

Bio | Kunst

Bio|Kunst

- **Levende materiale**



Joseph Beuys
„7000 Eichen“



Thomas Grünfeld "Misfits"





Henrik Håkansson

Ken Goldberg & Joseph Santarromana: TeleGarden



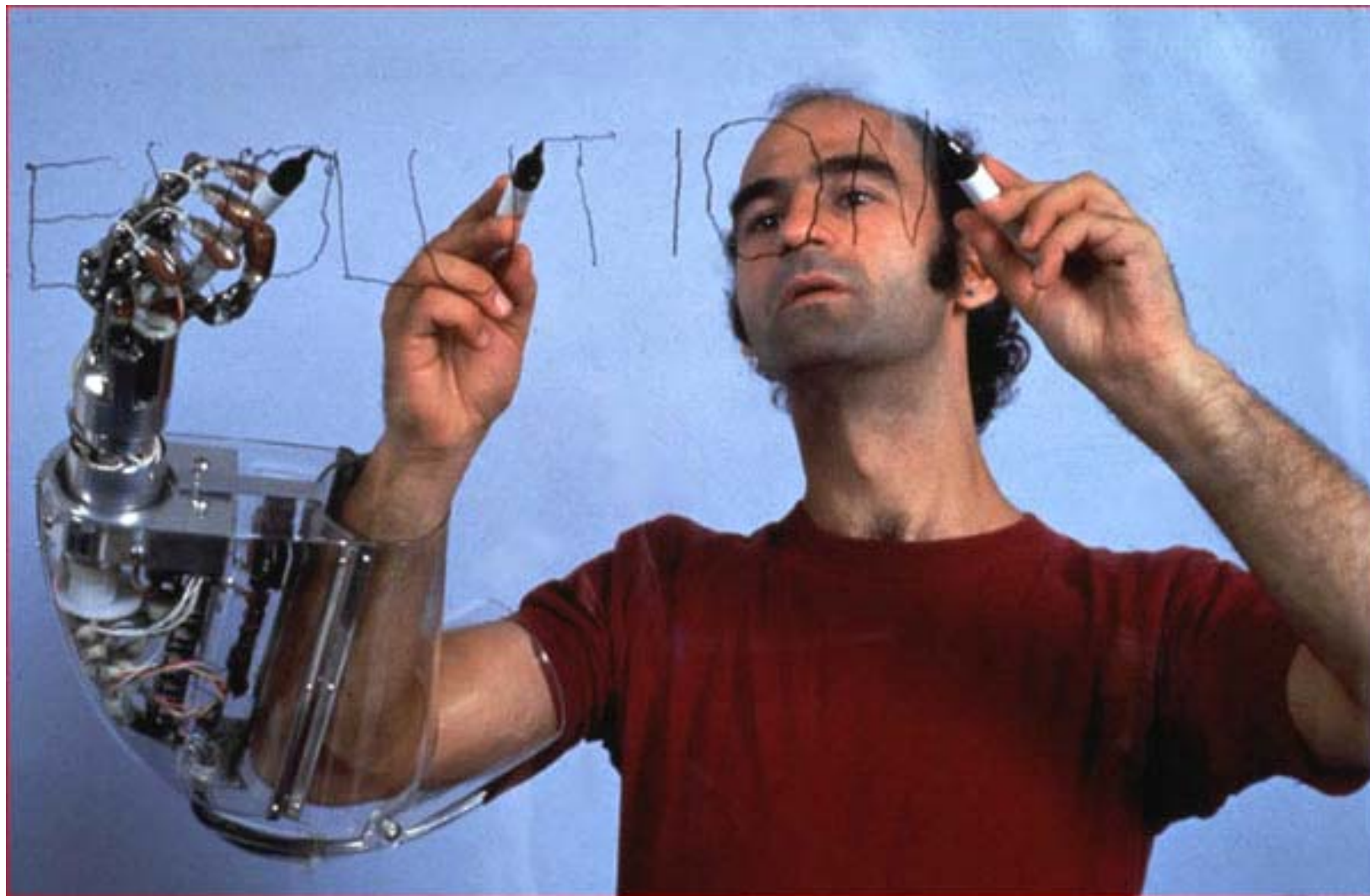
Roy Ascott: Moist media

We are simultaneously present in many realities: physical presence in ecospace, apparitional presence in spiritual space, telepresence in cyberspace, and vibrational presence in nanospace.

... The new art media is immaterial and moist, numinous and grounded, while the technoetic mind both inhabits the body and is distributed across time and space. Art and reality are becoming syncretic as these contradictions are reconciled, and differences melded.
(R.A. 2007)



Stelarc



Wim Delvoye : "Cloaka" (2000-)



Orlan



Stelarc



George Gessert



Hybrid 467
[90-36F]
Hybrid 22 (83-7D) x
Hybrid 175 (85-47C)
First bloom 1995
Flower diameter 4"
Stem 16"



Died.

