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Introduction[3] to
CompositionCloud

On the front cover is a databent close-up photo of my desk lamp.

Die Lösung: vom Werk zum Prozess

Man kommt, solange die Kunsttätigkeit auf die Hervorbringung von selbständigen *Werken* zielt, nicht über den Parallelismus [zwischen Kunst und Wirklichkeit, Simulation und Realität G.P.] hinaus. Man kann auf diese Weise nicht zum Involviertsein, nicht zum einem wirklichkeits-implikativen Status der Kunst, nicht zu einem Verwickeltsein der Kunst in die Wirklichkeit gelangen. Denn man kann nicht zugleich die Abgrenzung – die ästhetische Differenz, die für Werke konstitutiv ist –, aufrechterhalten *und* diese Schranke niederlegen.

Die einzige Alternative, die aus diesem Dilemma hinausführt, scheint mir die zu sein, die künstlerische Tätigkeit nicht auf selbstständige *Werke* auszurichten, sondern auf *Prozesse*. Und natürlich nicht auf Prozesse, die ihrerseits wieder in einem künstlerischen Werk der üblichen Art terminieren (wie das bei künstlerischen Herstellungsprozessen für gewöhnlich der Fall ist), sondern auf Prozesse der Wirklichkeit selbst.

Dabei kann man künstlerisch solche Prozesse neu initiieren oder man kann in schon laufende Prozesse eingreifen. Ein Beispiel für das erstere wäre Beuys' Aktion *7000 Eichen – Stadtverwaltung statt Stadtverwaltung* bei der Documenta VII (Kassel 1982). [...]

In solchen Fällen übergibt die Kunst sich Prozessen, die, wie bei Wirklichkeitsprozessen üblich, von selbst weiterlaufen. Nach einiger Zeit wird man oft nicht mehr wissen oder nicht mehr erkennen können, dass dabei Kunst ihre Hand im Spiel hatte. [...]

Dies scheint mir, wie gesagt, der einzig mögliche Fall zu sein, wie Kunst tatsächlich in die Wirklichkeit verwickelt sein kann. Sie kann es nicht, indem sie in der Wirklichkeit Stücke kreiert (Werke), sie kann es nur, in dem sie sich in Prozesse der Wirklichkeit hineinbegibt und in diesen gleichsam auf- oder auch untergeht.

Dies bedeutet freilich auch, dass der Kunstcharakter hier zunehmend verschwindet. Oder besser: dass er sich transformiert, nämlich weg vom konventionellen Sinn von Kunst, der auf autonome Werke zielt, hin zu einer künstlerischen Anregung oder Impulsgebung in der Wirklichkeit. Die Wirklichkeit wird durch den künstlerischen Input energetisiert und intensiviert, und sie schlägt Wege ein, die ohne diese Anregung nicht entstanden wären — wobei der ursprüngliche künstlerische Input sukzessiv weniger kenntlich werden und am Ende ganz verschwinden kann (oder wo allenfalls das Ensemble von Künstlichkeit und Wirklichkeit als wirklicher Prozess weitergeht).

[...]

Wenn ich mich nicht täusche, bezeichnet dies eine Suchrichtung (und vielleicht auch Sehnsucht) etlicher Künstler seit Jahren.

(Welsch, 2016, pp. 101–102)

DISCLAIMER

CompositionCloud is constantly changing.

Thinking about *CompositionCloud* changes it, as does writing (and reading) about it.

This book, finalized in April 2018, is therefore only an ephemeral attempt (as the previous one)* to introduce readers to *CompositionCloud*.

CompositionCloud is also growing.

This book is therefore necessarily partial. (and could and should be enlarged). Will it?

*The previous attempt, *Introduction to CompositionCloud*, was written in the end of 2016 with the aim of giving readers an impression of how *CompositionCloud* works, how it is communicated, and what it is as a whole. It has two versions: the first one was translated into German by Jakob Ullmann and published under the title “Austausch und gemeinsame Nutzung von Ideen” in MusikTexte 152, the February 2017 issue of the new music magazine MusikTexte; and the second one was revised after an email correspondence with James Saunders and is available online on *ccloudblog*, a blog about *CompositionCloud*, see <https://ccloudblog.com>. Note that this book can be [is] considered a third version of *Introduction to CompositionCloud*.

CompositionCloud

a virtual space
for storing, processing,
and sharing
(compositional) ideas.

The expression
“a virtual space for storing,
processing, and sharing ...”
refers to the virtual spaces
currently used ubiquitously for
storing,
processing,
and sharing
data,
clouds , or more technically,
cloud computing,
a term popularized by
Google and Amazon
in 2006:

“What’s interesting
[now] is that there is an
emergent new model ...
It starts with the premise
that the data services
and architecture should
be on servers. We call it
cloud computing — they
should be in a ‘cloud’
somewhere.”

(Google CEO Eric Schmidt,
August 9, 2006, Search Engine
Strategies Conference)

Note that MIT’s magazine *Technology Review*
discovered that the term was coined, in fact,
a decade earlier by a Compaq marketing
executive named George Favaloro and a young
technologist named Sean O’Sullivan:

“Favaloro ... dug out a paper copy of a
50-page internal Compaq analysis titled
'Internet Solutions Division Strategy for
Cloud Computing' dated November 14,
1996 ...

O’Sullivan located a daily planner, dated
October 29, 1996, in which he had jotted
down the phrase
”

(Regalado, 2011)

‘Cloud
Computing:
The Cloud
has
no Borders’

Of course, clouds in this context are metaphors as well.

Historically, the origin of the term goes back to how network engineers graphically represented large unknown networks in their network designs. While all other devices and connections in a network were described in great detail, when information was sent to or received from the Internet, the exact destination or source was unclear. It was *cloudy*.

The Internet has also other cloud-like characteristics:

it is a network of networks made up of highly distributed and densely interconnected particles (hence, resembling also the structure of a rhizome), and it has an amorphous shape that is constantly changing.

Such a graphic representation, dating from 1977, can be seen at <http://www.computerhistory.org/internet/history/1970s/>.

