Manual for

N55 BOOK

N55 manuals and publications, 1996-2003

Introduction:

N55 BOOK is an accumulation of manuals for different things made by N55. New manuals and developments of existing manuals will be published continuously at www.N55.dk.

Construction:

Most of the manuals have been published separately between 1996 and 2003 as periodicals and on the N55 website. They do not appear in N55 BOOK in chronological order.
A digital version of N55 BOOK can be downloaded for free at www.N55.dk.

Copyright:

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Contents:

Soundtracks:

Music by Anders Remmer for a number of N55 things can be downloaded for free at www.N55.dk

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Manual for

N55

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Producing, transmitting and receiving radio on Svalbard 1999.

Introduction:

N55 works with art as a part of everyday life.

Construction:

N55 numbers four persons, Rikke Luther, Ion Sørvin, Cecilia Wendt and Ingvil Hareide Aarbakke, who work together, share places to live, economy, and means of production.
N55 is based both in the N55 SPACEFRAME situated in Copenhagen, and in LAND.

Production / distribution:

N55 has its own means of production and distribution.
Manuals for N55 things are published at www.N55.dk and in the N55 periodical. Furthermore, N55 things are implemented in various situations around the world, initiated by N55 or in collaboration with different persons and institutions.

Economy:

N55 is non-commercial. N55 is financed primarily by exhibitions, grants and educational work.

Politics:

N55 suggests respecting conditions for description: logical relations and facts, as a basis for politics.
Ideologies, religions, subjective opinions, social conventions, and habitual conceptions do not necessarily respect conditions for description.
An example of a decisive logical relation is the logical relation between persons and their rights. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here we have a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.
An example of a decisive fact is that concentrations of power characterise our society. Concentrations of power do not necessarily respect person's rights. Concentrations of power force persons to concentrate on participating in competition and power games, in order to create a social position for themselves. Concurrently with the concentrations of power dominating our conscious mind and being decisive to our situations, the significance of our fellow humans diminishes. And our own significance becomes the significance we have for concentrations of power, the growth of concentrations of power, and the conflicts of concentrations of power. It is decisive that persons try to find ways of existing with as small concentrations of power as possible.

History:

In 1994 a non-commercial exhibition space and lab was initiated in Nørre Farimagsgade 55, Copenhagen. N55 grew out of this collaboration. In 1996, a number of persons started living together in an apartment located in the center of Copenhagen, trying to "rebuild the city from within" and using their everyday life situation as a platform for public events and collaborations. Since early 1997 N55 consists of the 4 persons currently working together. In the year 2000 FLOATING PLATFORM and N55 SPACEFRAME were constructed in the harbour area. N55 SPACEFRAME now serves as workspace and living space together with a place included in LAND in 2002 nearby in Sweden. These two places are now the starting points of different initiatives locally and elsewhere. See updated biography at www.N55.dk/cv.html.

FRIT VALG (FREE CHOICE), Nørre Farimags-gade 55. Alternative to the Danish election,1994.

IT IS AN ILLUSION THAT WE LIVE IN TIME AND SPACE, demonstration, Copenhagen 1995.

ART AND REALITY, Louisiana Museum, Denmark 1996.

Beer brewing by Jakob Jakobsen and HOME HYDROPONIC UNIT by N55, Studiestræde 1997.
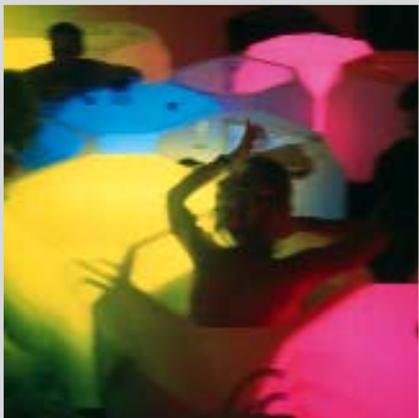
HYGIENE SYSTEM - EXTENDED, Studiestræde, Copenhagen 1998.

N55 SPACEFRAME and FLOATING PLATFORM, Copenhagen 2000.

Manual for

DYNAMIC CHAIR

DYNAMIC CHAIR, 1997

Introduction:

A new principle is applied in the construction of the DYNAMIC CHAIR.

The seat is mounted directly onto a sphere. This enables the person who uses the chair to move the hips and back far more freely than by the use of conventional chairs. At the same time, the user will achieve a better posture, as one compensates for lack of balance by straightening the back.

The simple construction of the chair has made it possible to employ few and light components with a low degree of manufacturing while ensuring considerable strength and durability.

Physiological background:

There are two major problems related to normal chairs used for working, eating and other activities.

The first is back problems related to ordinary, poor sitting positions.

The second is the stiffening and aching of joints and muscles due to inferior blood circulation in the legs and back.

The DYNAMIC CHAIR solves these problems. Its construction principle allows the person sitting on the chair to make small movements that strengthen the muscles of the loin and prevent pain and stiffening. When a person sits on the chair, the seat leans slightly forward and gives a good straight position especially to the back and shoulders. Concurrently, a free space is created under the thighs allowing the blood to circulate unhindered.

The DYNAMIC CHAIR can replace conventional chairs in every instance. It gives the user a wide reach as the seat turns both vertically and horizontally in all directions. The user is able to roll the hips, as if upon a ball, while sitting down. The user can make the seat more or less movable by regulating the tension of the rubber straps situated at the bottom of the chair. They have four positions. The height of the chair can be adjusted to fit the individual user.

Construction:

The DYNAMIC CHAIR is constructed of two tetrahedra made of stainless, acid-resistant steel struts. One of them rests on the floor and sustains the other, which is movable. They are connected via a steel sphere.

The seat consists of a thin steel sheet, which covers the upper surface of the movable tetrahedron.

The summit of the tetrahedron on the floor is being pulled down via the lower corner of the movable tetrahedron.

The static tetrahedron transfers the weight to the floor. The center rod and all six horizontal steel struts absorb the tensile forces, while all six diagonal struts

The seat rests on a sphere.

absorb the compressive forces.

