer science and AI¹. The swarm concept has come into scientific prominence in so-called *complexity science*. It deals with masses of individuals, or *agents*, which coordinate by adjusting to each other, not by being controlled in a simple way. This should feel familiar for musicians. Studies of swarm behaviour have been conducted of animals such as ants, fish, birds, and a factor that may facilitate the coordination has been found to be *pheromones*, that is, substances excreted by individuals which evaporate and can be smelled by the others. A Berlin based improvisation ensemble calls itself *Schwarm 13*. Musician and writer David Borgo made the swarm notion a central one in his book having the telling title *Sync or Swarm*², also talking of a “swarm intelligence”.

This entry explores whether concepts from my PhD thesis, *Conceptualising Musical Graphic Performance*, can illuminate Markus J. Buehler's *MusicSwarm: Biologically Inspired Intelligence for Music Composition*. My thesis examined how performers transform visual stimuli into musical materials through: decodification, world building, musical ekphrasis, conceptual analogue formation, and hermeneutic playfulness. Buehler's *MusicSwarm* distributes composition across multiple AI agents communicating via pheromone-like traces. Coherent musical structures emerge through local interactions rather than centralized authorship. From my thesis perspective, the most interesting aspect is that *MusicSwarm* produces music through an intermediary field of traces - similar to how musical graphics function as visual fields provoking performers to construct relationships between image, thought, sound, and action.



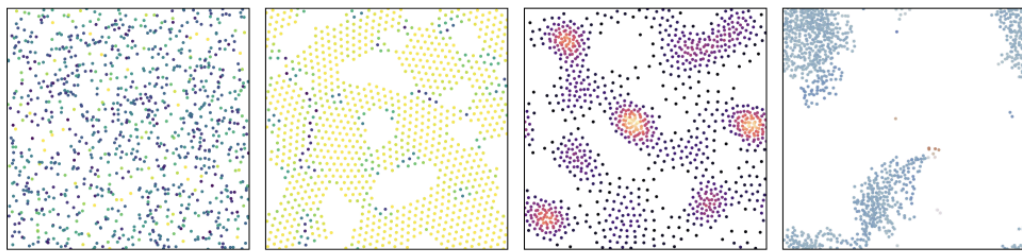
Graph representations of musical self-similarity for three generation paradigms: (A) traditional multi-agent baseline, (B) swarm (decentralized, pheromone-mediated), and (C) single-shot baseline.

1) It is published openly at <https://arxiv.org/abs/2509.11973>

2) Two editions: Borgo, David: *Sync or Swarm*. NY/London (Continuum), 2005. May be purchased with or without a CD. And with an unchanged title, Revised Edition, New York (Bloomsbury), 2022, Various paper and e-editions

Decodification describes how performers identify and interpret elements within musical graphics, converting visual elements into referents (a line becomes a gesture, trajectory, pressure, etc.). MusicSwarm performs an analogous process: agents encounter traces and treat them as information shaping future behavior. However, human decodification is unstable, embodied, and imaginative, whereas MusicSwarm's is more procedural and evaluative.

World building describes how performers consolidate referents into a broader conceptual field—an imagined environment in which marks make sense. Applied to MusicSwarm, this reveals both strength and limitation: the system has an environment, but it's unclear whether it has a world. Coherence is not the same as world building. My thesis suggests future versions could introduce a shared conceptual analogue containing spatial, material, gestural, emotional, or ecological information. Agents would compose not simply by responding to successful patterns, but by asking how those patterns belong within a shared conceptual environment.



A representation of each of the different emergent patterns of agentic behaviours.

Musical ekphrasis describes representing something from one medium in another - not literal translation, but creating a meaningful musical response to source material. MusicSwarm transforms prompts, objectives, and traces into musical material. My thesis suggests we should distinguish between consensus and ekphrastic fidelity: does the music remain meaningfully related to the conceptual conditions that generated it? Convergence alone doesn't guarantee faithfulness to the originating prompt or idea. Future systems might benefit from mechanisms evaluating ekphrastic relationships, not just musical quality or coherence.

Hermeneutic playfulness describes the reflexive loop between the performer's conceptual analogue and generated musical materials - the performer tests the world against the music and vice versa. MusicSwarm contains a computational version: agents generate material, receive feedback, adapt, and continue composing. But is this truly hermeneutic playfulness or merely adaptive optimization? Hermeneutic playfulness involves a shifting interpretative relationship between material and meaning-world. If MusicSwarm incorporated a shared conceptual analogue, feedback loops could become more hermeneutic with agents revising