Edward Steichen



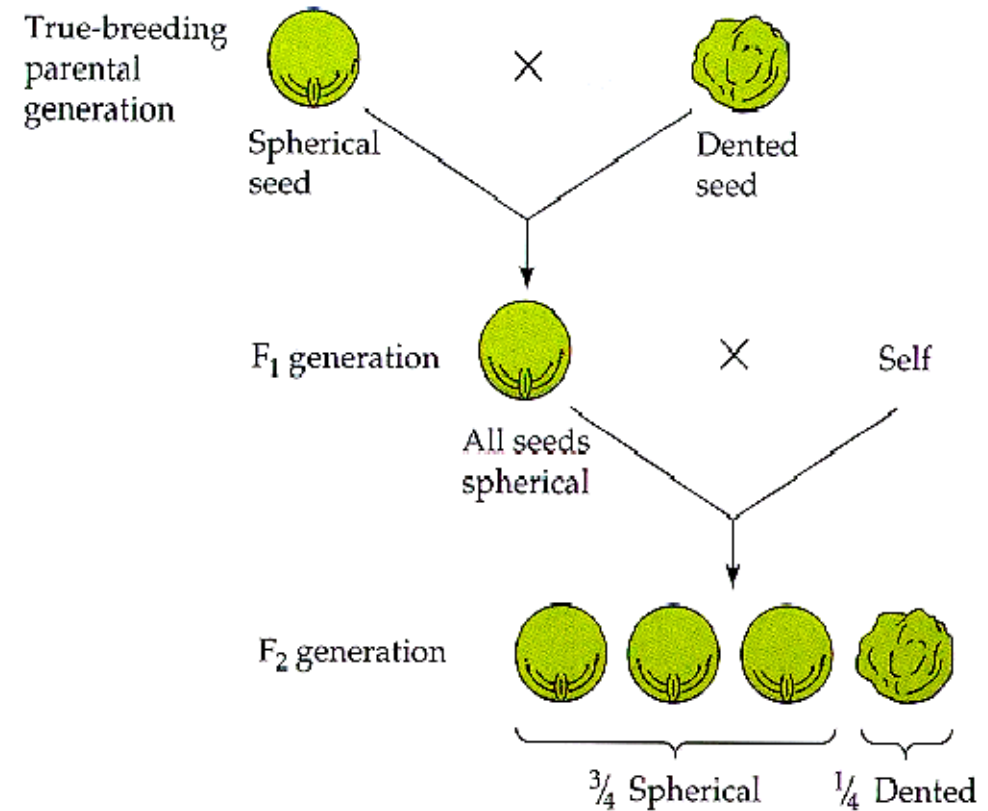
Genetisk | Kunst

Gregor Mendel

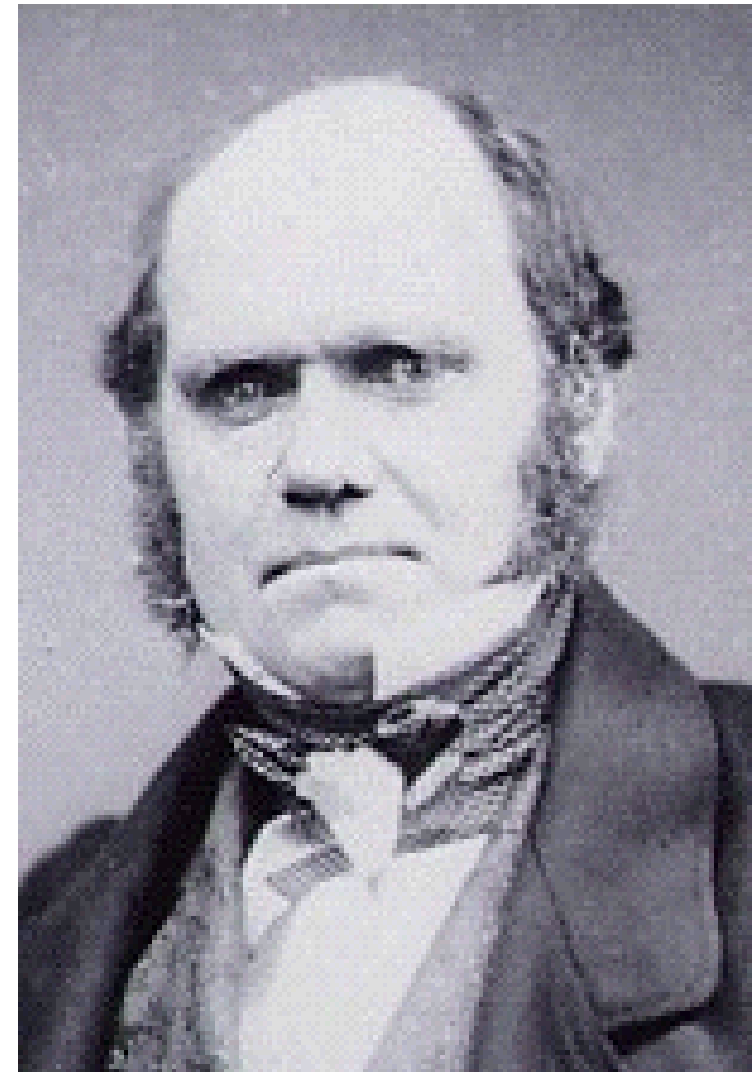
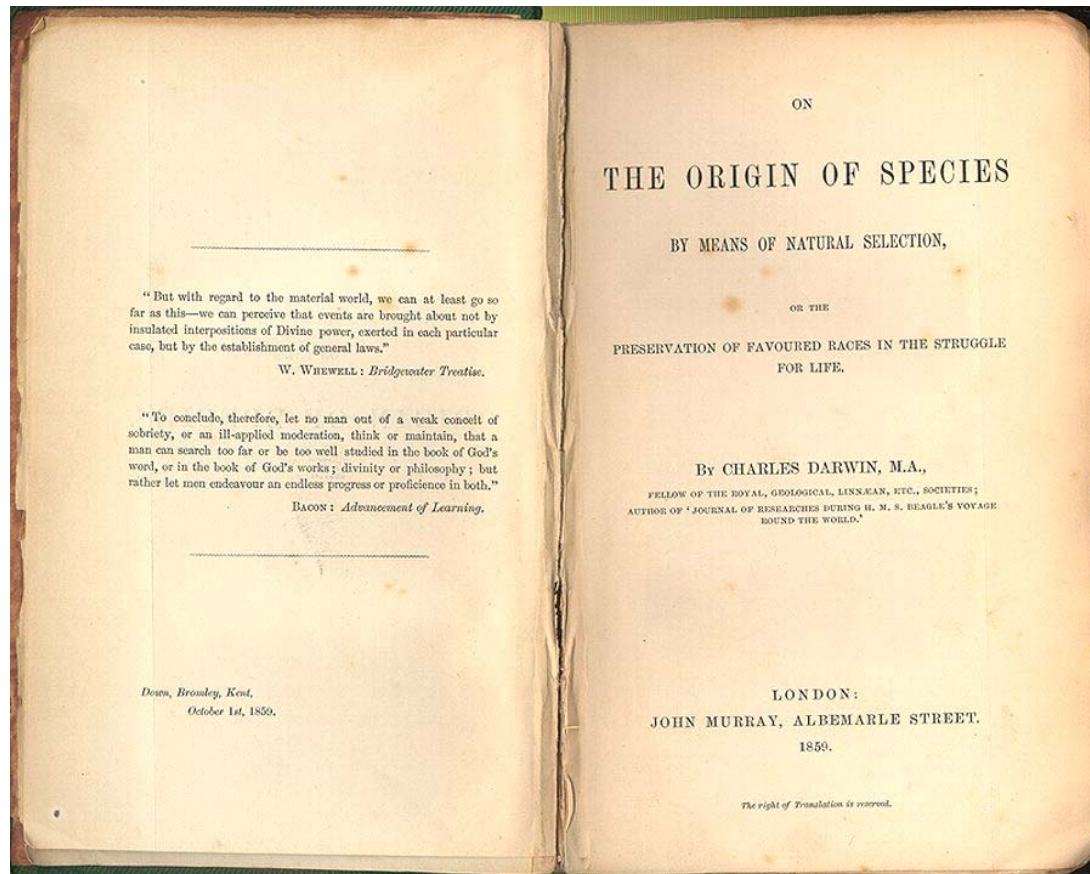
"Versuche über Pflanzen-Hybriden" (1865)