The seat swivels around the center of the sphere on which it rests. Three elastic rubber straps are affixed between the lower corner of the movable tetrahedron and the three plastic spheres.

The elastic rubber straps modify the swinging movements produced by the person on the seat.

A pad made of firm, insulating polyethylene foam covers the seat.

Maintenance:

The rubber straps may lose their elasticity over time. Their life span is one to five years depending on the user. The rubber straps can be replaced without the use of tools. A small amount of oil should be applied underneath the sphere periodically.

Technical specifications:

Weight: 3.5 kg.
Dimensions: 590 x 520 x 495 mm.
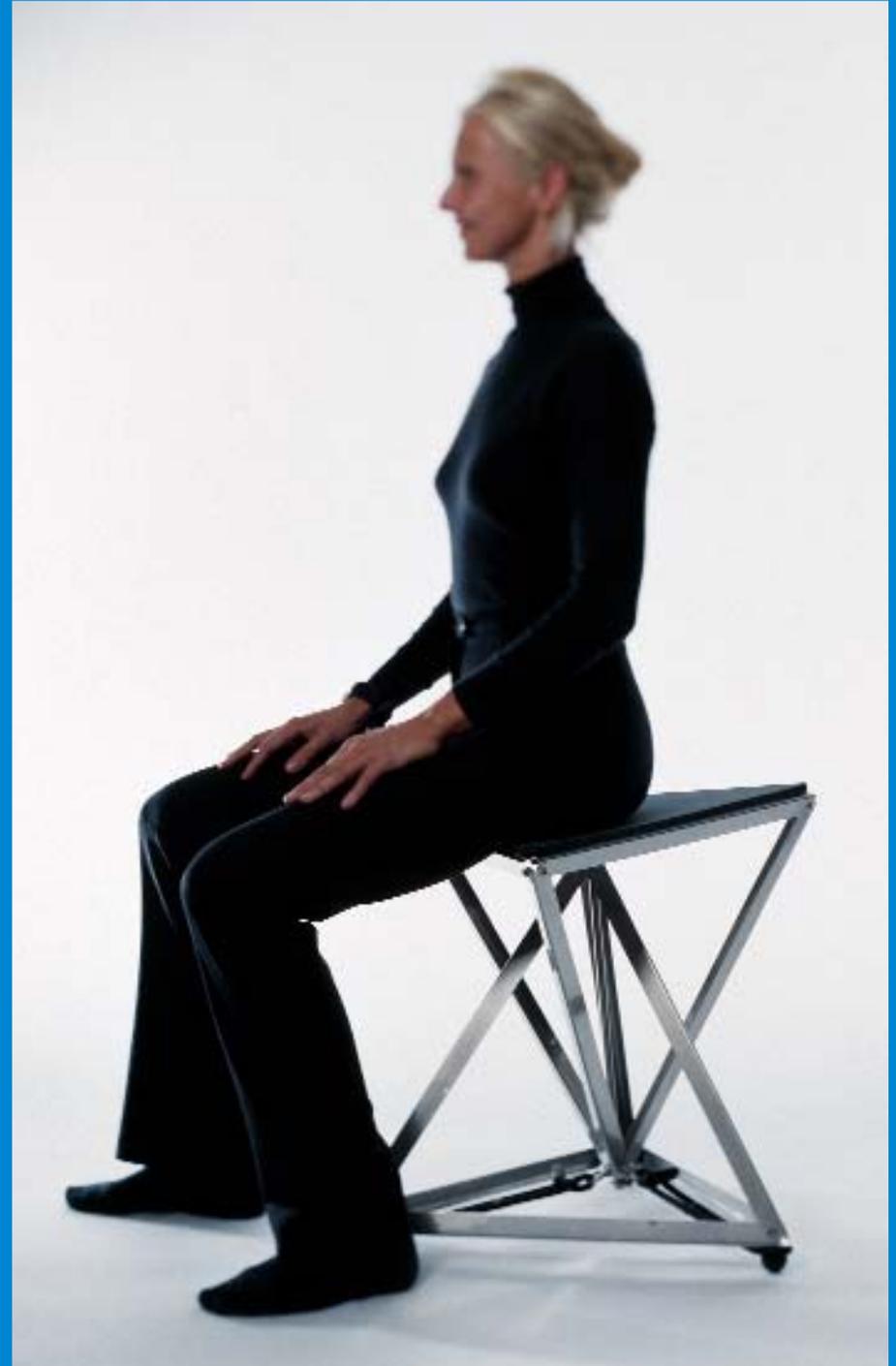
Component list:

1 pc stainless steel sphere Ø 30.4 mm
3 pc eye nut M6
3 pc set screws 6 x 16
15 pc buttonhead 6 x 10
15 pc lock nut
3 pc set screws 6 x 10
3 pc hexagonal holes 6 x 10 mm with cut head
3 pc self-locking washers
3 pc top nuts M6
2 pc hexagonal holes 8 x 15 mm
2 pc disks 8 x 24 x 2 mm
1 pc steel rod 420 x 10 x 1.5 mm
1 pc seat 515 x 515 x 515 x 1 mm, stainless, acid-proof steel AISI 316 L
12 pc 70° struts, 500 x 50 x 1 mm stainless, acid-proof steel AISI 316 L
1 pc seat pad 514 x 9 mm, PE foam density 40 kg/m^3
3 pc truck tarpaulin rubber straps
3 pc bakelite spheres Ø 32 mm
Double-sided tape.

Manual for

TABLE

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TABLE, 1997

Introduction:

The TABLE is a lightweight table manufactured with a minimum of components. All the materials are highly durable. A strong and stable construction is obtained in an unexpensive and simple way.
The TABLE can be used separately or in combinations to form different shapes according to varying functions and requirements.

Construction:

The legs are constructed using stainless, acid-resistant steel struts assembled as tetrahedra. This geometry makes it possible to achieve a strong construction using only 1 mm steel plate.
The legs are attached to the corners of a birch plywood plate cut out in the shape of a regular triangle.
Because the TABLE has only three legs it will always be stable. Therefore there is no need to attach stabilising screws to the legs.
Used in combination the tables form triangular, rhombic or hexagonal shapes, or they can be used separately as working stations, as tables to eat at, etc.
The shape of the plywood plate can be changed.