Paul Baran's "On Distributed Communications Networks" is often considered to be the origin of the structure of the Internet. Driven by the Cold War fear of a nuclear attack, Baran proposed a distributed network topology, in which a network can continue to function even after part of it has been destroyed.

CompositionCloud's concept of the
cloud
draws on all of these connotations:
it is a container,
an abstract space to be filled with
interrelated ideas,
a work in progress having the form of an
ever-changing conglomeration,
a rhizome
in the state of
constant flux.

"Thinking literature begins in
destroying literature"
(Ghosh, 2016, p. 8)

The rest of
Ghosh's sentence describes
what is meant by "destroying
literature", that is, "an
experience of the impossible
through excess, singularity, and
eccentricity".

CompositionCloud begins in
destroying composition,

even though "destroying
composition" is obviously
impossible.

CompositionCloud begins
in destroying composition
because it is through this
doomed-to-failure attempt
that it defines its concept of
composition.

Trying to destroy
composition reveals
singularity and eccentricity,

that is, what is left of composition, is
the unique and strange,
that that we did not think
of as
composition before.

as well as excess.

in other words, composition is
inevitable;
even the very act of destroying
composition is composition (the
composition of "destroying" and
"composition").

CompositionCloud begins
in **putting composition in
parentheses,**

(compositional) ideas

outcomes
and/or conceptions of
(compositional)
activities.

compositional

Of or pertaining to composition.

(OED Online, 2018)

composition

I. [As an action]

9. The action or act of composing music.

(OED Online, 2018)

(compositional)

of or pertaining to an extended concept of composition, informed by the blurring between art and life, and by the notion of art as life: art as something ungraspable and indefinable.

"compositional" is placed in parentheses to represent that (compositional) ideas are not only the outcomes and/or conceptions of activities that are normally associated with composing music:

in *CompositionCloud*, (compositional) ideas could be basically *anything*,

including found objects,
musical instruments,
drawings,
texts,
videos,
computer programs,
games,
etc.

"[M]usic is ... ultimately [a] revisable art form that, when radically conceived, exceeds any strict adherence to specific mediums or material forms including sound itself. [... To] deploy forms of composition [is to] recognize a broader need to put together and assemble, to construct and compose radical forms of commonality."

(Barrett, 2016, pp. 5-6)

composition

I. [As an action]

1. The action of putting together or combining; the fact of being put together or combined; combination (of things as parts or elements of a whole).

2. The forming (of anything) by combination of various elements, parts, or ingredients; formation, constitution, construction, making up.

(9. The action or act of composing music.)

(OED Online, 2018)

Barrett is drawing from Bruno
Latour's "An Attempt at
'Compositionist
Manifesto'
".

Latour is attracted to the word
"composition" because "it underlines
that things have to be put together"
(Latour, 2010, p. 473).

"Above all", Latour claims that
(his) 'compositionism' "draws
attention away from the irrelevant
difference between what is
constructed and what is not
constructed, toward the crucial
difference between what is *well*
or *badly* constructed, *well* or
badly composed". "What is to be
composed", he says, "may, at any
point, be *decomposed*"

(*ibid.*, p. 474).

How is one to address this
difference?

"always locally and practically"
(*ibid.*, p. 488)

, **temporarily.**

One should not hesitate to leave;
one should not hesitate to change;
one should not hesitate to
decompose;
one should not hesitate to
compose:

this flexibility is inherent to
CompositionCloud.

"[O]ne should not hesitate to leave
behind sound as an autonomous
medium. Our real work, after sound
and art, begins by composing radical
collective formations of bodies, times,
and spaces."

(Barrett, 2016, p. 167)

the subjectivity
and ephemerality of
(compositional) progress
are *CompositionCloud*'s
starting point.

That is to say

One should not hesitate to leave **well**;
one should not hesitate to change
well;
one should not hesitate to decompose
well;
one should not hesitate to
compose **well**

[(compose) well;
hesitate well]

even if **well**
is no longer
well; even if
it has never
been well,

[even if it
has been
badly]

still,
following one's
true sense of
(composing) well
does matter:

it allows
one to
change

why i stopped writing “pieces”

as far as i can remember, it was on a flight to Singapore in summer 2013 that for the first time i was contemplating deeply the initiation of CompositionCloud. it seems difficult to describe now the exact image i had back then, presumably because the image was too obscure to be recorded in my memory. what i can accurately recall, however, is that i was imagining an infinite, never-ending project, a work in progress that could encompass and connect everything i would find musically interesting.¹

in addition, i was also driven by the need to resolve what seemed to me an inherent contradiction between my view of art (and music) as something ungraspable and indefinable, and the necessity of bounding ideas (often fetishizing them)

¹in the end of 2014 i discovered that a project motivated by similar ambitions was realized by John Cage for some time between 1953 and 1956. here is a description of Cage’s project by James Pritchett: “Cage’s plan was to compose many independent pieces for various media, each of which could be played as a self-contained work in its own right, or could be performed together with any number of the others. Such an open work could be added to constantly — since the ensemble would not be fixed at any time, the total need never be ‘finished’, but would remain a work ‘in progress.’ This large-scale project occupied Cage at various times during the period of 1953 until 1956, at which point he dropped the plan altogether and moved on to other concerns. In the course of these three years, however, Cage produced a number of pieces which represent partial realizations of his original plan. These are: six short pieces for a string player (1953), an unfinished work for magnetic tape (1953?), an unfinished work for voice (1953?), *34’ 46.776” for a pianist* (1954), *31’ 57.9864” for a pianist* (1954), *26’ 1.1499” for a string player* (1955), and *27’ 10.554” for a percussionist* (1956).”

(Pritchett, 1993, p. 96)

[[in terms
of "pieces"]]

“In the end
I hope to leave
readers with
the specific
feeling that
speaking about
music in terms
of works is
neither an
obvious nor
a necessary
mode of
speech”
(Goehr, 2007,
p. 243)

“For me, every attempt to bring a work to a close
after a certain time becomes more and more

when they are to be turned into “pieces”, a term i use for denoting artistic artifacts that pretend to be complete, autonomous, and timeless. my main concern was, accordingly, to find a framework that will keep artistic artifacts open, related, and temporal.

to clarify, let us consider the following questions:

we experience art.