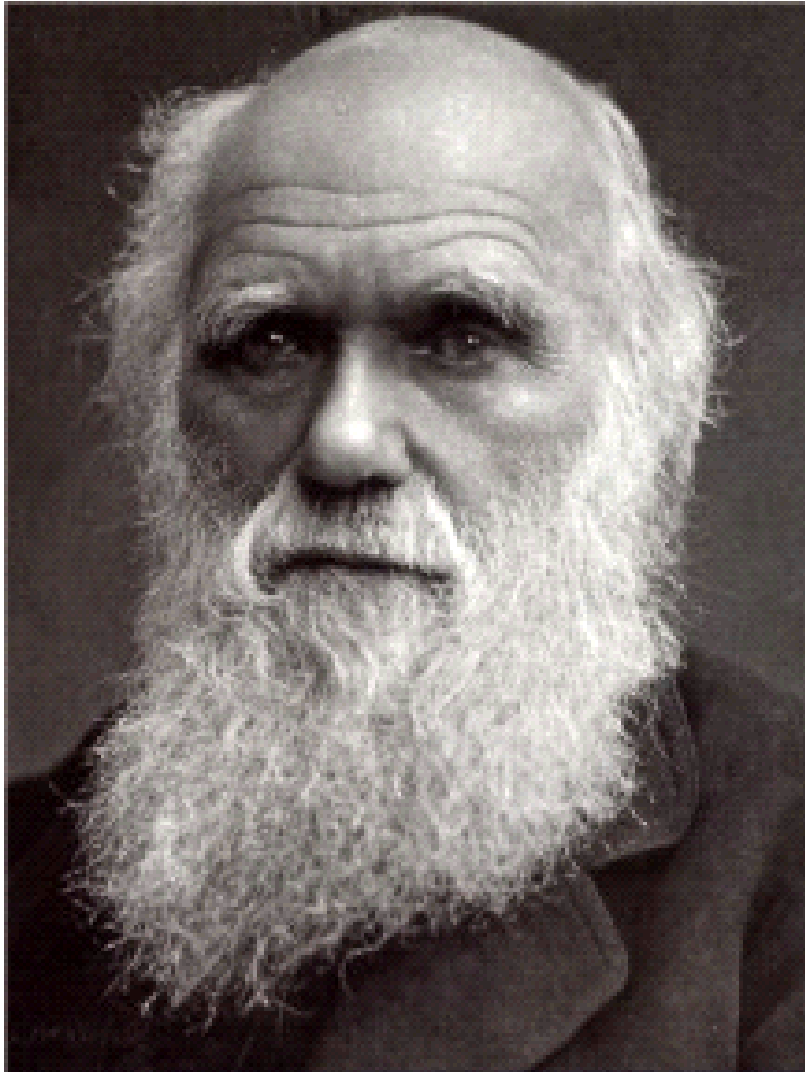
Gregor Mendel



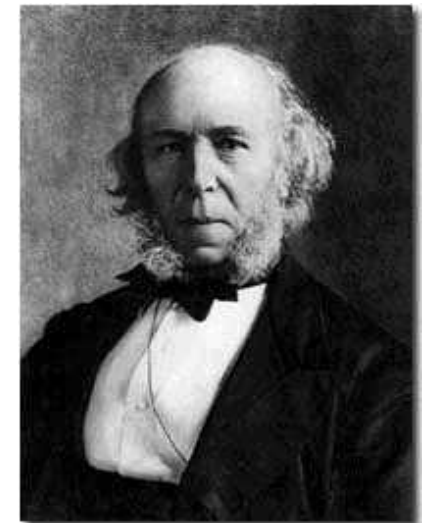
Charles Darwin



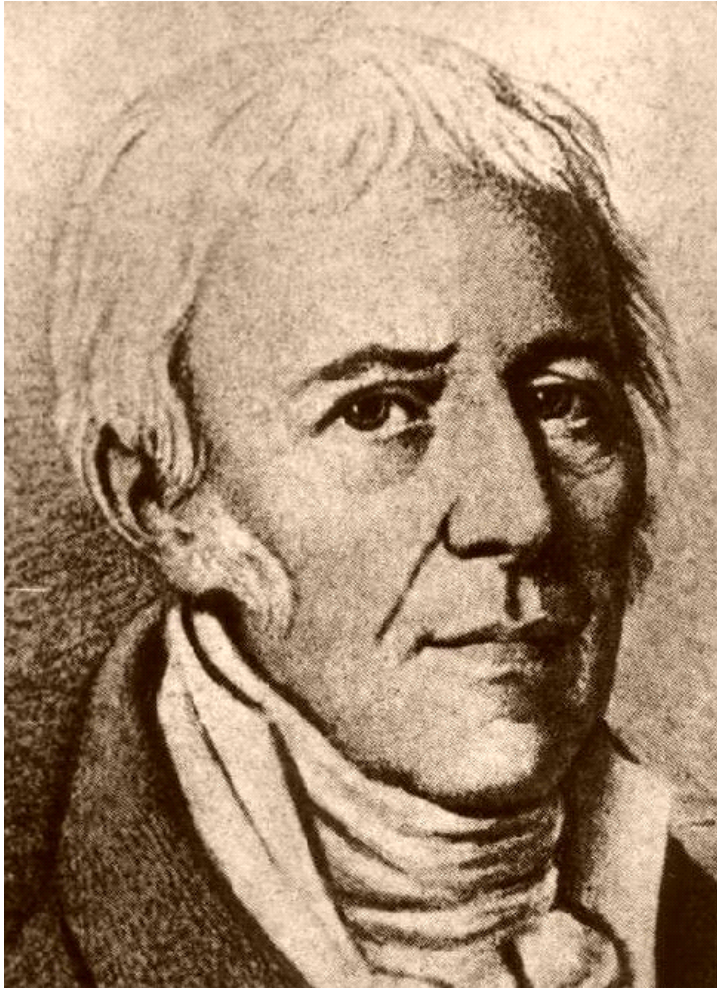
Charles Darwin



- Darwin sagde aldrig "survival of the fittest"
- **(Det gjorde Herbert Spencer)**
- **Darwin sagde "survival of those most likely to breed"**