Maintenance:

The surface of the TABLE is equipped with a renewable PVC covering, which is easy to clean using dish washing liquid.
The covering may need to be changed now and then.

Technical specifications:

Weight: approximately 15 kg.
Dimensions: height 70 cm, width 142 cm, depth 142 cm.

Component list:

Table top:
1 pc 20 mm birch plywood plate, sides 142 cm
1 pc PVC covering.

Legs:
9 pc 66 cm struts in stainless, acid-resistant steel AISI 316 L

9 pc 20 cm struts in stainless, acid-resistant steel AISI 316 L
27 pc 6 mm screws and nuts
3 pc bakelite spheres Ø 32
9 pc 15 mm screws
3 pc 25 mm screws
3 pc eye nut M6.

Manual for

BED MODULES

BED MODULES, 1999

Introduction:

The BED MODULES make it possible to assemble a bed for any number of persons. Beds are normally designed for use by one or two persons and are thus intended for certain social constellations. By using the BED MODULES, the size and shape of the bed may be varied according to wishes and circumstances. It takes only a few minutes to assemble a bed. The BED MODULES can be stacked when they are not in use, in order to occupy less space.

Construction:

The modules are equilateral triangles, made of aluminium and covered on both sides with polyethylene foam. The aluminium adds strength and rigidity to the foam, while the foam acts as an insulator and distributes weight. Velcro tape on the edges of the BED MODULES fixes them to each other.

Use and maintenance:

The BED MODULES are intended for use in combination with sleeping bags

or other fabrics that absorb excess moisture. The PE foam is highly insulating and keeps the body warm while moisture is absorbed only into the surface of the material. The BED MODULES need to be aired for a short while before they are piled up. Apart from this they need no maintenance.

Component list:

60 cm triangles, seawater resistant, semi hard aluminium
60 cm triangles, polyethylene foam density 40 kg / m³, 20 mm and 10 mm
Velcro tape 20 mm.

Manual for

HYGIENE SYSTEM

Index:

HYGIENE SYSTEM, 1997

Introduction:

The HYGIENE SYSTEM enables persons to have their needs for personal hygiene satisfied.
This version of the system consists of three parts: a toilet module, a bathing module, and a supply module.
The system is constructed in such a way that anybody is capable of installing and using it. The volume is minimized and, when in use, the system takes up only approx. 1.4 m²; after use, the system can be stacked, and it takes up only 0.36 m².
The simple construction has made it possible to use few components with a low degree of manufacturing. At the same time, the HYGIENE SYSTEM is easy to clean and it is very durable. This version of the HYGIENE SYSTEM is intended to operate under very simple conditions, and for easy installation in existing buildings.

Technical background:

The HYGIENE SYSTEM is constructed by using three polyethylene (PE) plastic tanks of equal size.

The tanks are not fixed to the ground or to each other, and can be easily moved or stacked.
The system requires no plumbing, and it uses only soft flexible tubes for the water supply and drainage.
The bathing module is mainly intended for bathing or showering, in both cases in a sitting position. Since the module has no plughole, it may be placed anywhere one prefers, e.g. directly on the floor, and stacked away after use. This makes it possible to have a pleasant bath even in very small rooms, which were not originally meant for this type of activity. A pump placed inside the bathing module removes the water after use.
The supply module leads water and electricity to the bathing module and at the same time it functions as a table and a lamp.
In the toilet module, a biodegradable PE plastic bag is used instead of water to carry away the urine and faeces.

System components:

A: The toilet module
The toilet module consists of three parts: 1) a PE tank with a triangular cut-out for sitting on while using the toilet; 2) a PE bag placed in the triangular hole is used to catch faeces, urine, paper, and water from washing one's hands. Instantly after use, the bag is shut by pressing out excess air, letting the bag rotate a few times and making a knot; 3) a transport unit in which the bag can be transported safely. The transport unit is kept inside the toilet module and lifted up for use.
The bag can be disposed of in many ways, depending on the local environment.
One of the following options may be chosen:

1) The bag can be buried in the ground or composted in an insulated tank, whereby the bag and contents will be degraded with the help of biological processes. After three to six months, the product can be used as a fertiliser in food production. If burying is chosen, one should be aware that a temperature that is sufficiently high to kill all micro-organisms can only be achieved at the centre of the sludge.

2) The bag can be burned at a high temperature whereby odours and risks of infection are eliminated. By using this method, the ashes can be used immediately as a fertiliser.

3) The content of the bag may be dried in the sun, whereby it is dehydrated and the volume is reduced. Hereafter it may be spread on a field. This method could cause some odour inconveniences.

If none of these alternatives are applicable, a further possibility would be centralised collection and burning, although some of the advantages of the system would then be lost because in this way, one ends up concentrating the sludge, causing risks of infection and over-fertilisation.

If the sludge is to be collected, these problems must be solved. The transportation must be done safely and the ashes should be redistributed locally for fertilising purposes.

The sludge could also be treated in a biogas plant that returns energy in the form of methane gas.

The advantages of this toilet are partly that it uses no water for waste transportation and partly that it is very hygienic compared to other dry closets. Finally, the toilet makes it possible to keep viruses, bacteria, and nutrients local. A water closet produces aerosols during the flushing process whereby micro organisms and particles are spread in the air. A normal water closet uses 6-15 liters of water every time it is flushed. Hereafter the sludge passes through an expensive sewage system that demands a lot of maintenance, before it is concentrated, causing problems with bacteria, viruses, and nutrients.

The dehydrated excrement of an adult man amounts to about 38 liters a year. Every time a water closet is flushed, 6-15 liters of pure drinking water are transformed into polluted sewage, which will contain nutrients and microorganisms, even after treatment. Low-flush toilets still spend 3.5-4 liters and cause problems with clogged sewage pipes.

B: The supply module

The supply module uses the same PE tank as the toilet module. It administers the supply of water and electricity to the HYGIENE SYSTEM.