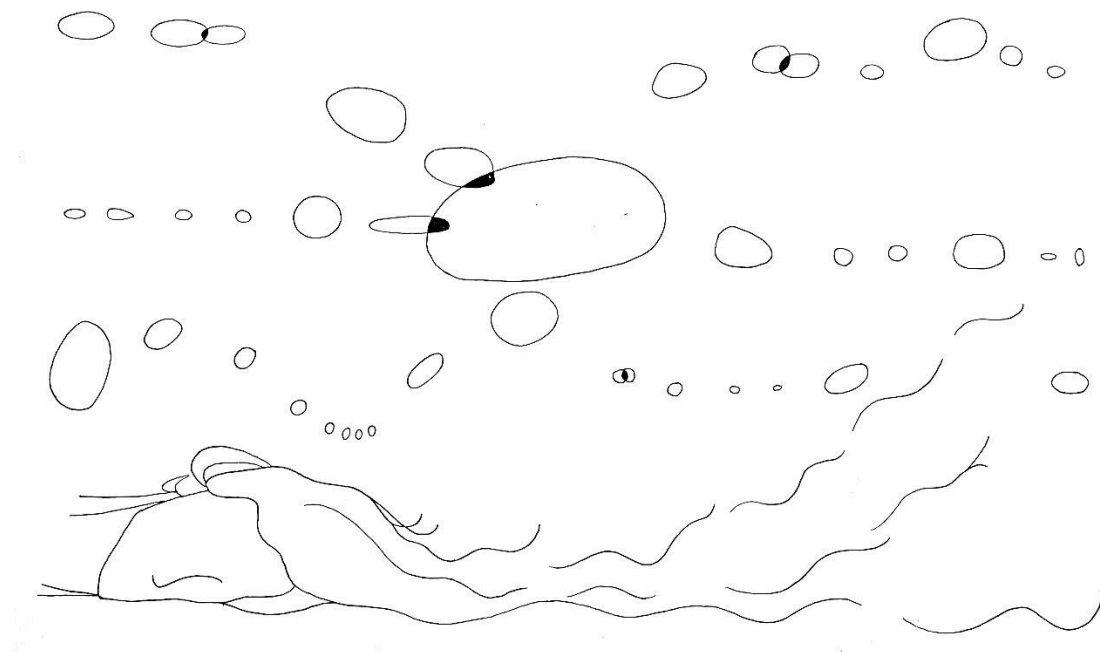
material not only because it's successful, but because it opens new possibilities within the imagined world. This reframes MusicSwarm as a performance system, not merely a compositional one. Its significance lies in how it engages with conditions of musical emergence. Authorship is further displaced: it doesn't reside solely in the human designer, initial prompt, individual agent, or final output, but is distributed across the architecture of interaction. However, caution is warranted. My thesis was grounded in human experience, artistic practice, and autoethnographic reflection. MusicSwarm lacks lived experience, embodied resistance, anxiety, intuition, or phenomenological awareness. Its agents may simulate differentiated roles but don't inhabit them as performers do. Concepts cannot be transferred without alteration. Nevertheless, the comparison is productive. It shows which aspects of musical graphic performance can be computationally modeled (decodification, feedback, distributed agency, iterative development) and which remain bound to human experience (world building, ekphrastic fidelity, hermeneutic playfulness).

The conclusion is that MusicSwarm can be read as artificial open-score performance. The pheromone field functions like a mutable score-space; agents function like performers negotiating it. Yet, from my thesis perspective, MusicSwarm would become more artistically powerful if it developed a more explicit account of the intermediary conceptual world through which musical decisions pass. My pipeline suggests a richer process: stimulus, decodification, world building, conceptual analogue, musical ekphrasis, hermeneutic play, and performance outcome. The difference is insisting on the importance of the interpretative middle. Where musical graphics become music, and possibly where AI-generated music becomes more than pattern production.

Reading MusicSwarm alongside my thesis places it within a longer history of attempts to generate musical form without fixed notation or centralized control. The fundamental problem is: how can meaningful musical coherence emerge from conditions of openness? My answer is that openness becomes musically meaningful when mediated by processes of interpretation. MusicSwarm shows artificial agents can produce emergent structures through distributed interaction. My thesis suggests the next question is not simply how such systems can become more coherent, but how they can become more interpretative. This makes MusicSwarm especially interesting for IM-OS. It provides a computational model of distributed musical becoming; my thesis provides a human, performer-centered model of interpretative becoming. Reading them together allows us to ask whether the future of open scores might involve hybrid systems in which humans and artificial agents construct, inhabit, and sonify shared conceptual worlds.

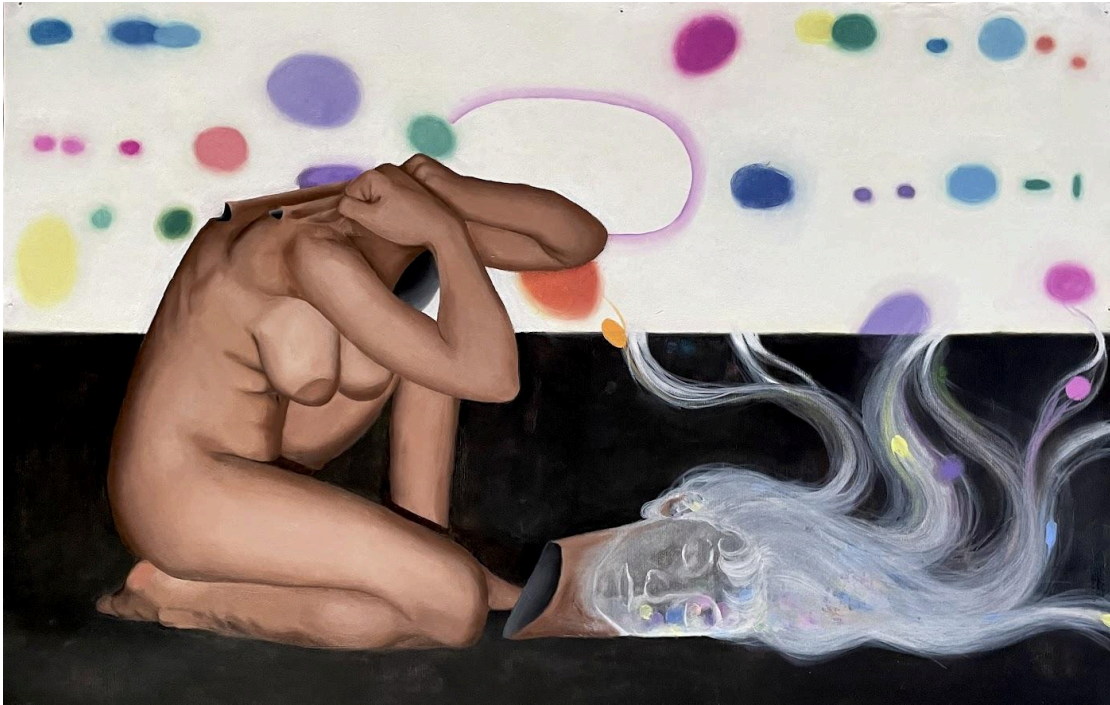
A FLOWING STORY

The graphic score below was premiered in sound at a graphic scores exhibition with a concert in Copenhagen 26.March 2026.



Mansoor Hosseini: "Free mind of a girl". Drawing by Maria-Louisa Pfeifer

However, the score was not drawn by Mansoor Hosseini himself, as apparent above. He wished for a score focusing on flowing hair which he had seen in other pictures by Maria-Louisa Pfeifer, and on his suggestion, she created the picture below. Discussing this together, Hosseini wished to concentrate on the head and hair. Thinking of drums, the circular shapes came into being, but there is no explicit instruction about how to play the score.