- must we know what is the “piece” we experience?
- must we know when it began and when it will end?
- must we be able to distinguish between what is part of it and what is not?

often, we tend to say yes. we want to know what is the “piece” we experience, when it began and when it will end, and what is part of it and what is not.

but what if we answer “no” or “not necessarily”?

of course, in order to experience art, we must first be aware that there is art to be experienced; *something* has to be shared.² nevertheless, we do not have to know exactly what it is (we can speculate), or when it began and when it will end (we can wait). we might also be confused in regard to what is part of it and what is not, but we could still experience art if we recognize that there is something artistic in what we experience (a banal example: an uneducated listener listening to an orchestra tuning up before playing a “piece” as the “piece”).

with the above in mind, i searched for ways to realize (or to

²experiencing art completely voluntarily without anything being shared (if that is possible) might be an exception to that, or at least a limit to be explored.

forced and ridiculous. I am looking for ways of renouncing the composition of single works and—if possible—of working only forwards, and of working so ‘openly’ that everything can now be included in the task in hand, at once transforming and being transformed by it; and the questing of others for autonomous works just seems to me so much clamor and vapor.”

(Stockhausen in Wörner, 1973, pp. 110-111)

“WITH THIS STATEMENT, Stockhausen articulates the impulse to create a modular composition. That a piece could be flexible and subject to constant change between performances was beginning to become relatively well-established as an idea; [...] the notion that such an approach could form a complete compositional method was not. Even though works might be internally flexible, generally they had limits and were deemed complete (in terms of their composition) following the composition of all component parts and the structural format which bound them. What if this was not the case though, and a piece became continuously extensible so as to form a complete compositional method encompassing all of a composer’s work?”
(Saunders, 2008, pp. 152-153)

I found this statement by Stockhausen in December 2015, quoted by James Saunders in his “Modular Music”.

I could sympathize with it.
(Perhaps with the exception of “working only forwards”, as for me looking back is also part of working forward.)

CompositionCloud’s open-ended concept of composition corresponds to “working so ‘openly’ that everything can now be included in the task in hand”. The wish to interrelate ideas within *CompositionCloud* corresponds to “transforming and being transformed”.

Furthermore, the search after “ways of renouncing the composition of single works” eventually led me to stop writing “pieces” and initiate *CompositionCloud*.

Saunders’ “Modular Music” draws on

begin realizing) (i stopped writing “pieces”, but
 (i did not stop writing
 why
 i (also not re-writing).)
 stopped
 writing
 “pieces”
 continues
 on pages
 28–29.
)

“Writing is an experience of metamorphic transformation. It makes one feel that ideas are not the author’s, that they demand some kind of cerebral—that is, bodily—contortion that defeats any preformed intention. [...]

It could even be said that writing is what gave transformative forces a particular mode of existence—that of ‘ideas.’”

(Stengers, 2012)

“pieces” are the outcomes of a very particular transformative force, that that is rooted in the **desire to preserve and perfect** ‘ideas’. To preserve and perfect them until they are almost frozen.

modular product platform theory, with the aim of setting out principles for the design of a modular composition method.

Saunders provides examples of various implementations of modularity within object art, literature, and music, as well as an extended examination of his own modular project *#[unassigned]* (2000-9), which at the time of writing was still a work in progress.

CompositionCloud and *#[unassigned]* share a great deal in common, as both undermine the convention of what is referred to in this book as “pieces”, acknowledging that

“[t]here is a sense that the boundaries we make between any artistic objects are artificial or at least arbitrary”,

and that

“[t]he work is perhaps a convenient way for ideas to be articulated, but it is largely driven by external factors (e.g., the need to communicate ideas in the temporal domain, or through practical opportunities such as performances)” (ibid. p. 184)

There is a major difference between them, however.

Although Saunders did state in an earlier text that

“I can see many possibilities for future extensions of *#[unassigned]* alongside developments in writing for concert situations. Whether this be through developing installations, recordings, computer realisations or any other media, I do not feel constrained by the precedents

set up by the project"

(Saunders, 2004)

, in practice, *#[unassigned]*'s modules almost always took the form of one of the following:

- short through-composed fragments, usually lasting for 10-50 seconds and written for solo instruments
- actions/drones of variable duration

Moreover, *#[unassigned]* also had a fixed form of presentation, that of a live or recorded musical performance. (For example, of its over 150 versions, only one, *#0505-040606-[i]*, is described as an installation.)

CompositionCloud

an abstract rhizomatic
space
containing different ideas
to be used in modular ways
to create art, mostly in
the realms of sound and
music,
but not necessarily.

the infinite, never-ending project i was imagining.

at the time, however, i was busy with other things. after summer 2013 and before CompositionCloud, i continued writing "pieces", notably: Prism, the electronic part of Concertino, Stains, and "Just Representations?". only in December 2014 i began to work on the project, and only in March 2015 i really found how to do so. what i found was a methodology that shifted my focus from "pieces" to *ideas*: instead of writing "pieces", i add new ideas to CompositionCloud, develop existing ideas that are already part of CompositionCloud, combine existing ideas into new ideas, extract new ideas from existing ideas, and share ideas.

regarding the latter and considering the aforementioned condition for experiencing art, that is, "*something* has to be shared", the term *art piece* could be redefined as that *something* that is shared:

art piece

any (artistic) idea or complex of (artistic) ideas that is shared in social events, via social networks, or by any other social means.

(placing the adjective artistic in parentheses represents my view of art as something ungraspable and indefinable.)

ultimately, rather than "pieces", sharing ideas is intended to create "openings". receivers are invited to enter CompositionCloud through these "openings" and explore it (and eventually even contribute to it).

(so is this text.)

The methodology

When I had just started working on *CompositionCloud* in March 2015, it was empty, and the first idea I added to it was a simple methodology for regulating artistic activities, developed with the purpose of creating a basic, rudimentary link between all the ideas it will contain. Practically speaking, this methodology can be described in terms of five procedures: adding new ideas to *CompositionCloud*, developing existing ideas that are already part of *CompositionCloud*, combining existing ideas into new ideas, extracting new ideas from existing ideas, and sharing ideas.