The electric system transforms 220 V supply into 24 V using a security transformer. The transformer must be placed far from the hygiene system. In order to light up the supply module, a 24 V/36 W truck lamp is placed at the centre. The lamp is connected to the same circuit as the drain pump. Because of the semitransparent sides of the supply module, the toilet module as well as the bathing module and the surrounding room are illuminated.

The low voltage power supply is used in order to prevent accidents. Supply of fresh water as well as transport of used water is carried out via flexible transparent tubes which can be pulled in and out of the supply module. All tubes are connected with quick couplings that are easy to handle without the use of tools. The tubes are accessible so that leaks can easily be located and repaired.

This version of the supply module uses an externally placed heater to supply hot water. If no such heater exists, a flow heater can be installed inside the module. Otherwise, the supply module can be connected to a solar heater, as mentioned in "Extra equipment". Problems with legionella bacteria are avoided by using a flow heater, as well as the energy loss that follows when stor-

HYGIENE SYSTEM, toilet module

ing hot water in a tank. Furthermore, one will not suddenly run out of hot water. If a solar heater is used, the tank must be sterilised regularly or a UV filter may be connected. If one does not have access to water from waterworks, a tank for collecting rain water can be connected. If one has no electricity for the drain pump, the drain problem must be solved with a simple plug hole in the bottom of the bathing module. Washing water, because of its low degree of pollution, may simply be let out on the ground, if allowed by the surrounding conditions.

C: The bathing module

The bathing module is constructed from the same PE tank as the other modules. Its dimensions are adjusted so that even very tall persons can sit comfortably inside it. Very overweight persons may need a larger module, though.

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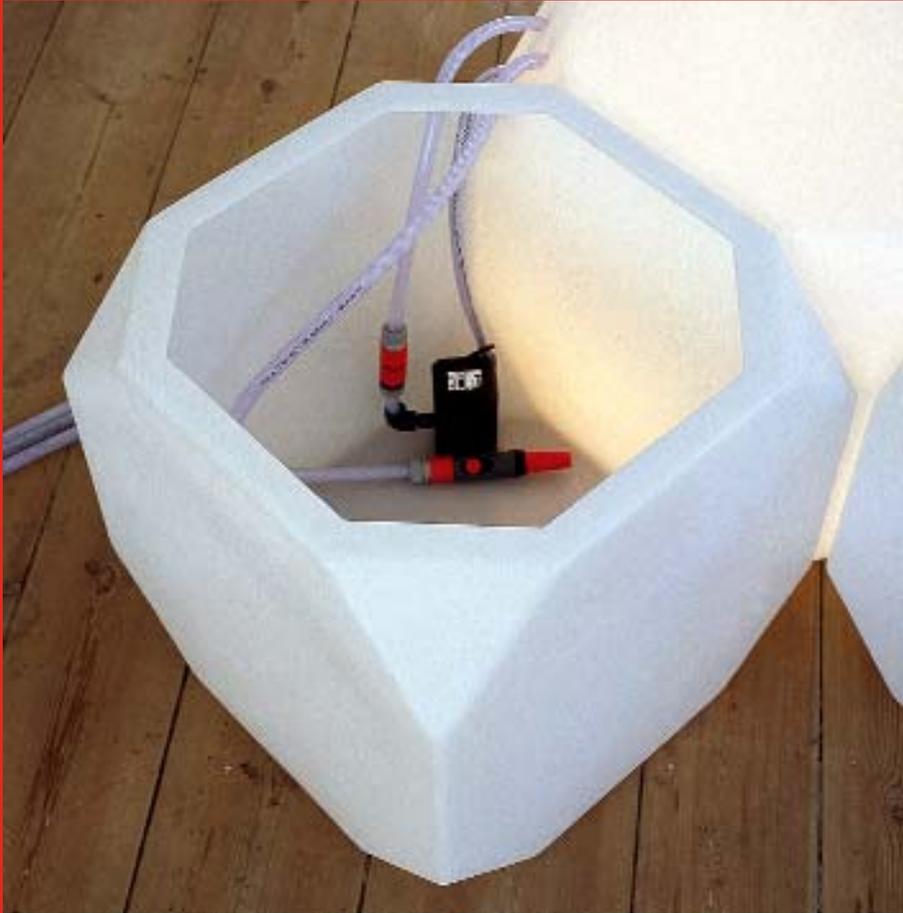
HYGIENE SYSTEM, bathing module

The bathing module serves three main purposes: as a shower, a bathtub and a sink for hand washing.

As a bathtub, it has the following advantages: firstly, it does not demand as much water as an ordinary bathtub since much of the volume is filled by the bathing person's body; secondly, it is easy to keep clean; and, finally, it offers some pleasant experiences because of the semitransparent sides and the light that illuminates the water.

Generally speaking, a bath is more hygienic than a shower; it offers more relaxation and may reduce stress. A more thorough cleaning of the body is achieved by long stay in hot water, dirt is dissolved and dead skin cells are removed. Because of the high efficiency, one does not have to take a bath very often. In general, bathing uses more water that showering, but on a total basis this system saves water because of the dry toilet.

If showering is preferred, the bathing module is equipped with a variable spray device that atomises the water and minimizes the use of it. A 24 V pump is mounted inside the bathing module to pump out the water after the bath or shower. Draining the bathing module takes approx. 5 minutes. When the tank is empty, the quick-coupling is disconnected before shutting the pump off, in order to keep the water from flowing back. The bathing module can also be used as a sink, although for hygienic reasons, the PE plastic bag is better suited for this purpose.

Extra equipment:

A solar heater, flow heater, solar power panels and accumulators may be added to the HYGIENE SYSTEM as well as extra bathing and toilet modules, in order to make it possible for more persons to use the system at the same time.

Installation:

The HYGIENE SYSTEM needs supply of hot and cold water, as well as electricity. Furthermore, a way of getting rid of the drain water must be found, either by the use of existing drain pipes, pouring the water directly out on the ground, or by directing it through a cleaning system.

The system is modular, it can easily be adjusted to existing rooms, and it is easily transported and stored. The HYGIENE SYSTEM is able to resist bumps and strokes without being damaged since the materials are mainly PE low density.