Maria-Louisa Pfeifer: "Strip me", oil on canvas 90 x 50 cm

No AI was involved in this process, just a flow of ideas. The reductionism and simplification may be instructive in some way of how graphic scores can suggest music. Which is not to say this is the only way! And without expecting any definite method or viewpoint you may compare this to the other flow stories in IM-OS 7 by John Voigt, and in IM-OS by 12 by Frascioni and Hannafin.

More information about the artists:

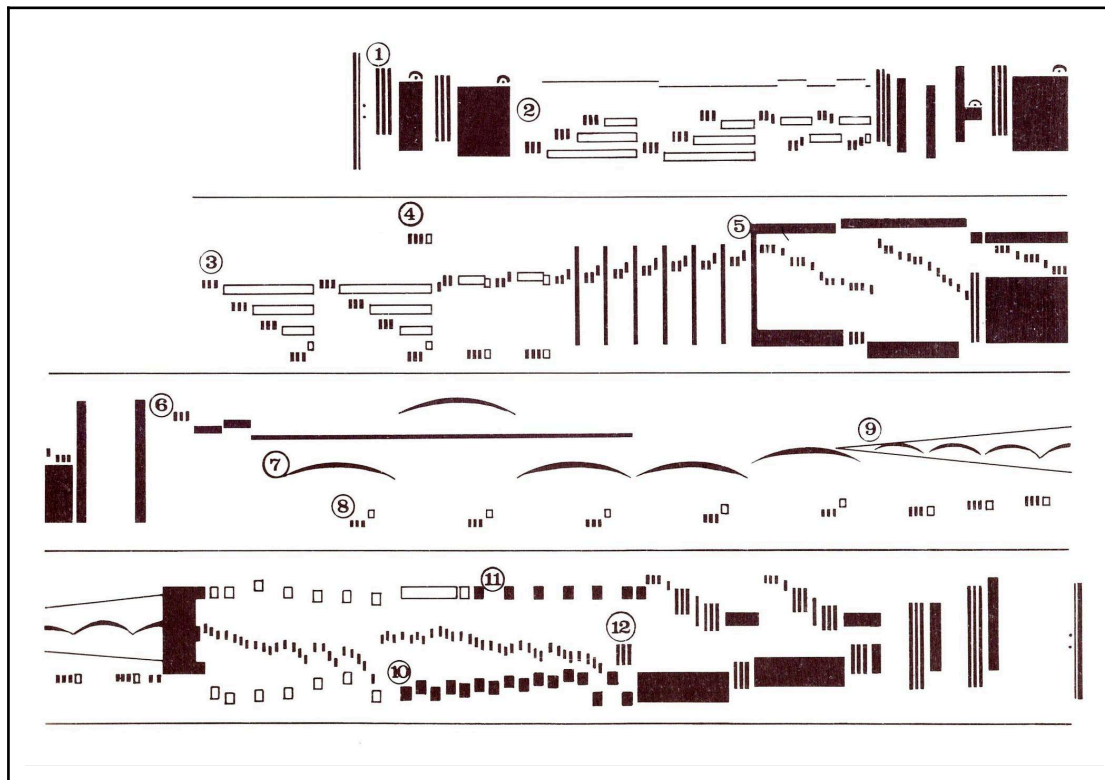
Mansoor Hosseini: <https://www.musicalmo.com/new-index-1>

Marie-Louisa Pfeifer: <https://marialouisapfeifer.com/>

GRAPHIC SCORES AS AURAL SCORES

by Carl Bergstroem-Nielsen

Scores not for playing, but for guiding the listener have a long history in music education. They act like maps for the landscape - for orientation, for keeping focus while listening. Below is an example from Bernt Johan Ottem ¹ - depicting the beginning of Beethoven's Fifth Symphony:



From Bernt Johan Ottem: Lytteboka, p. 67

As may be apparent, this can be followed by readers who do not know traditional music notation. In my article commented below by my co-editor, I am dealing with their use - not exactly *within* music therapy, but *for music therapists*. To serve overview, memory and analysis. This is indeed not to deny that another use of drawing and painting in therapy is a mixed use of exchange between them, playing from the drawing, drawing from listening live or from a recording, etc. But music therapy as a new discipline in higher education appears to have had a tendency to work intensively and meticulously to establish its disciplines.

1) Lytteboka. Illustrations and lay-out: Rune Hansen. Norsk Musikforlag, cop, 1971

POWER FULL OF SORROW

MELANCHOLIC FUN

WOULD YOU LIKE TO JOIN ME FOR A WALK?

THE CHALLENGE

FULL THROTTLE FORWARDS!

EXPLANATION OF SYMBOLS

= SINGLE BASS TONES = SINGLE TONES IN HIGH REGISTER = CHORD/INTERVAL/CLUSTER BASS = CHORD/INTERVAL/CLUSTER IN HIGH REGISTER = MELODIC WAGGING FIGURE IN HIGH REGISTER	= MELODIC AND RHYTHMIC PHRASES IN HIGH REGISTER = MELODIC AND RHYTHMIC PHRASES BASS = STACCATO MELODIC/RHYTHMIC PHRASE IN HIGH REGISTER = STACCATO MELODIC/RHYTHMIC PHRASE BASS = FORM OF THE LINE FOR MELODIC/RHYTHMIC PHRASES IN HIGH REGISTER AND BASS INDICATE THE MOVEMENT OF THE MELODY = SIZE OF SIGNATURES INDICATE DYNAMICS
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Karina Erland Jensen: Aural Score. From examination at Aalborg University 2007

My article being referred to in the essay following the present one was digitally published this year and a printed version has been announced to appear on December². Here, I am making a short presentation of the kind of aural scores it deals with.