1. Adding new ideas to *CompositionCloud*

At the beginning of the project, I was mostly occupied with the first procedure, adding new ideas to *CompositionCloud*, as with the exception of the methodology itself *CompositionCloud* was still empty. The post “new_ideas-March2015” documents the first 10 brainstorming sessions I had for coming up with new ideas for *CompositionCloud*, and figure 1 shows the outcomes of the first two sessions. The titles of the sessions are made up of each session’s date (in yymmdd format), focus,¹ and duration (randomly selected between 5 and 30 minutes). The ideas written in black are those that were developed further, and links to their more developed versions as well as explanations of their role in *CompositionCloud* are given in “new_ideas-March2015”.

Even now, almost two years later, a considerable number of ideas in *CompositionCloud* can still be traced back to these March 2015 brainstorming sessions. Using the first session as an example: idea 01, “slinky”, is listed as one of the objects to be placed on the large speaker cone of the self-made subwoofer with which *2sinNoiseLPFrLFO-sub-Ws* was played, and as an object “capable of producing noise sounds” in *objects4JamesSaunders*; idea 03, “a mute as a poetical idea: the struggle between an energy that wants to erupt and the thing that mutes it” is the origin of the expression “muted agitation” in *iS1*; and idea 05, “textual collages”, is what often results from combining imaginary sounds.^{2, 3}

New ideas were also added to *CompositionCloud* after March 2015 and were often motivated by stimuli external to it, such as my participation in different projects, workshops, and other artistic frameworks. *modularSound-Stories*, a collaborative writing experiment I started at the Donaueschingen Festival 2017, is an example of that. During the festival, I collected short sound descriptions from over 40 participants using a technique inspired by

¹Before each session, I randomly selected whether the ideas are to be limited to a specific category or topic in advance. Categories were based on arbitrary categorizations of the possible media of ideas, and topics were derived from random articles, images, scores, websites, etc. The two sessions brought here as an example are both denoted by “free brainstorming” as in none of them the ideas were limited.

²*2sinNoiseLPFrLFO-sub-Ws* is a Max patch made up of a synth, a lighting controller, and a sequencer, originally developed to animate the installation *Wechselstrom*, where it was connected to two self-made subwoofers and five lighting projectors. The collection *objects4JamesSaunders* and what I call *imaginary sounds* are discussed later in this text (*iS1* is an imaginary sound).

³At the time, I considered these ideas to be of a different category from their more developed versions, namely, to be *pre-ideas*, as apart from being numbered, they have no titles and often consist of only a single word or at most a single sentence (written here in quotations marks). At present, however, I prefer to think of them simply as ideas in a less developed state.

- see also "ccloudlab1" and
"24d24iS_es04bsPSpbVRssS2-
EPB" on ccloudblog.
- 150311 free brainstorming (10 minutes)
- 01 slinky
 - 02 structural divisions of an ensemble
 - 03 a mute as a poetical idea: the struggle between an energy that wants to erupt and the thing that mutes it
 - 04 a melody?! melodies.
 - 05 textual collages
- 150312 free brainstorming (21 minutes)
- 06 altered saxophone
 - 07 vocal practice
 - 08 intuition
 - 09 images as scores
 - 10 videos as scores [[dynamic notation]]
 - 11 imagined spaces
 - 12 randomness
 - 13 harsh high-pitched sound

Figure 1: The outcomes of the first two sessions out of the 10 brainstorming sessions documented in the post *new_ideas-March2015*.

the Surrealists' exquisite corpse: each participant was asked to continue a sound description written by another participant, who was asked to continue a sound description written by another participant as well, and so forth.⁴ Unlike an exquisite corpse, however, the description each participant was asked to continue, was not necessarily the description written by the participant who directly preceded her/him, but instead a description chosen randomly. Another difference was that after writing the description, the participant could also select if one or more of three other sound descriptions (written by other participants) could follow the description she/he had written. Accordingly, rather than a single linear sequence (as is typical of an exquisite corpse), what emerged was a network, which could then be read in a choose-your-own-adventure fashion.⁵

⁴I wrote the first sound description: "only hiss, nothing more. after a while, some short 'sh' sounds and a small crowd of people talking from far away."

⁵See also "modularSoundStories" on *ccloudblog*.

2. Developing existing ideas that are already part of *CompositionCloud*

To explain how ideas are being developed in *CompositionCloud*, several ideas will be discussed here in more detail. Idea 06, “altered saxophone”, is the origin of the *saxoschlauch*, a hybrid instrument made up of a saxophone mouthpiece and a corrugated insulation tube. Its development can be considered a linear, collaborative process, in which each stage is an improvement over the preceding one. Here is its story. First, I asked composer Giovanni Santini to borrow his saxophone. After telling him about my plans to alter the instrument, he also gave me a corrugated tube and suggested that I try to attach the mouthpiece to it. Then, fascinated by the sounds it produced, I decided to take the idea a step further and to make finger holes in the tube, and the first experiments in this direction were carried out in collaboration with saxophonist Patrick Stadler, who also played the instrument in public for the first time.⁶ Afterwards, during a presentation I gave about *CompositionCloud* in summer 2015, composer Bnaya Halperin-Kaddari suggested adding a bell to the instrument, and a revised version was designed and built after working with saxophonists Amit Dubester, Valentine Michaud, and Marc Vilanova Pinyol, and with the technical assistance of scenographer and technician Jonas Vogel. Photos of the first and revised versions of the *saxoschlauch* are shown in figure 2.