As the system can be dismantled completely without the use of tools, it is easy to install and maintain. It may be necessary to use conversion links between the tubes of the HYGIENE SYSTEM and the existing pipes one finds in a building.

Maintenance and cleaning:

The PE-tanks are easy to clean and tolerates most cleaning remedies. If one wants to avoid the use of chemicals, a micro-fibre cloth and some water is sufficient for most cleaning tasks. In special cases, small amounts of methylated spirits may be used as disinfectant.

Cleaning remedies are kept in a container that also functions as a bucket. It is placed at the bottom of the toilet module next to the transport container.

The coarse pre-filter, attached behind the pump's suction grille, should be rinsed frequently under running water.

Technical specifications:

Total weight: approximately 25 kg.
Dimensions: 3 modules, 600 x 600 x 600 mm each.
Electricity (present configuration): light bulb 36 W, pump 28 W.

Component list:

3 pc tanks in low density PE of 216 l, 600 x 600 x 600 mm
2 pc cylindrical containers in PE of 2.5 l, with lids
1 pc centrifugal pump, 24 V/28 W, 20 l/min, 2.5 m water geyser
1 pc 24 V/36 W light bulb with socket
1 pc 24 V security transformer
1 pc inert fuse with socket
1 pc double switch with socket
15 m 1/2" polyether fibre reinforced tube, PVC
1 pc variable spray device
6 pc quick couplings
PE bags of 50 x 60 cm
5 m electric cable
Micro-fibre cloths.

HYGIENE SYSTEM - EXTENDED, Copenhagen, Denmark 1998. Music by Anders Remmer.

Manual for

HOME HYDROPONIC UNIT

HYGIENE SYSTEM - EXTENDED, Copenhagen, Denmark 1998.

HOME HYDROPONIC UNIT, 1997

Introduction:

The HOME HYDROPONIC UNIT enables persons to produce their own food. It is designed for the continuous production of food in sufficient quantities to provide a daily supplement to a household of 3-4 persons. It can easily be extended.
By using the hydroponics technique it is possible to grow clean, toxin- and pesticide free produce with an optimum level of vitamins and other beneficial compounds.
The unit can be installed indoors. One is therefore not dependent on access to land in order to produce food.

Technical background:

Hydroponics is a growing method that makes it possible to control and optimize all growing parameters and avoid problems like soil-born diseases. The plants are grown in pure water and the necessary nutrients are added only in the amounts needed by the plants. The nutrient solution is not discharged into the environment but re-circulated indefinitely. The biggest problem in hydroponics is that pathogens will thrive well in the nutrient solution because of the high amount of energy (organic matter/TOC), which is present in the form of root exudates. These will feed the pathogenic micro-organisms and cause outbreak of diseases. To prevent this, a hydro unit continuously cleans and sterilizes the nutrient solution.

System components:

To keep the re-circulating nutrient solution optimized, the following components are used. Approximately 50% of the buffer tank volume is filled with a special rockwool biomat that acts as a substrate for aerobic bacteria. These bacteria are needed for consuming the root exudates that otherwise act as energy providers for root pathogens, especially fungus.
A circulation pump is connected to the tank. The solution gets divided into two flow systems. One is a shunt that leads approximately 50% of the solution back into the tank. A spray system aerates the solution and distributes it onto the rockwool biomat that acts as a bio-filter. This flow is regulated with a manual valve.
The other half of the solution is passed through a filter filled with activated carbon. This is for adsorption and destruction of unwanted organic matter that has not been broken down in the biomat. From here, it is led through a filter that will restrain all particulate matter down to 50 micron. After this, the solution is sterilized in the UVC unit, which disactivates up to 99% of the micro-

organisms. The solution is now ready to be distributed to the growing system. This distribution is done through rigid PVC and polypropylene (PEL) tubing where a number of nozzles are located. The distribution system with the nozzles leads the solution into a number of PVC gullies where the plants are situated. After flowing through the plant roots, the solution is returned to the buffer tank and re-circulated back through the cleaning modules and then to the growing system.

Implementation:

The whole system is modular and can be dismantled completely for transport or storage. This means that it is easy to assemble. All tubes, fittings and connectors are made of rigid PVC and can be assembled by hand without the use of tools. The sustaining framework is made of acid resistant stainless steel (AISI 316L) and can be assembled using only a screwdriver.

Plants:

The hydroponics technique is particularly good for fragile, fast growing and water consuming plants such as lettuce, tomatoes, peppers, cucumbers, herbs, etc. Plant species and configuration of the system should be chosen according to the required amount of space and light. Large plants such as tomatoes or cucumbers may be grown directly in the reservoir, while the growing tubes are best suited for e.g. beans, lettuce and herbs. Plants with massive roots such as potatoes, beets and carrots have special requirements with regard to space and the depth and pressure resistance of the growth substrate. The HOME HYDROPONIC UNIT can be extended with growing modules to fit these requirements.

Seeds:

Most plant species are propagated with seed, but many can with advantage be propagated using cuttings. Depending on the size of the plant at harvest time, different plant densities must be selected. Some seeds have to be stratified before germination, otherwise most seeds will germinate at room temperature in a high, relatively humid atmosphere. Most seeds will germinate both in light and darkness. Some seeds can be germinated directly in water. Other seeds only need a moist atmosphere and will perish if they get wet.
A number of plants can be seeded directly into a growth substrate in their final growing position. Others have to be germinated in one growth substrate and later transplanted as seedlings into their final growing position.