The above example is an elaborate aural score created by a student at Aalborg University's Music Therapy education in 2007³. The therapeutic method here is the so-called active music therapy in which client and therapist work creatively together in order to clarify given issues and uncover personal resources. The audio excerpt features an excerpt from music played on piano four hands by client (treble part) and therapist (bass part). There are explanations of individually created symbols underneath. The excerpt covers 4 minutes and 40 seconds as apparent from the timeline. And it is divided into segments, each with a title. Titles form together with the visuals a fictitious narrative, and this narrative has the sole functions of approximately characterising by metaphors and of suggesting a coherent overview of the musical process. Therapists may wish to go further to a psychological assessment directed at working on with the client or at studying a case, which lies outside our scope here.

2) It may yet take some time before the digital item appears as hosted by research libraries who make the necessary subscription. Carl Bergstroem-Nielsen: "Graphic Notation: Aural Scores for Description and Analysis", <https://doi.org/10.1093/9780198942849.001.0001>, in: The Oxford Handbook of Improvisation in Music Therapy. Online ISBN: 9780198942849 - Print ISBN: 9780198942818

3) Several further examples are available at <https://vbn.aau.dk/da/publications/graphic-examples/> made from the same audio recording which can also be downloaded from this URL. Source for the audio is Colin Lee: Music at the Edge, several ed. 1996, 2016 (ebook) (extract three). Further, there are also links to opensource illustrated articles.

FURTHER REFLECTIONS ON CARL Bergstroem-Nielsen'S "GRAPHIC NOTATION: AURAL SCORES FOR DESCRIPTION AND ANALYSIS"

By Joe Scarffe

Introduction

Carl Bergstroem-Nielsen's chapter, "Graphic Notation: Aural Scores for Description and Analysis"¹, is an important contribution to the study of graphic notation, improvisation, music therapy, and musical analysis. Its principal concern is with graphic notation as an aural score: a visual means of describing music that has already sounded, rather than a score from which music is to be performed. This distinction is crucial. Graphic notation, in this context, does not ask the performer to produce music from an image. Instead, it asks the listener, therapist, analyst, or participant to create a visual form through which an improvisation can be remembered, compared, interpreted, and discussed.

The chapter is particularly valuable because it refuses to reduce graphic notation to either clinical documentation or artistic illustration. Bergstroem-Nielsen's approach keeps both possibilities active. The graphic notation may function as a practical tool for remembering what happened in a session, but it may also become a poetic, visual, and interpretative object in its own right. It can help the therapist return to details that might otherwise disappear from memory, while also allowing musical experience to be contemplated through shape, density, spacing, contrast, text, and layout.

This article offers further reflections on the implications of this position. The central question is not simply how graphic notation can describe improvisation, but what kind of knowledge becomes possible when improvised music is transformed into image. The answer is not straightforward, because the graphic notation is neither the music itself nor a neutral record of it. It is a constructed visual analogue. It remembers selectively, emphasizes certain details, omits others, and makes the improvisation newly available for reflection.

1) see the reference to this article in note 2 in the previous article, "Graphic scores as aural scores"

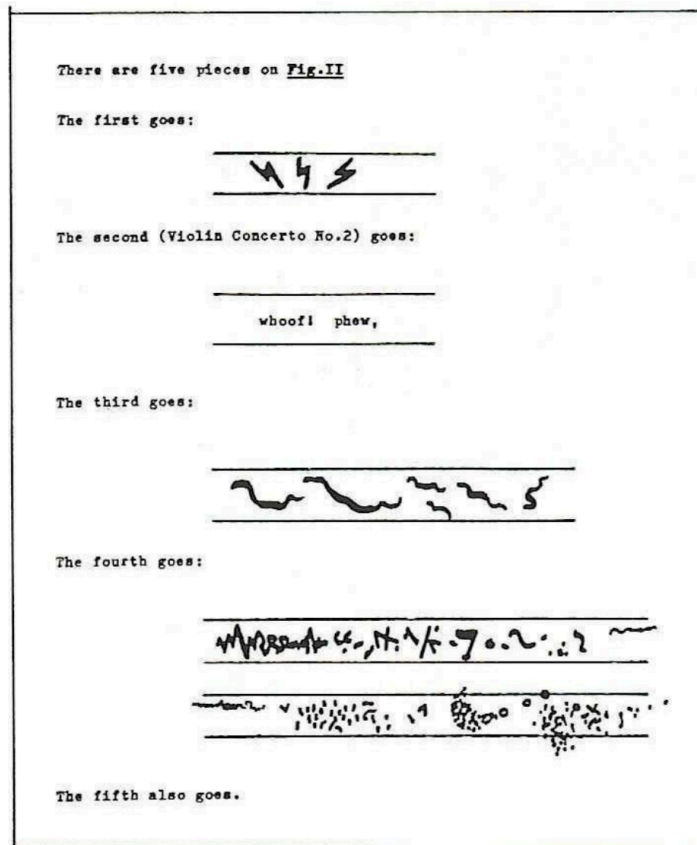
The Map and the Musical Landscape

Bergstroem-Nielsen writes that the map is not the landscape, but it can create access to it. This is a simple formulation, but it has far-reaching consequences. A map does not reproduce the territory it depicts. It makes choices. It decides what matters. It exaggerates, suppresses, frames, connects, and clarifies. A road map, geological map, weather map, and tourist map may all describe the same location, but each brings different relations into view. The same is true of graphic notation.

An improvisation is not only a sequence of sounds. It is also a field of relations: between participants, between musical materials, between expectation and surprise, between gesture and response, between the remembered past and the immediate present. A recording preserves much of the sonic surface, but it does not necessarily make the structure of these relations readily visible. A graphic notation can do this. It can show the shape of an interaction, the density of a passage, the force of an interruption, the recurrence of a motif, the emergence of a new behaviour, or the way one performer's action alters the musical environment of another.