While the *saxoschlauch* is a good example of a linear development process, most of the ideas in *CompositionCloud* are, in fact, developed nonlinearly. In other words, instead of progressing through sequential steps, multiple variations of the same idea (or of variations of the same idea) are created, forming a structure that grows in multiple directions, in which ideas are not necessarily improved, but rather transformed. This is also the case in what I call *diagrams*, graphic representations of abstract information that can be interpreted as sound and music. Idea 09, “images as scores” (see figure 1) is

⁶One may take a step backward and ask how idea 06, “altered saxophone”, was selected to be developed in the first place, or even how ideas are selected to be developed in *CompositionCloud* in general. There are two answers to that: first, by intuition — for example, my fascination with the sound produced by attaching a saxophone mouthpiece to a corrugated tube — which is regarded in *CompositionCloud* as the ultimate validation of every decision; and second, in accordance with the circumstances, which were, in the case of idea 06, “altered saxophone”, my participation in the summer course of the Tzlil Meudcan Festival 2015, for which I was asked to write a piece for Ensemble Nickel: Patrick Stadler (saxophone) and Brian Archinal (percussion). As we all lived at the time in Basel, Switzerland, and could meet several times before the first scheduled rehearsals to experiment with alternative instruments, it was reasonable to take advantage of this opportunity and develop this idea.



Figure 2: In the left photo is the first version of the *saxoschlauch* (Patrick Stadler, Tzllil Meudcan Festival 2015, photo by Vardi Benesh Raviv). In the right photo is the revised version (Marc Vilanova Pinyol, *10d_6sxsch-MVP_Wsb*). `10d_6sxsch-MVP_Wsb` is discussed later in this text.

the first explicit indication of my interest in graphic notation, however, the notion of the diagram came to me only a couple of days later, in idea 20, “the many diagrams in the article”, in reference to the diagrams in a more than 120-year-old, randomly-selected article on Native American anthropology. The difference is important: the term *image* is usually understood as a representation of the appearance of something; a diagram, on the other hand, gives an insight into how something works, into how its parts are interrelated.⁷ The first collection of diagrams I created, *diagrams1-7*, was drawn with Adobe Illustrator and consisted of heterogeneous mixtures of colorful geometric shapes and traced photos, which were then developed in divergent ways: traced photos were developed in the next diagrams in the series, *diagram8*, *diagrams9*, and *diagrams10*; and the colorful geometric shapes were (are being) developed in an ongoing collection of diagrams titled *Illustrator studies*, focusing on the specific tools of Adobe Illustrator, in which nonlinear development is also explicitly evident at the level of the individual diagrams. Figure 3 is a scheme demonstrating the development process of *pen1* and its six variations: *pen1v1*, *pen1v1v1*, *pen1v1v1v1*, *pen1v1v1v1v1*, *pen1v1v1v1v2*, and *pen1v2* (note that the titles reflect the development process; “v” stands for variation).

⁷Accordingly, *CompositionCloud*’s diagrams, I believe, do not only offer a subjective stimulation, but also suggest formal structures.

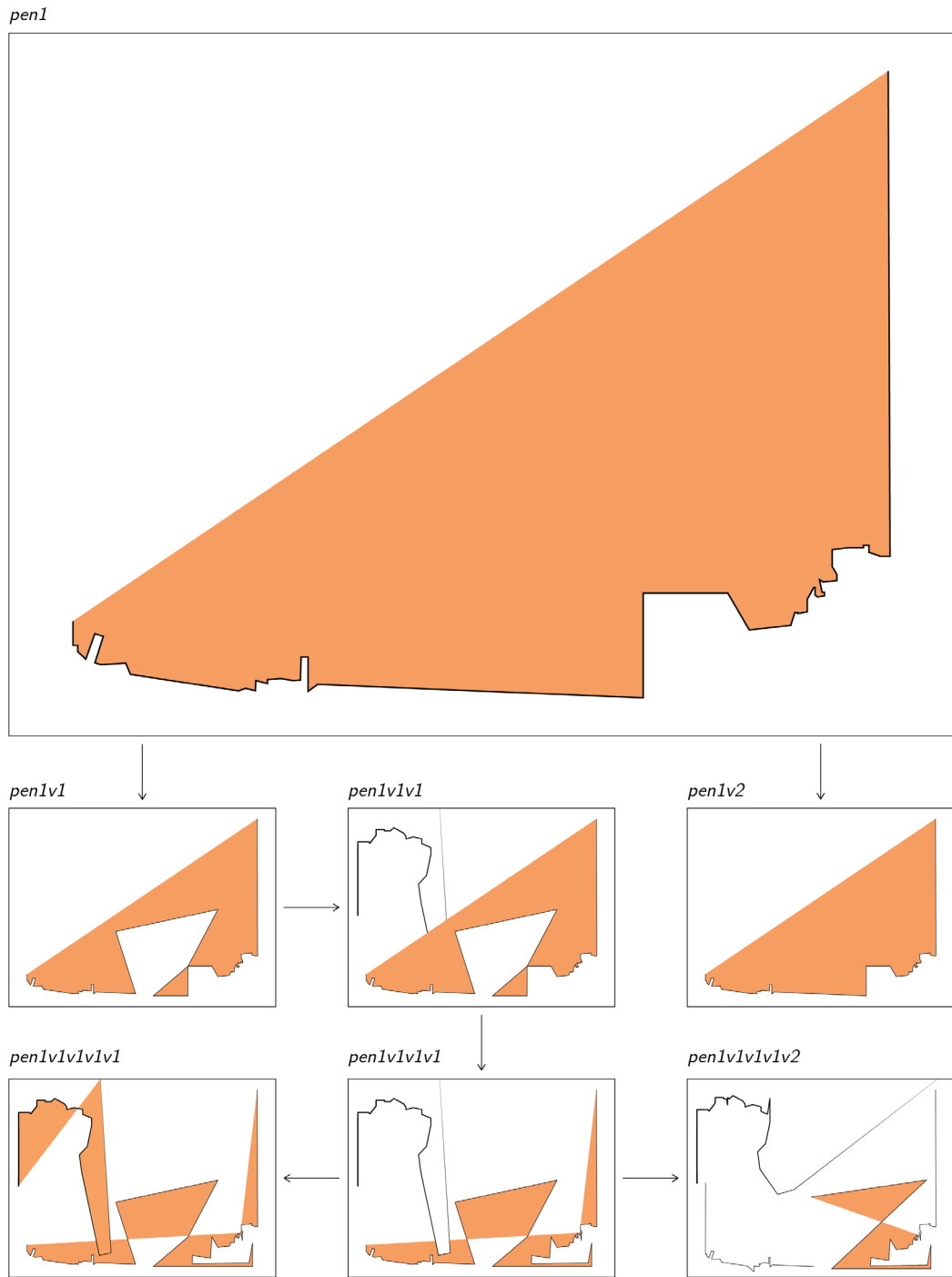


Figure 3: The development process of *pen1* and its six variations: *pen1v1*, *pen1v1v1*, *pen1v1v1v1*, *pen1v1v1v1v1*, *pen1v1v1v1v2*, and *pen1v2*.