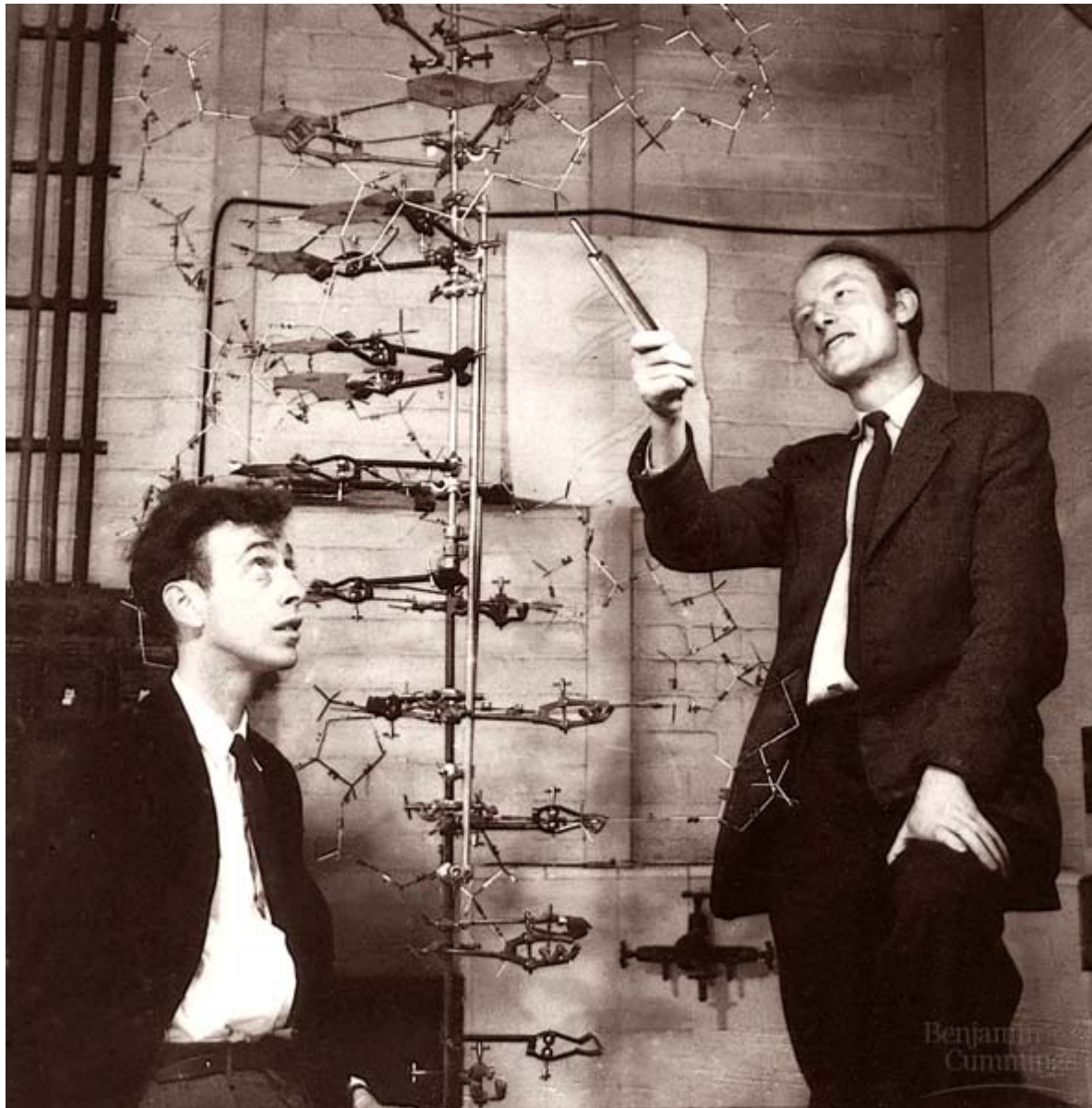
Jean-Baptiste Lamarck



DNA

James Watson
Francis Crick

1953



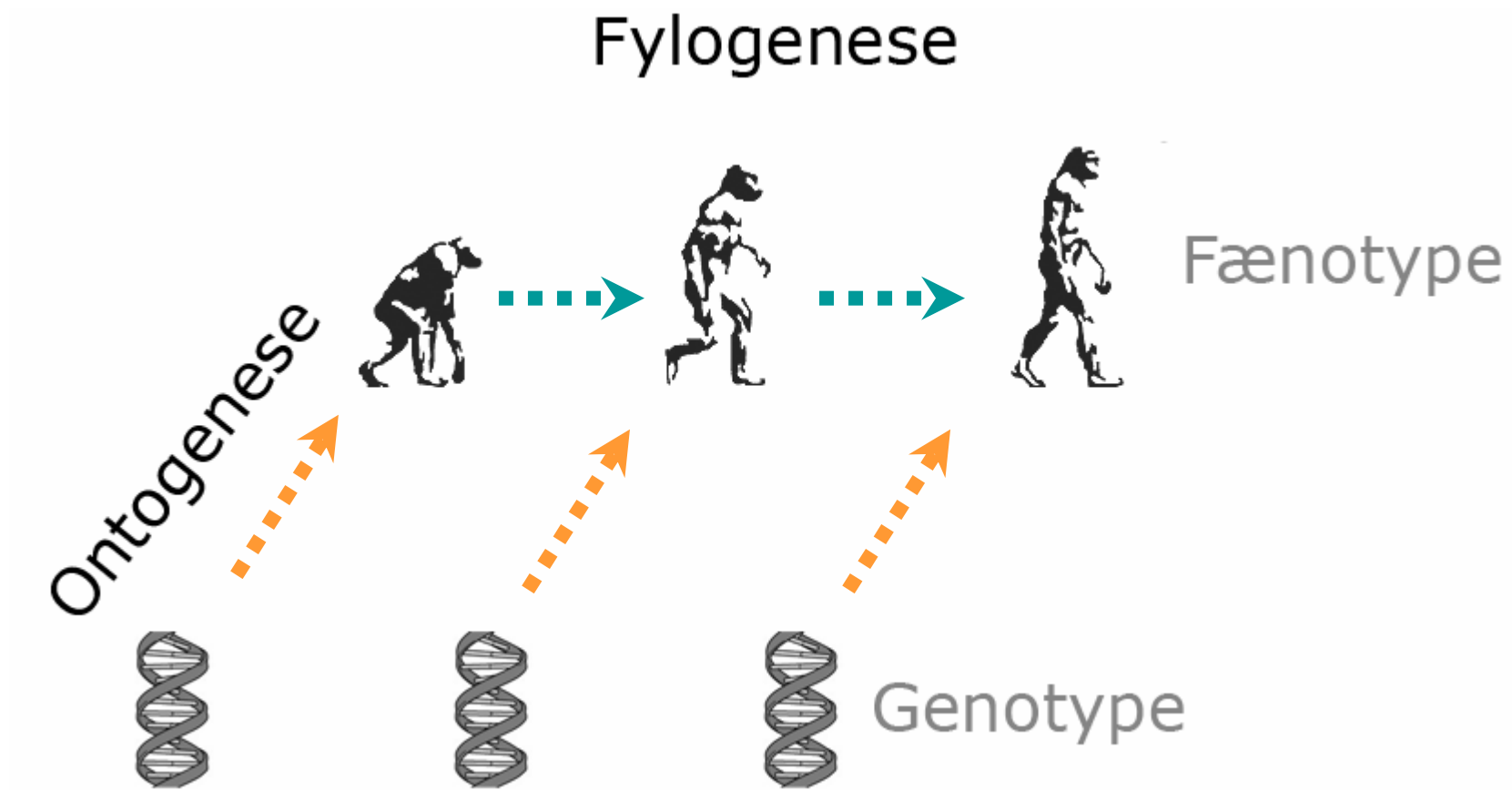
Richard Dawkins



“Det selviske Gen”
(1976)

“Den blinde
urmager” (1986)

2 x Udvikling



Genotype / Fænotype

- Genotype



Instruks
Information



Proces


Fænotype




Form

Genetiske operatører


Mutation

abcdefghijklmnop

 abc**m**efghijklmnop


Crossover

abcdefghijklmnop
 ABCDEFGHIJKLMNOP

 abcdefg**HJKLM**mnop

Inversion

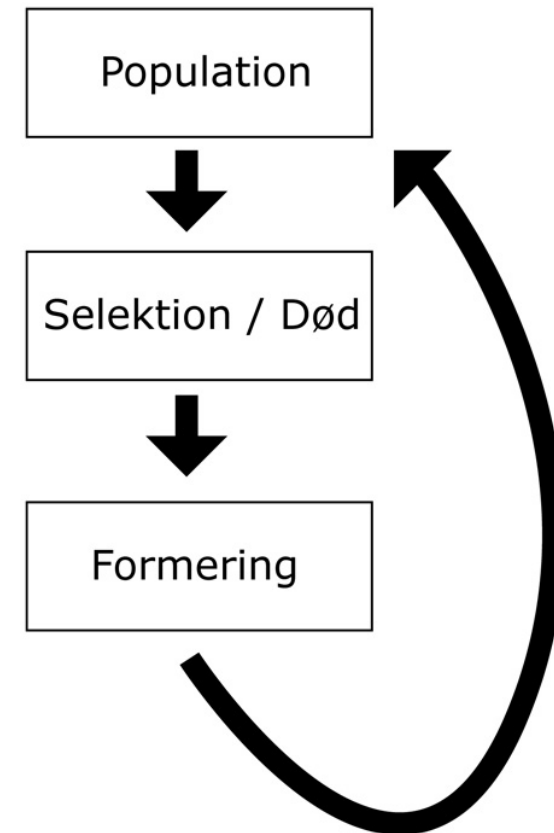
abcdefghijklmnop

 abc**gfed**hijklmnop

Duplication

abcdefghijklmnop

 abcdefg**de**fg

Evolution

- Population
- Selektion / "Fitness Factor"
- Rekombiner/muter genotype
- Fødsel (fænotype)
- Opdateret population



Peter Weibel

- Evolutionary Art
- Biogenetic Art
- Genetic Engineering
- Algorythmic Art
- Robotics
- Virtual Beings
- Artificial Art



Weibel | Evolutionary Art

- Artificial **intervention in growth processes** and structural modifications – either in the biological material itself or on the immaterial level of computer simulation

Karl Sims: Galapagos

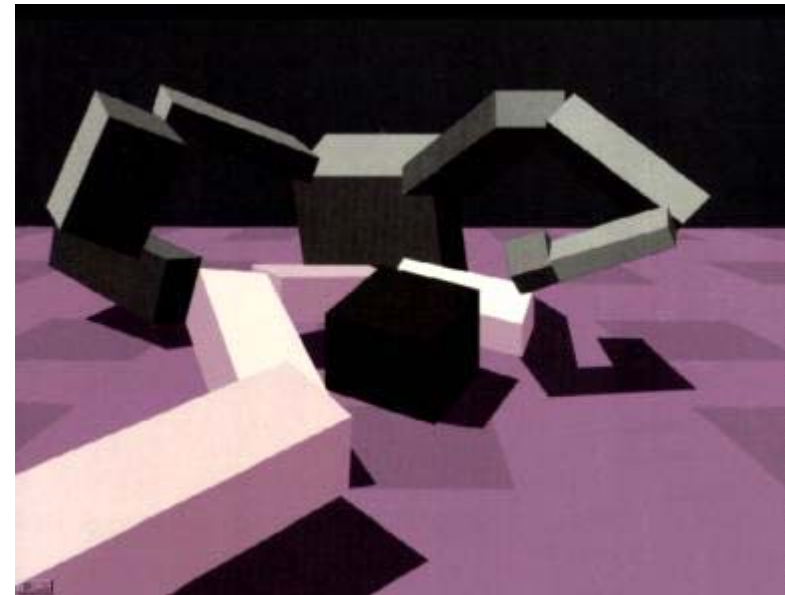
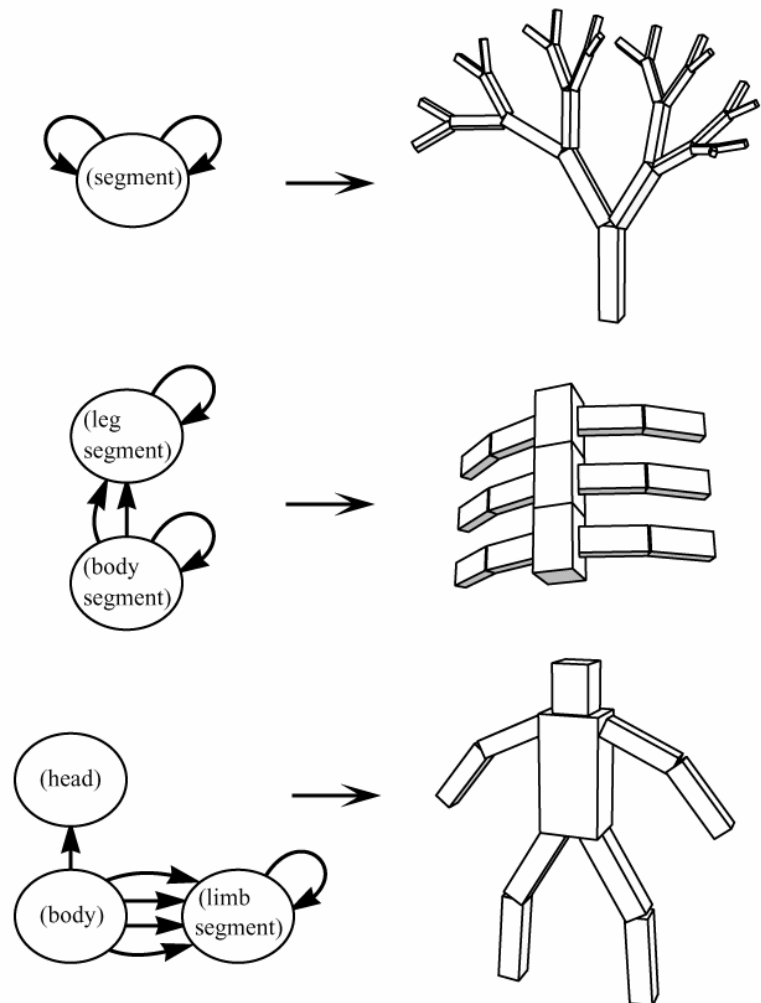


Weibel | Biogenetic Art

- Biological processes of procreation and reproduction of **different forms of life**..... – either on a biological or digital level

Karl Sims Creatures

Genotype: directed graph. **Phenotype:** hierarchy of 3D parts.