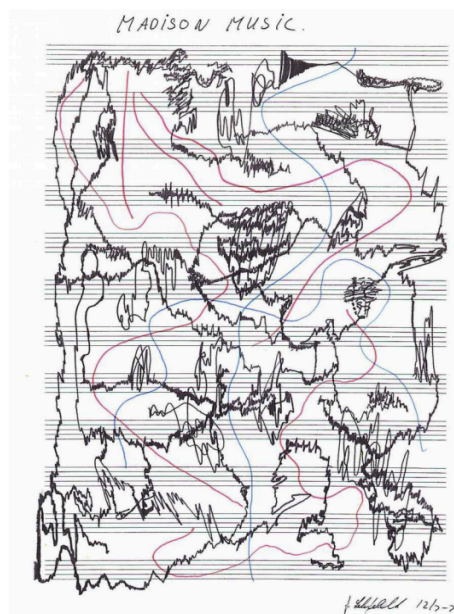
However, this also means that every graphic notation is partial. It cannot notate everything. Nor should it try to. Its usefulness lies precisely in its capacity to select. It makes a claim about what was salient in the improvisation. This claim may be descriptive, analytical, poetic, therapeutic, or some combination of these. The notation is therefore not merely a representation of the improvisation. It is an interpretation of what in the improvisation mattered.

This is one of the reasons why standardisation is both useful and potentially problematic. A fixed repertoire of signs would allow different notations to be compared more easily. It would make teaching, research, and communication more efficient. But too much standardisation risks making the notation answerable to the system rather than to the music. Improvisations are rarely tidy. Their most significant events may be precisely those that do not fit a pre-existing category. A notation that is too rigid may become efficient at recording what it already knows how to see, while remaining blind to the unexpected character of the musical event.

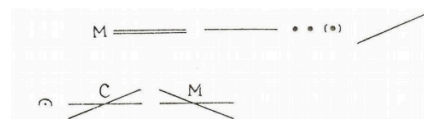


This notation is from a review by Peter Riley of a Trans Museq cassette release in the British magazine *Musics* 6, 1976. Along with the following illustrations in this article, quoted from Bergstroem-Nielsen, Carl: *Graphic Notation: Systematic Exercises for Making Aural Scores*. Aalborg University's Research Portal, 2024.

<https://vbn.aau.dk/da/publications/graphic-notation-systematic-exercises-for-making-aural-scores>



Jørgen Lekkfeldt: Madison Music (1976)

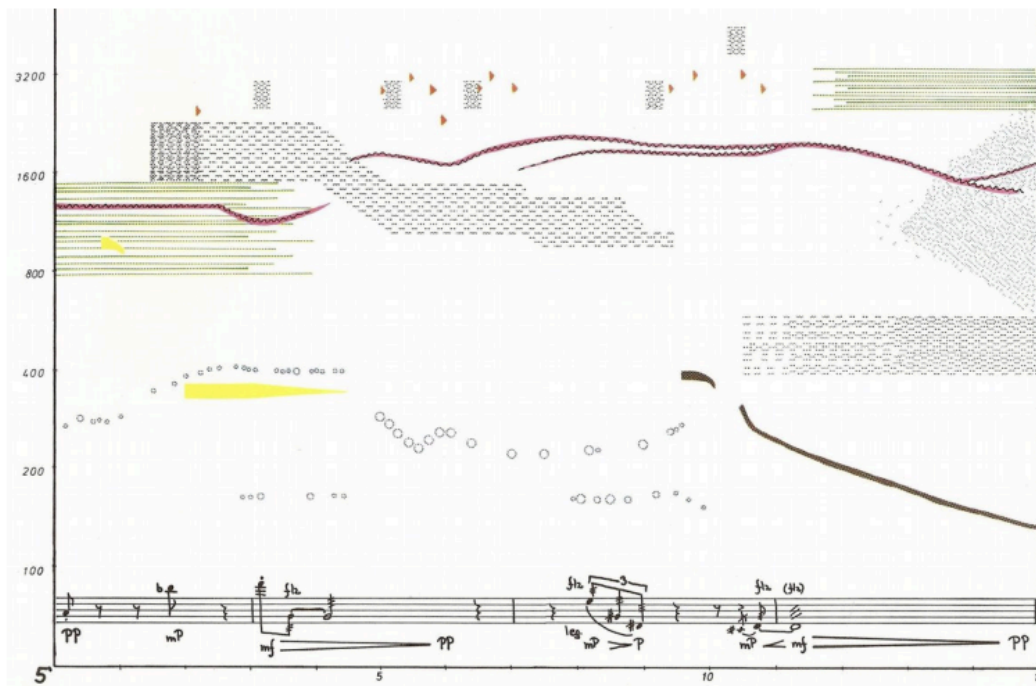


from Toshi Ichiyanagi: Sapporo (1963)

Graphic Notation as Listening

One of the most valuable implications of Bergstroem-Nielsen's chapter is that graphic notation can be understood as a mode of listening. It is not only something produced after listening has taken place. It changes listening itself. To notate graphically is to listen for form, contrast, movement, relationship, energy, duration, and atmosphere. It requires the listener to ask what is happening, where attention is being drawn, and how musical features are changing over time.

This kind of listening differs from the listening encouraged by traditional notation. Traditional notation is extremely powerful when pitch, rhythm, harmony, meter, and motivic detail are central to the analysis. However, improvisation in music therapy often includes sounds and interactions that are not easily captured by those means. Vocal cries, unstable pitches, timbral roughness, hesitant gestures, clusters, silences, and fluctuating intensities may be among the most therapeutically significant aspects of the music. These features may resist traditional notation not because they are vague, but because they require a different representational medium.



Excerpt from Borum et al.: Jørgen Plætner: Nocturne for Flute and Tape. Aural Score. Copenhagen, Wilhelm Hansen, cop. 1975.

Graphic notation offers one such medium. It allows the analyst to treat sound as shape, pressure, texture, direction, density, rupture, expansion, or contraction. It can represent the difference between a sound that presses forward and one that hovers; between a silence that feels empty and a silence that feels charged; between a repeated gesture that feels fixed and one that feels searching. These differences may be difficult to capture verbally, and they may be cumbersome to notate conventionally. Visually, however, they can often be made immediately perceptible.