3. Combining existing ideas into new ideas

Combining existing ideas into new ideas is the most explicit expression of modularity in *CompositionCloud*. At the time of writing this text, besides simple combinations of ideas of the same category (for example, the diagram *pen1v1v1v1polygon1*, the combination of the Illustrator studies *pen1v1v1v1* and *polygon1*), combining one or more diagrams with one or more musical instruments is the most common type of combination in *CompositionCloud*. As none of the diagrams are restricted to specific musical instruments, interpreting them also requires a decision regarding their instrumentation, which is, for the resulting music, not less important than the diagrams themselves. Therefore, in *CompositionCloud*, a musical interpretation of a diagram is always a combination of at least two ideas (the diagram and at least one musical instrument⁸). This can be done in various ways according to the circumstances and the skills and preferences of the performers involved. One example is *10d_6sxsch-MVP_Wsb*, in which 10 different diagrams are interpreted intuitively one after the other on six *saxoschl uche* of different lengths by Marc Vilanova Pinyol.⁹ Another example is *pen1v1111-ann_GPVsaxReed_dZH5*, a musical interpretation of an annotated version of *pen1v1v1v1v1* (see figure 4), in which annotations were added to the diagram in advance, defining how the abstract information represented in the diagram is to be interpreted. Annotating diagrams adds another layer of modularity, as the same diagram can be annotated differently (and at different levels of detail), or alternatively, similar annotations may be added to different diagrams. As can be seen, the titles of the combinations are combinations as well, and are made up of the titles or the abbreviations of the titles of the ideas that are combined.

⁸A musical instrument is not just a physical (or digital, in the case of computer-based musical instruments) object, but also the conception of what can or is to be done with it. This is especially relevant to self-made instruments, in which objects and materials that are normally used in one way, are used in others. In practice, these other ways of using and interacting with the objects and materials *are* the instruments.

⁹Note that *10d_6sxsch-MVP_Wsb* is not only a combination of diagrams and musical instruments, but also of the location where the musical interpretation took place, the Wettsteinbr ucke in Basel. A similar case is the video *etv-HK_Rg*, in which pianist Helga Karen was recorded practicing exercises to herself from the collection *exploring_the_voice* at Reverenzg asslein in Basel.

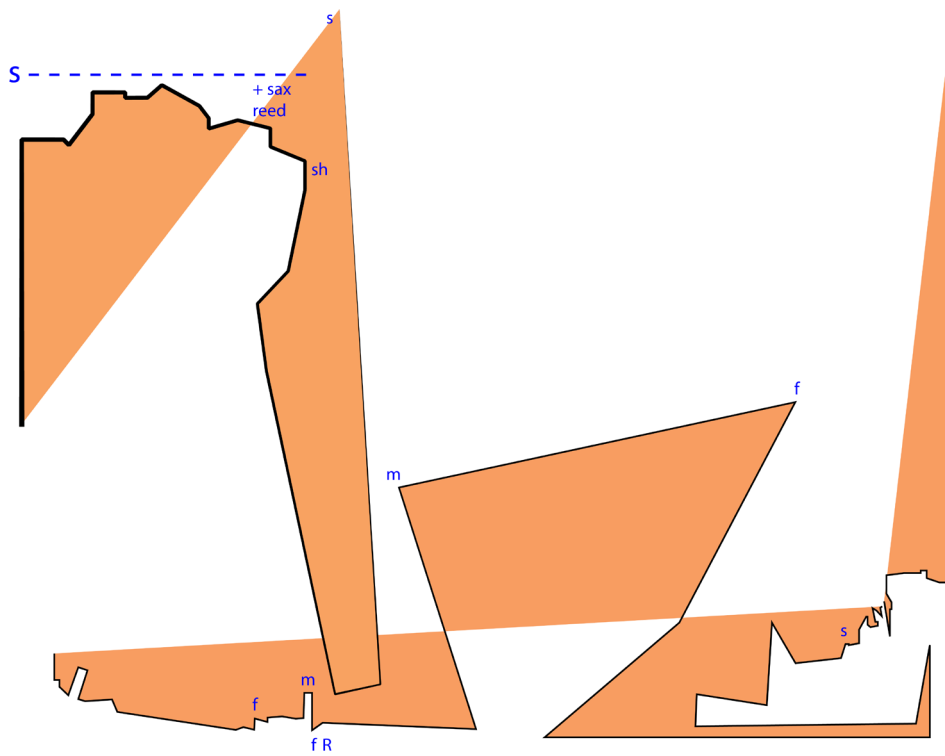


Figure 4: An annotated version of $pen1v1v1v1v1$.

4. Extracting new ideas from existing ideas

The modularity of *CompositionCloud* is reflected also in the fourth procedure, extracting new ideas from existing ideas, which is based on my belief that there is no such thing as an indivisible idea. Any idea in *CompositionCloud* can be modularized, or to put it differently, considered an implicit combination from which new ideas can be extracted.¹⁰ This does not have to be done mechanically, and ideas may be transformed through the process of extraction. An example of that is *objects4JamesSaunders-x1*, an extract of the collection of objects *objects4JamesSaunders*, which was compiled for a workshop with composer James Saunders at the Hochschule für Musik Basel on December 8, 2015. Besides being a subset of the original collection, the objects selected for *objects4JamesSaunders-x1* are also arranged in a particular way and form a compound musical instrument (see figure 5). Like *objects4JamesSaunders-x1*, extracts in *CompositionCloud* are usually denoted by adding an “x” and a serial number at the end of the title of the idea from which they were extracted.

¹⁰The *saxoschlauch*, for example, is an implicit combination of a saxophone mouthpiece and a corrugated tube, but also, perhaps, of the more general idea of hybrid musical instruments, by which it can be linked to other hybrid musical instruments, such as the *pDidgeballoon*, an implicit combination of a plastic didgeridoo and a tubular balloon.