Weibel | Genetic Engineering

- **Genetic manipulation** of foodstuffs, animals and human beings.

Edouardo Kac: GFP Bunny (2000)

Alba



"Free Alba" (2001-02)



Kac: Genesis (1999)



Første Mosebog (skabelsesberetningen)

*Let man have dominion over the fish
of the sea, and over the fowl of the
air, and over every living thing that
moves upon the earth*

Tekst > Morse > DNA

Let man have dominion over the fish of the sea and over the fowl of the air and over every living thing that moves upon the earth



```

CTCCGCGTATTGCTGTCACCCCGGTGCCCTGC ATCCGTTTGTTCGCGTCGCCGTTTGTCA
TTTGGCCCTGGGCTCATTGCCCGCACTTCGCGCGCCCGCCCAATTTCCTCAAGCCCGCACC
CGCGCTACTGTCGTCATTTCCTGCGCTCATGCCCGCACTTCGTTTGTTCCTCCAT
TTGCCCTATGCCCGCACTGCCGCTACTGTCTCATTTGCCCTGGCTCAGGCCCTGC
GCTCGTCTTACTTCGCGCGCCCTGCCGTCGTTTCATGCCCGCGCTGTTTCATGCCCGCTG
TATTGTTTGCCTTGCXGCCACCTGCTTCGTTTGTTCATGCCCGCACTGCTGCTCGTGCXCC
    
```


Oversættelse

Morse har 4 tegn:

Prik, streg, kort pause, langpause

DNA "alfabet" har 4 tegn:

T,C,A,G

Morse to DNA conversion principle

DASH (-) = T

A = WORD SPACE

DOT (.) = C

G = LETTER SPACE

Installationen



UV lys

Nødvendigt for kunne se
bakterierne

Mutagen



Efterfølgende de-kodning

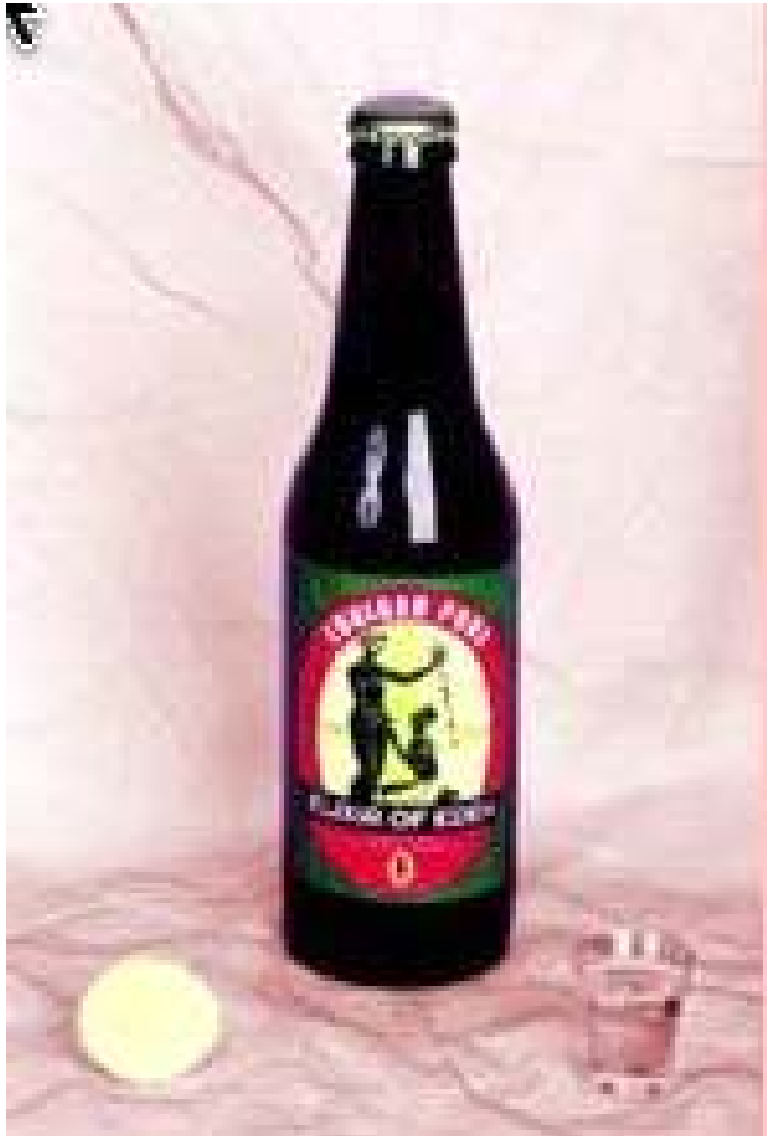
Let man have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moves upon the earth

*Let **aan** have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that **ioves ua eon** the earth*

Kac:
"Natural
History of
the Enigma"
(2003/08



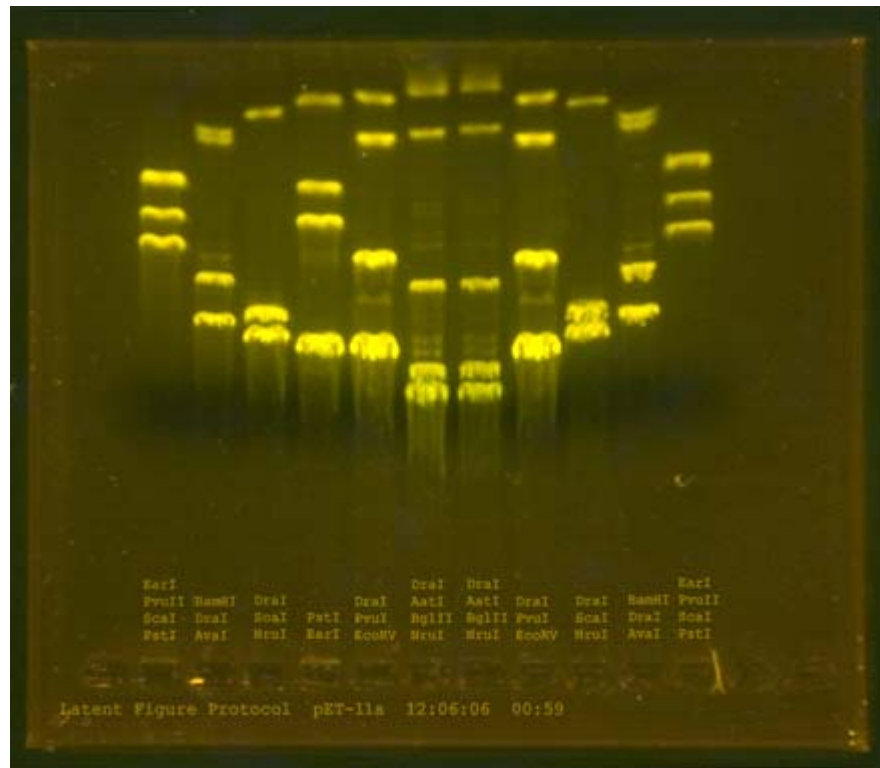
CAE & Paul Vanouse



Cult of the New Eve

Paul Vanouse

Latent Figure Protocol (2007)