Component diagram:
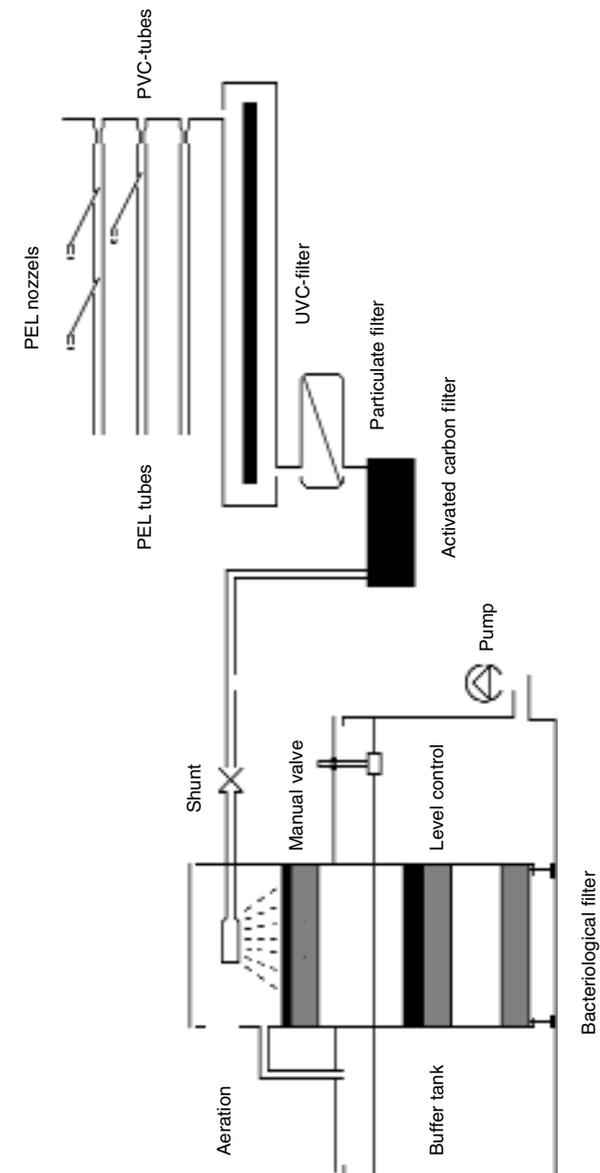
Growth parameters:

A number of parameters need to be controlled for the plants to grow optimally. The necessary parameters for the aerial parts of the plants, the leaves, beside light are: carbon dioxide, energy in the form of heating and some air circulation. A wind speed of 1 to 2 m/sec. is sufficient to remove the trace gasses (ethylene and oxygen) from the leaves and secure fresh carbon dioxide to the stomata. The roots need water, oxygen, and eleven different nutrients. It is necessary to control temperature, pH and conductivity of the solution.

Artificial sunlight

In order for the plants to grow inside a building where there is insufficient ambient light it is necessary to add artificial sunlight. This is accomplished by using two or four 36 W daylight fluorescent tubes over each shelf. The photoperiod is regulated with an automatic timer. Access to sunlight will of course reduce the need of artificial sunlight.

pH

The pH of the nutrient solution is optimal between pH 5-6. The plants will tolerate pH values ranging from pH 4 to 8, but optimal nutrient uptake is at pH 5.6. The pH will rise steadily in a normal nutrient solution without ammonium. It is necessary to adjust the raising pH with acid. The acid used for this purpose is nitric acid. Indicator strips (pH 5-7) can be used to measure the pH level.

Conductivity

The concentration of the nutrients is another important factor to control. It should be between 1.2 and 2 mS. The concentration regulates the osmotic pressure in the plant. It can only be measured with a conductivity meter.

Nutrients

The following nutrients are necessary for the plants. The plant will die if one component is missing. Toxic and deficiency levels must be watched carefully. In order to control this, the nutrient solution can be exchanged in intervals: the larger the buffer of nutrient solution the longer between changes. One to three months is a reasonable time period. If the same nutrient solution has to be kept circulating indefinitely it will be necessary to have the content of nutrients in the solution analyzed with one to three month intervals and corrected to optimal values:
N - Nitrogen 150 ppm, P - Phosphorus 40 ppm, K - Potassium 275 ppm, Ca - Calcium 175 ppm, Mg - Magnesium 30 ppm, Fe - Iron .55 ppm, Cu - Copper .03 ppm, Zn - Zinc .25 ppm, B - Boron .30 ppm, Mn - Manganese .05 ppm, Mo - Molybdenum .05 ppm.

HOME HYDROPONIC UNIT, 1997. The distributing system with the nozzles.

This recipe is a standard formulation for tomatoes but can be used for nearly all plants in hydroponics. It must be recognized that different plant species grown as monocultures will require different formulations.

Temperature
The air temperature may go down to 16°-17 °C at night when there is no light. It should be approx. 22-25 °C during the day. The temperature of the nutrient solution should be slightly higher than that of the air in order to avoid reverse osmosis.

Water quality
The water used to mix the nutrient solution will also have an influence on the quality of the nutrient solution, but normally only calcium is present in excess.

Harvest:

Most of the salad vegetables and herbs can be harvested continuously. Fruit bearing plants will have to be harvested when the fruit is ripe. In some cases, for example with radishes, new seeds must be started two or three times a week in order to have a constant supply of edible produce.

Maintenance:

Apart from keeping the system clean, it is necessary to execute the following maintenance proceedings:
pH control and regulation with 10% nitric acid as needed, one to two times a week.
Conductivity control and regulation with concentrated nutrient solution to desired conductivity (1.2-2.0 mS) one to two times a week.
Exchange of nutrient solution every one to three months.
Add pure water to the system if no automatic water control is fitted.
The filter cartridge in the particulate filter must be exchanged when the pressure gets too high.
The UVC filter must be exchanged once every year and the quartz tube in which it is mounted must be cleaned of particles and algae.
If the biological filter clogs up with sludge it must be exchanged or removed for cleaning.
The activated carbon filter needs to be checked every 6 months and new carbon must be added if needed.
The fluorescent tubes must be changed when the light level gets low. They normally have a useful life of two years.

Technical specifications:

The hydro system will be able to support up to 50 m of gullies using NFT (nutrient film technique) raised level (5 mm) hydroponics technique. This corresponds to approx. 50 tomato plants, 240 lettuce plants or 180 pots of herbs.
Present configuration:
Electricity consumption: pump 115 W, UVC 55 W = 170 W total.
Artificial sunlight: 12 x 36 W = 432 W.
Water consumption: approx. 8-10 l/day.
Water volume: approx. 100 l.
Dimensions: 1880 x 1320 mm, required floor space: 3 m².
Transport weight: 80 kg.