Figure 5: A photo of *objects4JamesSaunders-x1*.

5. Sharing ideas

Sharing ideas is how *CompositionCloud* is communicated. In the second post I published on *ccloudblog*, “why i stopped writing "pieces"”, I distinguished between my old conception of "pieces" as complete, autonomous, and timeless artifacts, and a revised definition of art pieces as “any (artistic) idea or complex of (artistic) ideas that is shared in social events, via social networks, or by any other social means”. The reason I changed the terms in which I was thinking, was what seemed to me an inherent contradiction between my view of art as something ungraspable and indefinable, and the necessity of bounding ideas (often fetishizing them) when they are to be turned into "pieces". The solution that I found to this contradiction was to integrate the term *art pieces* into the methodology of *CompositionCloud* as a fifth procedure: sharing ideas.

Because there are different ways of sharing ideas, each particular way may be considered to be an idea on its own. An example of that is the notion of *music for oneself*, which can be traced back to idea 14, “music for a single amateur listener performer”, as well as to my belief that art can also be experienced alone or even just be imagined. This notion was central at the event that I created for my master’s recital at the Hochschule für Musik Basel, *Music for Oneself*, where it was manifested in the form of a mobile app called *MUSIC FOR ONESELF v1* and five “images”: the app, consisting of 23 short texts arranged in a modular fashion, guided visitors through a solitary and partially imagined musical experience around the building in which the event took place, the Jazzcampus of the Musik-Akademie Basel, giving them instructions for where to go, what to listen to, and what to imagine, but also allowing them to create their own chain of events, their own imagined sound story; and the five “images”, an interactive audiovisual installation (*d9-tgoc_aCVPsG*), a performance (“*Just Representations?*”), and three videos played on laptops (*aLoneTreeReadsImaginarySounds*, *etv-HK_Rg*, and *10d_6sxsch-MVP_Wsb*), provided visitors with the opportunity to reflect on what music for oneself could be.¹¹

MUSIC FOR ONESELF v1 is also related to what I call *imaginary sounds*, texts that describe sounds using verbal metaphors, inviting readers to an imagined musical experience in which they are to use their own musical imagery to interpret the texts. In fact, 14 of the 23 texts of *MUSIC FOR ONESELF v1* are based on my own interpretation of seven imaginary sounds, transforming them into something less suggestive and more instructive by replacing the metaphors with concrete descriptions of sounds. Two screenshots of *MUSIC FOR ONESELF v1* are shown in figure 6.

¹¹See also “Music for Oneself” on *ccloudblog*.

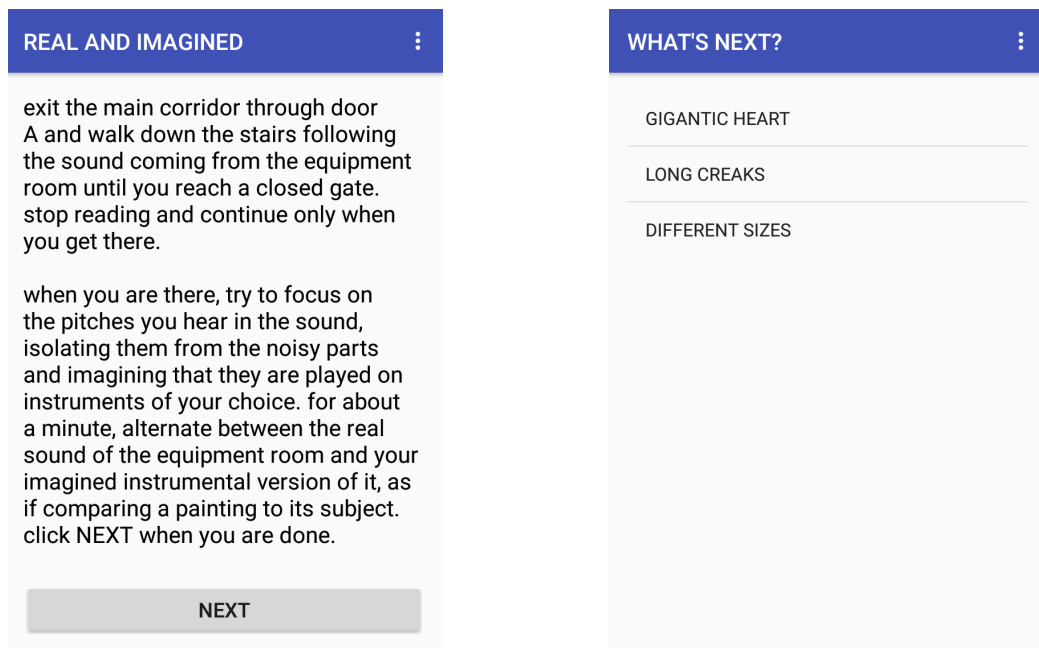


Figure 6: Two screenshots of *MUSIC FOR ONESELF v1*. The left one shows the text *REAL AND IMAGINED*, and the right one shows the options the reader receives after deciding to proceed to the next text.

Both *MUSIC FOR ONESELF v1* and the imaginary sounds reject passive consumption and require the reader to engage actively in the creation of the music (even if only in her/his own mind). Similarly, the diagrams and the self-made musical instruments encourage performers to participate creatively in the act of music making rather than simply following a recipe and executing instructions. The term *complex of ideas*, mentioned in the revised definition of art pieces given at the beginning of this section, reflects this approach and refers exactly to the moment after the ideas are shared with the performers and before they are combined. It is defined as “several ideas that are shared together as a set and are to be combined by their receivers according to provided guidelines that instruct them what to do with the ideas and point to a field of possible combinations”.¹² Of course, sharing ideas is also a bilateral activity: by interpreting *CompositionCloud*’s diagrams on *CompositionCloud*’s musical instruments, for example, performers do not only offer listeners a view into *CompositionCloud* but also contribute to the development of the diagrams and the musical instruments themselves

¹²This definition is taken from the post “d1-7_sxschVR-Nikel”, a reflection on the process of transforming the complex of ideas that I shared with Patrick Stadler and Brian Archinal (Ensemble Nickel) into a musical performance.