This does not mean that graphic notation is more accurate than verbal description or traditional notation. It is accurate in a different way. Its accuracy is not only a matter of measurement, but of adequacy to experience. A jagged line may not tell us the exact frequency content of a vocal sound, but it may tell us something about its force, instability, and affective presence. A widening space between symbols may not provide an exact temporal ratio, but it may show the experience of loosening, waiting, or dissipation. Such notations are not substitutes for recordings, spectrograms, transcripts, or written accounts. They are companions to them.

Description and Interpretation

Bergstroem-Nielsen's chapter is careful to maintain the distinction between description and interpretation while also showing that the two cannot be entirely separated. Graphic notation may be used descriptively, to show what happened in the music. Yet the act of deciding what to show already involves interpretation. The analyst chooses a scale, a layout, a visual language, a degree of detail, and a set of musical features to prioritize. Even a purely descriptive notation therefore contains an implicit argument.

This is not a weakness. It is a condition of analysis. Musical analysis has never been neutral. It always involves a way of hearing. The question is not whether graphic notation can remove subjectivity, but whether it can make the analyst's listening more available for reflection. A graphic notation can show how the notator heard the improvisation. It can then be discussed, questioned, compared, revised, or placed alongside other notations of the same event.

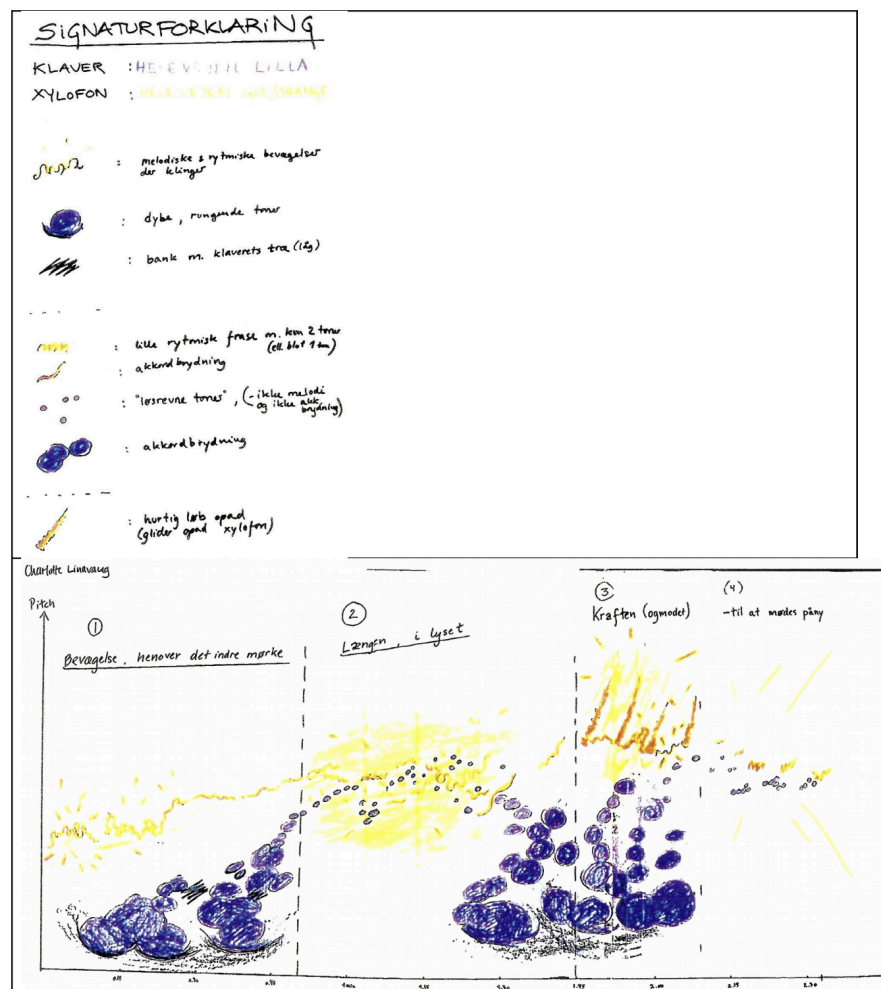
This possibility is especially important in music therapy, where the music is not an autonomous artwork separated from lived relations. It is part of a therapeutic process. The same improvisation may be heard differently by therapist, client, supervisor, researcher, and colleague. A notation can become a shared surface through which these different hearings are brought into dialogue. It can help make explicit where listeners agree, where they differ, and what each person has noticed.

This is why graphic notation may be particularly powerful when used collaboratively. A therapist's notation of a session may reveal one understanding of the musical

process. A client's drawing or graphic response may reveal another. A colleague's notation may identify structural features that the therapist missed. Several notations of the same improvisation may not converge on a single truth, but they may expand the field of understanding. In this sense, graphic notation is not only a method of analysis. It is a method of conversation.

Memory, Overview, and Return

Improvisation disappears as soon as it happens. Recordings preserve it, but recordings can also be overwhelming. To return to a one-hour session in full detail may be unrealistic in daily clinical practice. Memory, meanwhile, is vivid but unstable. It keeps atmospheres, impressions, turning points, and fragments, but it also omits, distorts, and reorganizes. Graphic notation sits between recording and memory. It provides a selective visual structure through which the improvisation can be returned to without having to replay every second.



Graphic notation by Charlotte Lindvang

This function should not be underestimated. A notation can serve as a practical memory aid, but it can also change what kind of memory is possible. Verbal notes tend to summarise events sequentially. A graphic notation can present simultaneity, layering, and contrast at a glance. It allows the eye to move backwards and forwards across the session. It can show the whole and the part together. It can make visible a pattern that was not consciously noticed during the improvisation itself.

This retrospective function is particularly important because improvisation often contains meanings that are not apparent in the moment. A gesture may seem incidental when it first occurs, but later become recognizable as the beginning of a pattern. A silence may seem like a pause, but in retrospect reveal itself as a boundary. A repeated sound may appear mechanical, but later be understood as a stabilising identity. Graphic notation allows such retrospective discoveries to be held in visual form.

The notation therefore does not simply preserve the past. It reopens it. It allows the past musical event to become newly active in present reflection. This is why the graphic score can become a jumping board for future sessions. It does not merely document what has happened; it helps the therapist prepare to listen differently next time.