Component list:

UVC filter: 1 pc 55 W HNS UVC lamp
Protective quartz tube: 30 x 1,5 x 833 mm
Activated carbon filter: 5 l activated carbon, type 300
Mechanical filter: 3/4" with cellulose filter cartridge 50 micron, 1500 l/h
Pump: UP 20-45 N. 115 W circulation pump, 600 l/h at 4.22 m wg
Assimilation light: 12 pc 36 W daylight flourescent tubes
Growing gullies: 12 pc PVC gullies 120 x1 32 x 47 mm with PVC covers
Reservoir: PEL w. PVC lid, 400 x 800 x 320 mm, 96 liters
Biological filter: 3 pc rockwool bioblock 300 x 300 x 100 mm, 27 l, 2 l activated carbon, 27 l granulated rockwool
Feed tubes: 2 pc ridgid PVC tubes, Ø 20 mm
Drain tubes: 4 pc rigid PVC tubes, Ø 16 mm
Delivery tubes: 6 pc PEL tubes, Ø 16 mm
Dividers: 96 pc PEL tubes, Ø 6 mm
Nozzles: 96 pc PVC tubes, Ø 6 mm with 2 pc Ø 0.5 mm holes in each
Main frame: stainless acid resistant steel AISI 316 L
1 pc timer
1 pc level control
2 pc temperature sensors: air and nutrient solution
1 pc moisture sensor
1 pc float valve.

HOME HYDROPONIC UNIT, Copenhagen, Denmark 1997

HOME HYDROPONIC UNIT, Moss, Norway 1998

HOME HYDROPONIC UNIT, Copenhagen, Denmark 1997

MODULAR HYDROPONIC UNIT

The MODULAR HYDROPONIC UNIT is a modified version of the HOME HYDROPONIC UNIT. This system is a low-pressure system, which uses only flexible hoses for fittings, water delivery and drain, and thus the risks of breakages, leaks and overflows are minimised. The cost of making and running the system is low, and it is easy to change its configuration.

The MODULAR HYDROPONIC UNIT consists of a variable number of growing tubes, a reservoir for nutrient solution, a pump, a sterilizing (UVC) filter, a bacterial filter, a number of assimilation light tubes and silicone hoses for water transportation.

The plants grow in a growing substrate placed in holes in the growing tubes. The level of the nutrient solution inside the tubes is approximately 30 mm, which means the roots are almost completely submerged in water.

This deep-flow technique demands that the nutrient solution is thoroughly oxidized; if not, the roots will drown.

The nutrient solution should be kept re-circulating both day and night in order to oxidise and sterilize the solution. The nutrient solution is kept in the reservoir with the pump and the bacterial filter.

The distribution of the solution is carried via flexible silicone hoses.

The nutrient solution passes from the reservoir through the pump and is then divided into two flow systems. One leads approx. 50% of the solution back into the reservoir through a spray unit, whereby oxygen by diffusion is dissolved in the solution. At the same time, the spray unit distributes the oxidised nutrient solution on the bacterial filter, thus ensuring good living conditions for aerobic bacteria. These bacteria consume the root exudates from the plants, which otherwise would have provided energy for pathogenic micro-organisms.

MODULAR HYDROPONIC UNIT, connection link

MODULAR HYDROPONIC UNIT, bacterial filter

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MODULAR HYDROPONIC UNIT, 1998. The growing tubes may be mounted on top of each other, next to each other on a flat horizontal surface, in a corner, or in a line.

SOIL FACTORY, 1998

Introduction:

The SOIL FACTORY enables persons to produce their own soil. By the process of vermicomposting the organic waste of a small household (3-4 persons) is effectively transformed, leaving a highly fertile substance. The system is made for indoor use.

Technical background:

A person living in a city produces approximately 100 kg of organic household waste per year. By using this material in the SOIL FACTORY or similar systems, it can be transformed into soil. Although it is not the most effective system, vermicomposting is a simple and cheap way of composting. The decomposition is done partly by worms, partly by other organisms and microbial processing. The worms´ digestive tracts perform efficient microbial and chemical transformation, and their activities provide the mechanical work also necessary for the composting process: mixing, draining and aeration.

System components:

The SOIL FACTORY consists of three main modules: 1) The top module, through which the system is ventilated and supplied with raw material and bedding. It keeps out light and reduces odour inconveniences. A thermometer, a fly trap and a container for bedding is mounted on the inside. 2) The middle module, consisting of three tanks containing the worms, the raw material and the resulting product. 3) The bottom module, which collects excess fluid.

The composting process is initiated by putting approximately 1000 worms and some organic material into the upper tank of the middle module. When this tank is full, it is exchanged with the next empty tank in the column. The three tanks are all perforated in the bottom to allow excess water to pass through to the bottom module. This is done in such a way that the worms will also be able to move upwards in the system.

As the worms process the material, they will move to the top layers where there is access to fresh raw material. When the tanks are full, they should be allowed to rest for some time in order to complete microbial and worm processing and to allow the worm cocoons, which are placed in the deep layers, to be hatched.

After approximately 6 months, the material in the lowest tank is transformed into a black, soft substance mostly consisting of worm castings, a large part of which is humus.

Some of the material will be the product of bacterial consumption, and there

System diagram:

Top module:
Ventilation
Thermometer
Fly trap
Bedding container
Light/odour control