(as was especially evident in the case of the *saxoschlauch*).¹³ Accordingly, I like to think of *CompositionCloud* as an open source project: its development process is exposed and documented, it is made up of modules (ideas) that can be developed further and (re-)combined by other musicians, artists, etc. (either in the spirit of *CompositionCloud* or not), and all of its digital content is available online for free.

¹³Another example is *pen1v111pg1_JRpDbCCo4JSxGP2Ks*, three musical interpretations of the diagram *pen1v1v1v1polygon1* by Jon Roskilly, Carlota Cáceres, and myself, in which Jon's and Carlota's contribution to *CompositionCloud* was not only the music they created with me, but also the annotations they added to the diagram.

The information-theoretic principles to which Walsh refers are based on the work of Espen J. Aarseth, in particular his book *Perspectives on Ergodic Literature*:

“The concept of cybertext focuses on the mechanical organization of the text, by positing the intricacies of the

N. Andrew Walsh,
in his “Taxonomie ergodischer Partituren”,
ask readers to consider
“the idea of the text-based online video game for which individual users are granted elevated privileges, enabling them to add on to the original game world. It is certainly conceivable, that one might design a framework for producing musical scores within a digital environment, store them within a database, and provide a system to attach those scores to parts of a corpus already in place. Such a system, in which the users move from one ‘room’ of the score materials to another, each of which is capable of responding to acoustic input differently, and providing different types of visual stimulus, is strongly implied as a potential consummation of information-theoretic principles here outlined. A key point of interest for this system is the idea that the whole of the score materials – not only those designed by the original program designers, but those selected to be added to them as well – constitute the ‘score.’ As such no single individual author, or rather ‘composer,’ can be identified: the work is instead the product of a collaborative effort undertaken by a collective group. In such a scenario the idea of the fixed work likewise dissolves: there is no longer a single fixed score, but rather a snapshot of a particular version, from a particular time. Such works begin to assume the profile of computer programs, often identified by version number and attributed to teams of designers; they become part of a collective heritage, owned by no one person, but instead regarded as a sort of common property whose development is overseen by teams.”*
(Walsh, 2015, pp. 69–70)

*Quoted from an English version provided by the author.

medium as an integral part of the literary exchange.

However, it also centers attention on the consumer, or user, of the text, as a more integrated figure than even reader-response theorists would claim. [...] During the cybertextual process, the user will have effectuated a semiotic sequence, and this selective movement is a work of physical construction that the various concepts of 'reading' do not account for. This phenomenon I call *ergodic*, using a term appropriated from physics that derives from the Greek words *ergon* and *hodos*, meaning 'work' and 'path.' In ergodic literature, nontrivial effort is required to allow the reader to traverse the text."
(Aarseth, 1997, p. 1)

CompositionCloud

a growing network of
graphic,
verbal,
dynamic,
and interactive scores and
music games;
self-made musical
instruments
and installations;
methods of
collaboration
and participation;
and writings
that aim to
describe and reflect
on the project.

“Having imagined architecture and art of the future, the artist is now proposing solutions for **inhabiting** them. The contemporary form of modernity is ecological, haunted by the occupancy of forms and the use of images.”

(Bourriaud, 2002, p. 111)

i offer now

an opportunity to **inhabit** music and art:

CompositionCloud, an ecology
that emerges from the occupancy
of (compositional) ideas and is
realized with the use of participatory
methods.

As a whole,

CompositionCloud is the synergy that emerges from the links (the interrelations) that exist between all the ideas it contains.

I wish to expose flexible interrelations between (compositional) ideas.

Flexible interrelations form spaces that (compositional) ideas inhabit, spaces that exist on meta-levels, on levels of (compositional) difference.

"Difference, being of the nature of relationship, is not located in time or in space."

(Bateson, 1979, p. 98)

**Exposing "flexible interrelations
between (compositional) ideas"
could be compared to the rabbinic
approach to language,
in which a word is not a
"singularity, a signifier of a specific
meaning"
but an "opening" "into a fluidity of
meaning"
(Lancaster, 2000, p. 244).**

Marc-Alain Ouaknin
uses the term *designifying*, which

“[i]n the face of the totalitarian thought of texts
that are already established in a system
[is] the first task of questioning speech
[questioning speech represent[s] a guarantee against
all dogmatic speech]”:

“By ‘designifying,’

ideas oppose all semantic actualization and resist
becoming object-concepts of discourse.”

(Ouaknin, 1995, pp. 286–287)

“the totalitarian
thought of texts
that are already
established in a
system”

and

“object-concepts of
discourse”

are like

“pieces” (

pretending

to be

complete,

autonomous,

and timeless).

“designifying”

is to think of

ideas

as “living beings”,

“beings” that

grow,

transform,

and interact.

Tung-Hui Hu
describes his book,
A Prehistory of the Cloud,

as

an attempt to examine what occurs in the
gap between the real, physical technological
platform of the Internet,
that is,
the infrastructure, data centers, cables, etc.,
that bring it into existence,
and the virtual Internet,
that is,
the conception of the Internet as an infinite
virtual space, a singular “network of networks”
(“the cloud”, “the Internet”), which resembles
more a system of belief than a cold hard fact,
an imagined reality, rather than an actual
one.

“The gap be-
tween the physical reality of the cloud,
and what we can see of it,
between the idea of the cloud
and the name that we give it – ‘cloud’ –
is a rich site for analysis.”

(Hu, 2015, p. ix)

CompositionCloud, in a way, is not very
different.

the ideas *CompositionCloud* contains
and the links between them could be
analogues to the physical infrastructure of
the Internet.

our conception of *CompositionCloud*,
however,
like our conception of the Internet,
may transcend it:

by "**designifying**" (by thinking of ideas
as "living beings")

CompositionCloud has
the potential of becoming more than a
catalog of "pieces".

**It can point to an ecology of ideas,
an abstract system of interrelations,
synchronic
and diachronic,**

far away
from the concrete realizations of the ideas
"inhabiting" it.

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