Artist Talk Paul Vanouse

Torsdag d. 14. maj
kl. 17:00

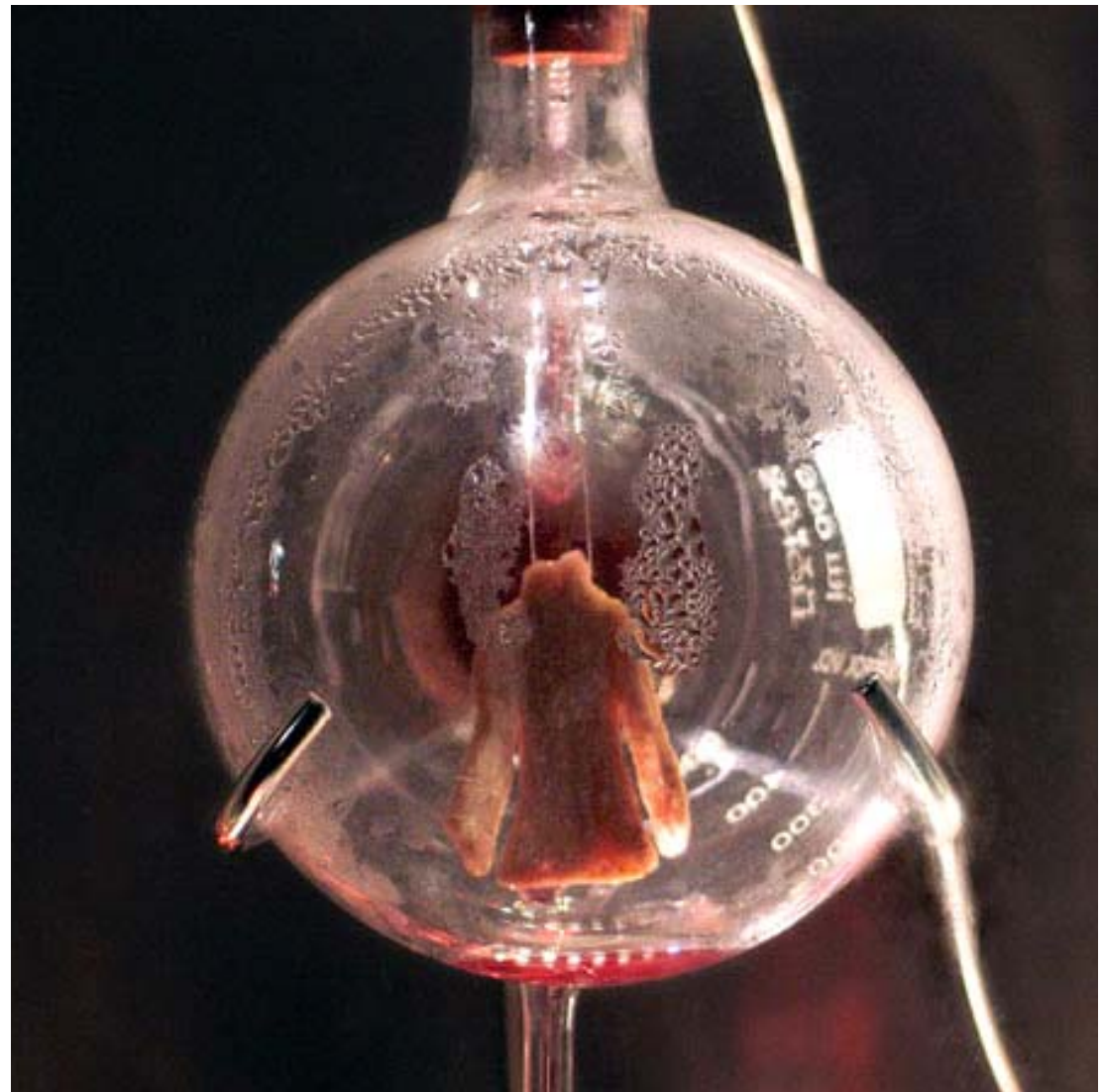
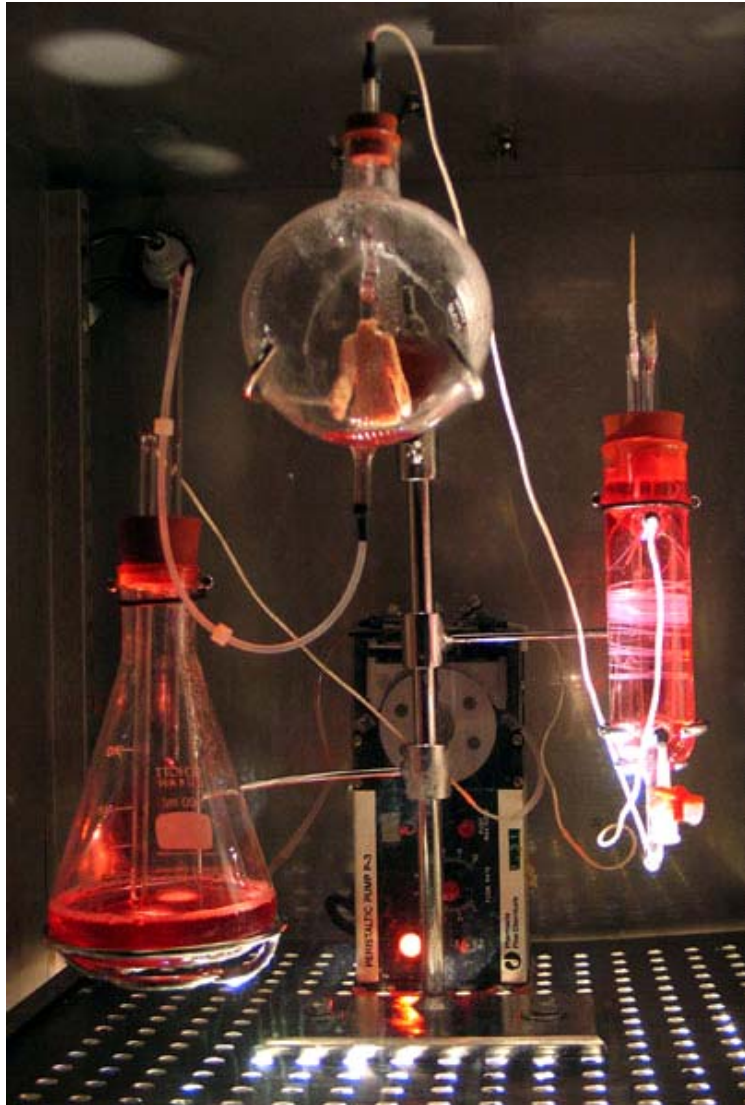
Kunsthallen Nikolaj

København

Tissue Culture: Disembodied Cuisine



Tissue Culture: Victimless Leather



Weibel | Algorythmic Art

- The life of language. **Grammars of languages constitute a creation formalism** that can be compared with the algorithm of plant growth.
- In such grammars, information is furthermore encoded in such a way that they can serve as general models.