The Question of Aesthetics

One of the most important aspects of Bergstroem-Nielsen's chapter is its insistence that aesthetics matter. This point is sometimes treated with suspicion in therapeutic contexts, as though aesthetic judgement might distract from clinical seriousness. Yet music therapy takes place through music, and music is always experienced aesthetically, even when the aesthetic is rough, fragmented, minimal, disturbing, or unresolved.

Graphic notation makes this unavoidable. A notation has visual character. It may be elegant, crude, dense, spacious, chaotic, balanced, playful, severe, or fragile. These visual qualities are not merely decorative. They influence how the music is remembered and understood. A notation that looks too polished may misrepresent a raw improvisation. A notation that is too cluttered may obscure a simple but powerful interaction. A notation that is visually beautiful may attract attention, but it may also risk aestheticising pain or difficulty in ways that require care.

The visual design of graphic notation therefore carries ethical as well as aesthetic implications. It matters how a client's sound is drawn. It matters whether a scream is represented as violence, intensity, release, distress, presence, or communication. It matters whether the therapist's contribution is visually dominant or responsive. It matters whether silence is shown as emptiness, space, suspension, or refusal. These decisions affect how the therapeutic event is understood.

This is not an argument against visual invention. On the contrary, it is an argument for taking it seriously. If graphic notation is to function as a bridge between clinical reflection, musical analysis, and visual communication, then its design must be considered part of the analytic process. Layout, scale, thickness, spacing, colour, framing, and symbolic vocabulary are not neutral containers. They are ways of thinking.

Clinical Independence and Theoretical Openness

Bergstroem-Nielsen's chapter is also important because it presents graphic notation as clinically independent. It can be used within different music therapy models, and does not require allegiance to one psychological or pedagogical framework. This independence is a strength, because improvisation may be understood in many ways: as expression, relation, regulation, play, communication, resistance, exploration, or shared musicking.

Graphic notation can support these different understandings without being absorbed by any single one. It can remain close to the musical event while allowing interpretation to unfold later. In this respect, it protects the specificity of the music. It prevents analysis from moving too quickly into psychological explanation. The notation can say: before deciding what this means therapeutically, look at what happened musically.

This is a crucial point. In therapeutic work, there is always a danger that music becomes evidence for something else. A musical gesture may be interpreted immediately as emotional expression, relational behaviour, developmental sign, or clinical symptom. Such interpretations may be useful and necessary, but they can also become reductive. Graphic notation slows this movement. It gives the music a chance to be seen and heard as music before it is translated into another discourse.

This does not mean that graphic notation avoids interpretation. Rather, it allows interpretation to remain accountable to musical detail. It encourages the therapist to ask how the interpretation is grounded in the sounding material. What was the rhythm of the interaction? What changed? Who initiated? Who followed? Where did the texture thicken? Where did the music become fragile? Where did something unexpected happen? These questions keep the analysis close to the lived musical process.

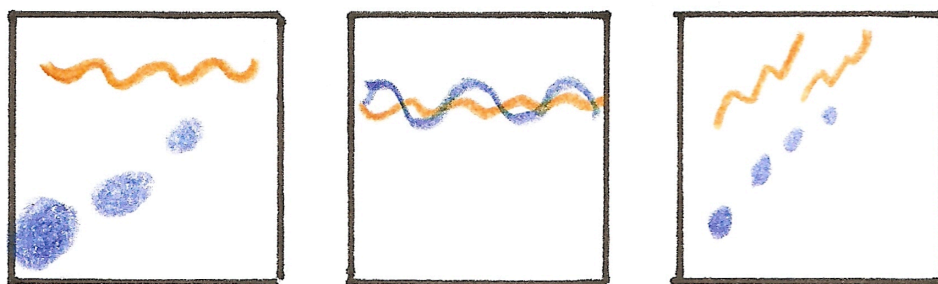
The Problem of the Salient Feature

Every graphic notation depends on the identification of salient features. The notator must decide what stands out. This may be a motif, a change in texture, a moment of dialogue, a sudden silence, a shift in register, an increase in density, a repeated rhythmic identity, or an expressive vocal sound. The difficulty is that salience is not always self-evident. What is musically prominent may not be therapeutically significant. What is therapeutically significant may be musically quiet. What is important to the therapist may not be important to the client.

This suggests that graphic notation should not be understood as a final statement, but as a provisional act of attention. It marks what the notator has noticed at a particular moment, from a particular position, with a particular purpose. Another notation might reveal different features. A later notation by the same person might reveal features missed the first time. This is not a failure of the method. It is one of its most productive qualities.

In this respect, graphic notation belongs to a hermeneutic process. It begins with a preliminary understanding of the music, gives that understanding visual form, and then allows the visual form to alter the next stage of listening. The notation is not the conclusion of analysis, but part of the analytic circle. It produces a new object that can be looked at, questioned, and returned to.

This also means that graphic notation has a pedagogical value. Students learning to notate improvisations are also learning what they attend to. They may discover that they listen primarily for rhythm, or for melodic contour, or for interpersonal exchange, or for atmosphere. They may discover that they ignore silence, or overemphasise their own part, or make all client sounds visually similar. The notation becomes a mirror of listening habits. This makes it valuable not only as a clinical tool, but as a training tool.



Pictograms depicting the sections of the Lindvang example stated above in a strongly simplified form to facilitate the readers' overview

Graphic Notation and Equality of Access

Bergstroem-Nielsen points out that graphic notation can convey impressions of music to non-musicians and allow therapists and clients to understand aspects of the therapeutic process on a more equal basis. This is one of the most socially important claims in the chapter. Traditional notation can exclude. It presupposes specialist training. Graphic notation, by contrast, can invite participation from those who cannot read music.

This does not mean that graphic notation is simple or universally transparent. Visual symbols also require interpretation, and different viewers may understand them differently. However, graphic notation can lower the threshold of access. It allows music to be discussed through visible forms that can be pointed to, compared, altered, or redrawn. A client may not be able to describe the harmonic implications of an improvisation, but may be able to recognise a thick black shape as corresponding to an intense moment, or a widening space as corresponding to a feeling of release.