Rekombination, Rewriting, Cut Up



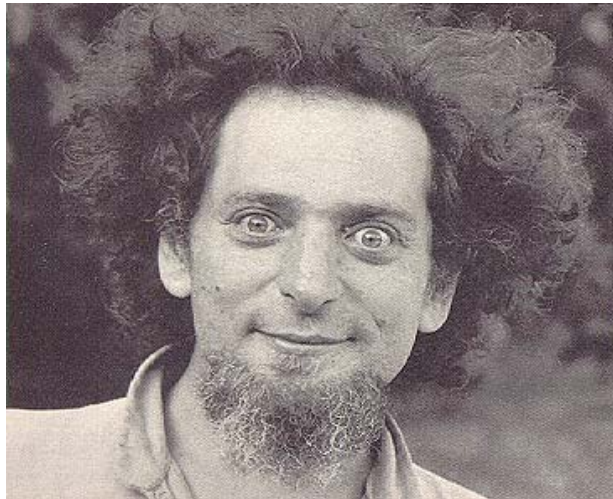
Tristan Tzara

William S Burroughs

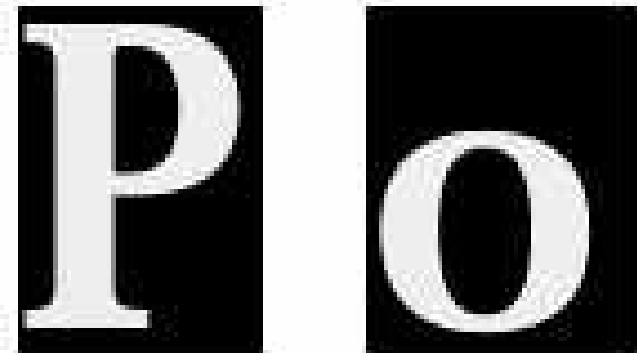
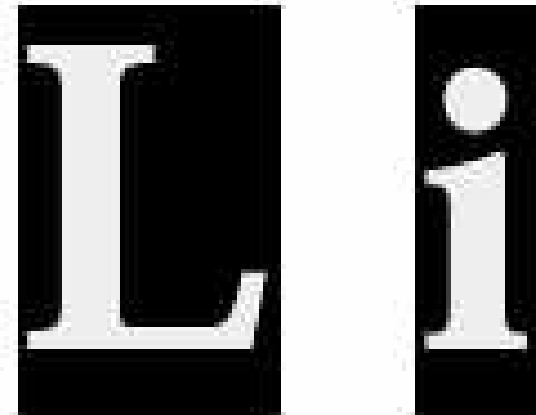
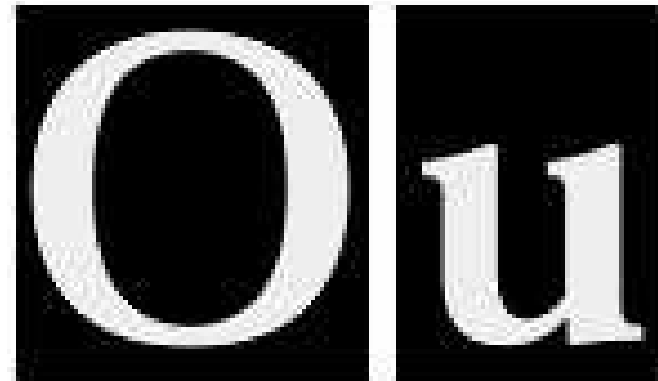


OuLiPo

Ouvroir de Littérature Potentielle,
(Workshop of Potential Literature)



Georges Perec
Raymond Queneau
François Le Lionnais
Claude Berge
Italo Calvino.



OuLiPo

**Raymond Queneau:
"Cent Mille
Milliard des des
Poèmes" (1961)**



Tomas Thøftner: Danmark er et godt nytår ("Alting A")

Nytårstale (I)

Vi ville. Fordi vi ville. Fordi vi vil. Fordi vi holdt fast. Og det gælder ikke mindst i Europa. Derfor skal vi videre. Lad os ikke glemme, ikke for at huske, men fordi dagen starter med et sundt og billigt måltid mad. Vi er blevet bredere, og vi har også oplevet en stor sorg, velfærd, afdrag på gælden og den enkelte families behov. Det er ikke længere nogens ansvar. Det er ikke sket af sig selv. Og får vi først standset den meningsløse vold, er vi som nation begyndt at se tilbage, ikke blot på året der gik, men som aktiv medspiller, med egen mening og egen indsats. Vi er som blade i et familiealbum. På billede efter billede optræder familiens medlemmer, dens venner og bekendte, til hverdag og fest, ved arbejdet og på ferie. Vi står midt i en forankring. Alligevel forstår jeg godt, hvis vi søgte tilflugt for stilfærdigt og ubemærket at samle os. De fleste af os sover nu og da, og vi har privatiseret vores sundhedspoliti. December følges op med venner og langt mere sensationsprægede dommedagsprofetier, men først

Genotype / Fænotype

- Genoty



Instruks
Information



Proces

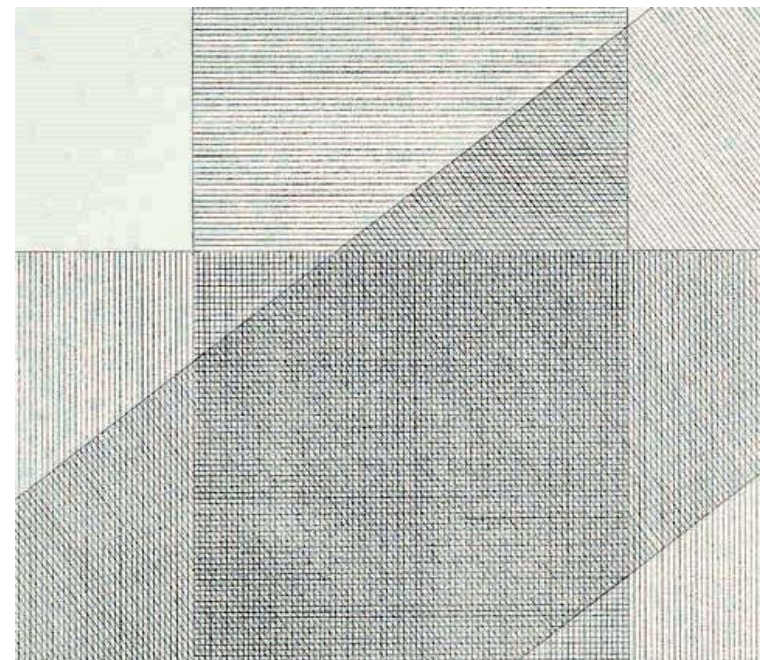
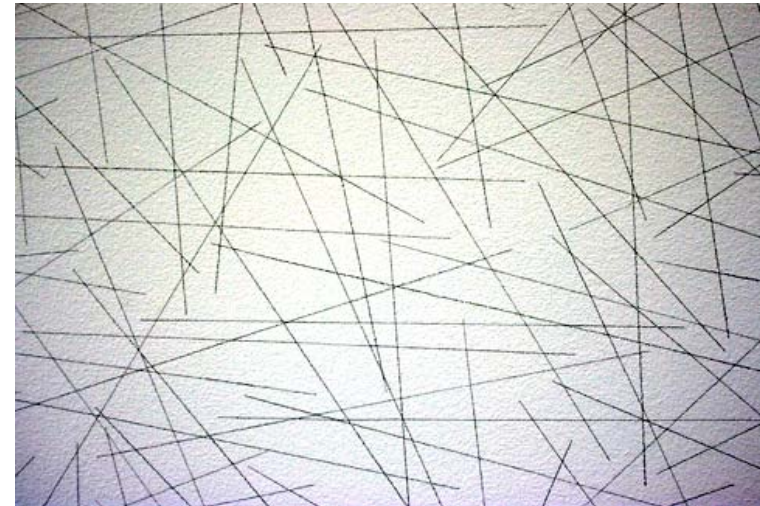
Fænotype



Form

Sol LeWitt: Wall Drawings

THE EIGHTH POINT IS LOCATED HALFWAY BETWEEN THE TWO POINTS WHERE AN ARC WITH ITS CENTER AT THE FIRST POINT AND WITH A RADIUS EQUAL TO THE DISTANCE BETWEEN THE FIRST AND THE SEVENTH POINTS WOULD CROSS A LINE FROM THE UPPER RIGHT CORNER TO A POINT HALFWAY BETWEEN THE MIDPOINT OF THE BOTTOM SIDE AND THE LOWER RIGHT CORNER.



Weibel | Robotics

- Three-dimensional, **mechanical beings** made of hard materials. These beings are characterized by a **behavior** resembling that of living organisms.

Theo Jansen: Strandbeest



Robotic Chair (1984-2006)



**Max Dean,
Rafaello D'Andrea,
Matt Donovan**

Weibel | Virtual Beings

- Virtual, **computer-simulated beings** are like the above-mentioned mechanical beings [robots] characterized by behavior patterns resembling those of living beings, or by processes of life.

Pattie Maes

- Artificial Adaptive Creature
- Software Agents
- "FireFly"



Weibel | Artificial Life

- **Machine configurations and programs** that constitute beings resembling living organisms

AI & AL

- AI: Kunstig intelligens
- AL: Kunstigt liv

- AI: 1970erne. Troen på intelligente maskiner, top-down, neurale net, ekspertsystemer, lærende systemer, store parallelle supercomputere.

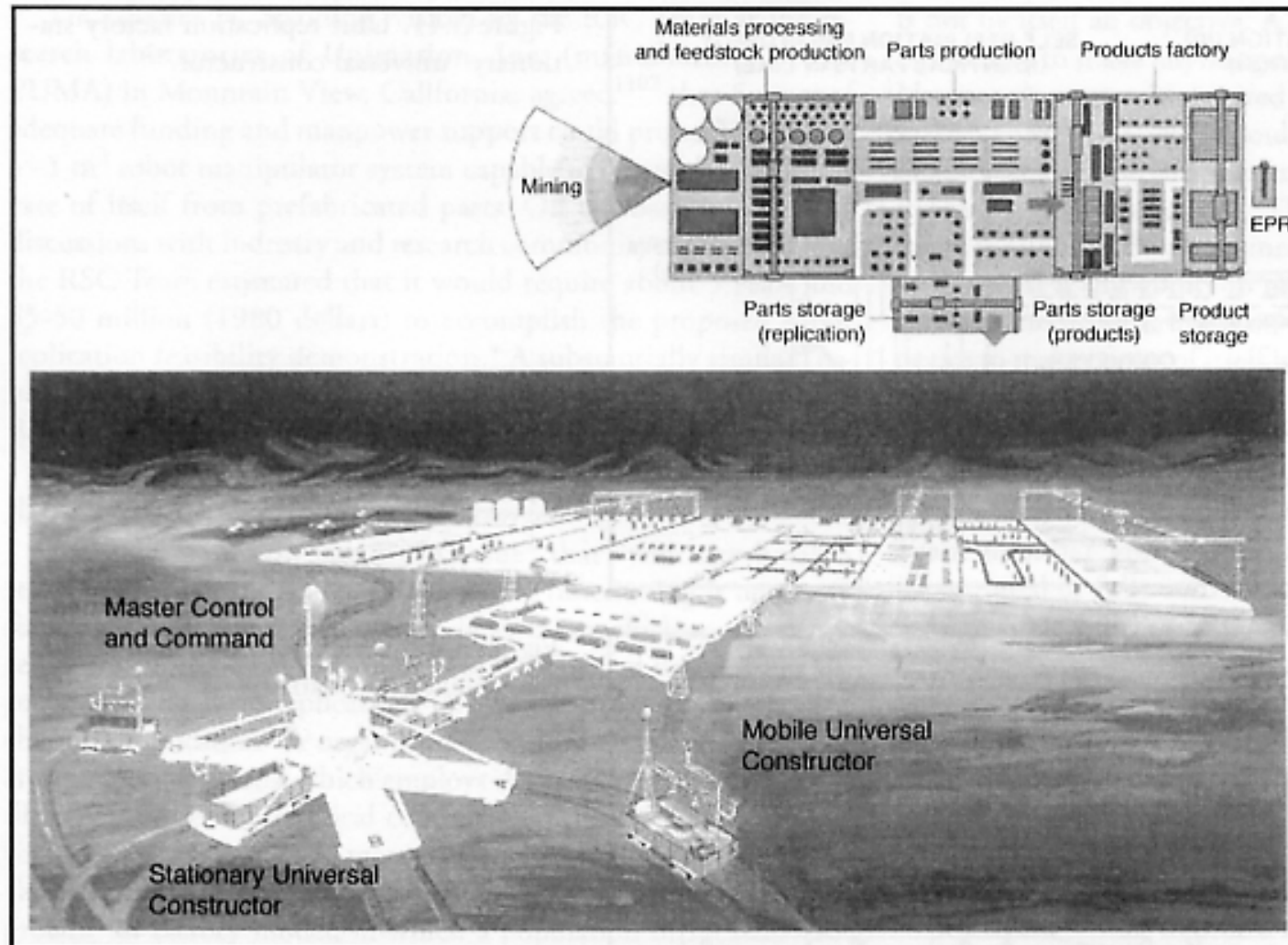
- AL: 1980/90erne. I stedet for at bygge et stort kompliceret system, byg mange små med lokale regler + evolution. Bottom-up tilgang.

John von Neumann

- Ledte efter en "Universal Constructor" I 1940erne.
- "Theory & Organization of Complicated Automata" (1949)
- Han prøvede at finde en hypotetisk maskine, som kunne bygge kopier af sig selv.
- Han fandt den i samarbejde med Stanislav Ulam som en meget kompliceret CA (formaliseret maskine).



Selvreproducerende maskiner



Christopher Langton



AI's fædre:

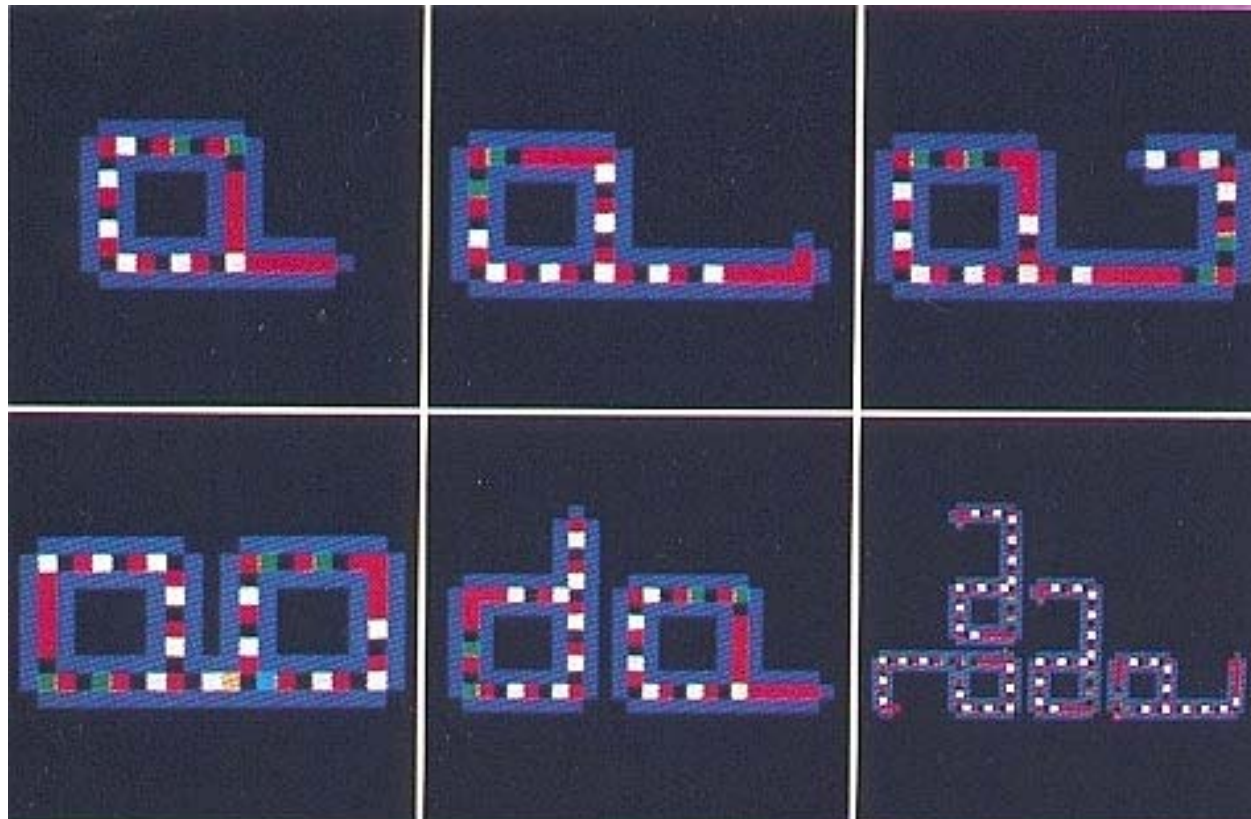
Alan Turing

John v. Neumann

Christopher Langton

Slutningen af 1980erne

Langton loop



Christa Sommerer & Laurent Mignonneau



"A-Volve" 1995

Video links

Orlan

http://www.youtube.com/watch?v=yzR-_W3XFNc

Karl Sims

http://www.archive.org/details/sims_evolved_virtual_creatures_1994

Theo Jansen (strandbeest)

<http://video.google.com/videoplay?docid=801354431605676858>

Robotic Chair

<http://www.roboticchair.com/documentation.php>

Sommerer & Mignonneau (A-Volve)

<http://www.youtube.com/watch?v=cZ3v1jcCXmk>