This creates possibilities for shared reflection. The notation can become a third object between therapist and client. Rather than speaking directly about the client's behaviour or feelings, both can look at the image of the music. This may make certain conversations less confrontational and more exploratory. The graphic notation can hold the musical event at a slight distance, allowing it to be approached with curiosity.

However, this also requires care. A therapist's notation of a client's music may be experienced by the client as recognition, but it may also be experienced as appropriation or misrepresentation. The client may not see themselves in the image. They may feel that something has been imposed upon their sound. For this reason, the possibility of client participation in the creation or revision of graphic notations deserves further exploration. A notation made with the client may differ significantly from one made about the client.

Computer Visualisation and Human Drawing

Bergstroem-Nielsen discusses computer visualisations such as waveforms and spectrograms, noting their usefulness while also warning against confusing entertainment visualisations with analysis. This distinction is important. Computers can provide precise information about amplitude, frequency, duration, and timbral features. They can reveal details that human listening may miss. Yet they do not decide what matters. They require interpretation.

A waveform can show intensity over time, but it cannot tell us whether that intensity was experienced as aggression, excitement, distress, vitality, or play. A spectrogram can show frequency content, but not the relational meaning of a sound in a session. Computer visualisation therefore extends perception, but does not replace listening. It gives additional data, not automatic understanding.

Hand-drawn graphic notation has different strengths. It is less precise, but more directly connected to the notator's experience of listening. Its marks can combine structural, affective, relational, and poetic dimensions. A drawn line can indicate pitch movement, but also effort, fragility, or direction. A computer display may be more measurable; a hand-drawn notation may be more interpretatively dense.

The most promising future work may lie in combining these approaches. A graphic notation could sit alongside a waveform or spectrogram, allowing measurable acoustic information and human interpretative listening to inform one another. This would avoid the false choice between empirical data and creative reflection. It would also allow graphic notation to retain its flexibility while becoming more accountable to sonic detail.

Further Research

Bergstroem-Nielsen's chapter concludes by outlining ideas for further research, and it is here that the field feels especially open. Several questions appear particularly urgent.

First, more work is needed on how different people understand the same graphic notation. Does a notation communicate similar musical features to therapists, clients, musicians, and non-musicians? Which features are immediately grasped, and which require explanation? How does colour affect interpretation? How do layout and scale influence perceived importance?

Second, comparative studies of multiple notations of the same improvisation would be valuable. If several therapists notate the same recording independently, what do they notice? Where do their notations converge? Where do they differ? Such studies would not need to aim for a single correct notation. Their value would lie in revealing the range of possible hearings.

Third, client-generated graphic notations deserve more attention. What happens when clients draw their own improvisations? Do they represent sound, feeling, movement, relationship, image, or memory? How might their notations differ from those made by therapists? Could the comparison between therapist and client notation become part of the therapeutic process?

Fourth, more research is needed on the relationship between graphic notation and future clinical action. Does making a notation change how therapists listen in the next session? Does it influence the interventions they choose? Does it help them remember clients' musical identities more accurately? Does it support supervision?

Finally, there is a broader theoretical question about whether graphic notation can help music therapy articulate a more musically grounded account of therapeutic change. If change happens through music, then methods of analysis must be able to show musical change without immediately translating it into non-musical language. Graphic notation may be one of the strongest tools available for this task.

Conclusion

Bergstroem-Nielsen's chapter makes a persuasive case for graphic notation as a flexible, creative, and clinically useful practice for describing and analysing improvisations in music therapy. Its importance lies in the way it holds together several functions that are often separated: memory, analysis, communication, aesthetics, pedagogy, and reflection. Graphic notation can be a sketch, a map, a diagram, a visual poem, a clinical note, an analytic tool, or a shared object of discussion.

The most significant insight is that graphic notation does not merely represent improvisation after the fact. It changes the way improvisation can be remembered, seen, discussed, and understood. It gives form to the ephemeral without pretending to capture it completely. It allows musical events to remain open to further listening.

For those concerned with improvisation, open scores, and the wider field of musical graphics, Bergstroem-Nielsen's chapter is a reminder that notation does not only point forward toward performance. It can also point backwards toward memory, sideways toward dialogue, and inward toward reflection. The graphic mark can ask for sound, but it can also answer sound. It can invite music into being, and it can help us return to music once it has disappeared.

IM-OS SCORE EDITION

Jørgen Lekkfeldt: Opus sine nomine (2014).

For ensemble ad lib. or solo

Jørgen Lekkfeldt is a Danish composer and improvisor, b.1948.

Web: <https://intuitivemusic.dk/iima/jl.htm>

Opus sine nomine

Rød: tutti

Blå: solo (alle efter tur)

= : samme eller variant

≠ : væsentligt forskellig

O : individuel ad lib.

Hændelsers varighed ad lib.

Værkets — " —

Hvilket som helst musikalt

(auditivt) materiale er tilladt

Pauser ad lib.

= ≠ ≠ ↑ ≠ ≠ = ↑ = ≠ = O ↑ ≠ = ≠ = O O ↑
O ≠ = O ↑ = ≠ O ↑ O = ≠ ↑ = = = ||

23/3 2014

ENGLISH TRANSLATION:

RED: TUTTI

BLUE: solo (rounds or one if many players)

= : same, or a variant

≠ : essentially different

O : individually, ad libitum

Events have ad lib. durations.

The entire work has duration ad lib.

Any musical (auditive) material at all is permitted.

Pauses ad lib.

Additional remarks and proposals by Carl Bergstroem-Nielsen:

Start with any solo or tutti. Solos may be initiated by the one who takes initiative to do it.

Variation: instead of following the score, let what to play next be determined by a hand-sign. 1,2,3 fingers with hand held high: same, or a variant - different - individual, ad lib. And let solo or tutti be indicated by the hand held low and showing 1 or 2. Signs are given by the one who takes initiative to do it. Invent a special one for indicating the end. - Paper cards may be used instead of hand-signs if you prefer.

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