Middle module:
Tank 1:
Raw material
Worms
Plastic covering

Tank 2

Tank 3

Bottom module:
Excess fluid
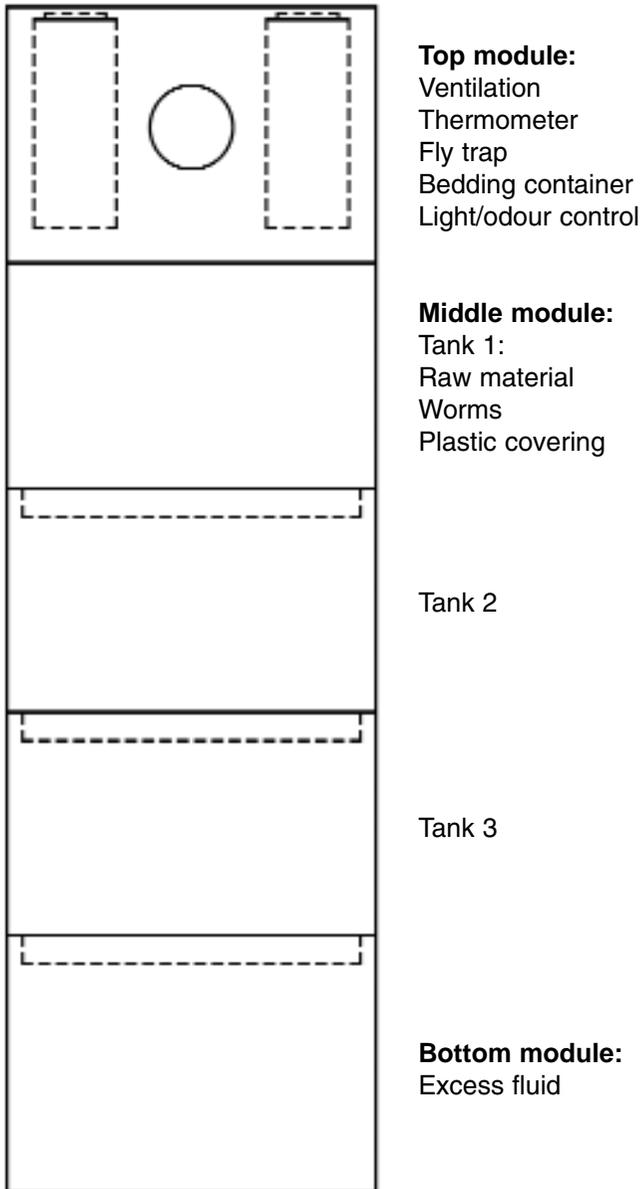
will also be occasional residues, which have not been degraded. This substance can then be mixed with sand, peat, gravel etc. for ventilation and volume and in order to lower the concentration of nutrients. One has now produced good nutritious soil. The drained water in the bottom module is also highly nutritious for plants.

Biological processes:

Shortly after adding raw material, moulds and fungi appear on the surface and pre-process the material before bacteria and worms take over. Apart from these, beetles, mites, flies, nematodes, snails, springtails, woodlice and other species may be present in the composting modules. The number of species present depends on many factors, such as the age, humidity, temperature and composition of the material and the access to the composting modules. Anaerobic bacteria may thrive in the material if it gets too dense and therefore is not thoroughly ventilated. Pathogenic bacteria normally will not survive in the compost as the environment simply favours the growth of other bacteria, which oust the pathogens.
The composting process is finished when the raw material has been processed into worm castings and the microbial activity has stagnated.

Worms:

Many different types of worms can be used in composting processes. Eisenia Foetida, which is the worm used in this system, is among the soil-surface-dwelling or compost-preferring species. These species prefer to live at or near the soil surface or in compost heaps, since they like to eat material which is high in organic matter.
The worms are hermaphrodites, producing both sperm and eggs, but are dependent on each other for reproduction. They reproduce by joining mucus from their clitella, exchanging sperm. The mucus hardens into a cocoon where sperm and eggs are deposited, whereupon the worm backs out of the hardening cocoon. After being released from the worm, the cocoon closes at both ends, and 2-10 eggs are fertilized.
Approximately 2-3 baby worms are hatched after 3 weeks. After 9 weeks, the new worms are fertile, and under optimal conditions they will produce 2-3 cocoons per week for 6-12 months.
The full-grown worms weigh approx 0.5 grams and consume approximately half their weight of material each day.
The average lifespan of the worms in a functioning vermicomposting system is 3-4 years.

SOIL FACTORY, worms: Eisenia Foetida

Composting parameters:

Ventilation
Vermicomposting is an aerobic combustion process which is dependent on constant access to oxygen. A lack of oxygen may result in anaerobic processes, which produce inconvenient smells. The worms make tunnels in the material providing oxygen supply and allowing CO_2 to escape. This is also important for the bacterial processes. If the material gets too dense, or the tank is too deep, these tunnels collapse. The surface of the material should be exposed to air, but loosely covered by e.g. a black plastic sheet. This is to protect the worms from UV-radiation, in which they can not survive more than a few minutes.

Temperature
The worms thrive and breed optimally in a temperature between 15-25 degrees Celsius. They can survive temperatures between 0-40 degrees. The proportion of worms/bacteria is decisive to the temperature, and a large bacterial population may cause temperatures lethal to worms. This is normally not a problem, as worms dig through dense areas and create ventilation ducts in the material, whereby the temperature is reduced. Good living conditions for worms will normally keep bacterial populations down.

Humidity
The vermicomposting process depends on a good humidity balance. If the material becomes too wet, the worms may drown, but the worms need moisture in order for the air exchange to take place through their skin. Therefore the compost must not dry out. The water contained in normal kitchen waste, together with some dry bedding, ought to ensure a good moisture balance. If the compost should become too dry, some water can be added. As long as water is condensed on the inside of the covering plastic sheet, the compost is moist enough.

Ph
The worms thrive at a neutral pH value of 6-7. If the pH gets too low, a calcareous product could be carefully added.

Raw material
All kinds of organic waste can be added to the SOIL FACTORY, although one must make sure that the material is not toxic or corrosive etc. Fruit, vegetables, coffee grounds, teabags, egg shells, bread, dairy products, paper, cardboard, coffee filters etc., are all suitable. Fish, shellfish and meat may cause severe odour inconveniences. Plastic and metals must be avoided, as it is normally not degraded in the compost and may be toxic. One must also be careful adding sauce or soup, which may disturb the humidity balance.

The material could be cut or ground before it is put into the SOIL FACTORY, as this eases the transformation process.

C/N proportion

The Carbon/Nitrogen proportion is essential to the composting process. If the amount of carbon is high in relation to the amount of nitrogen the process slows down. If the share of nitrogen gets too high, there is a risk of ammonia appearing in the compost. Bacteria and worms thrive optimally at a C/N proportion of 25:1. Kitchen waste normally has the proportion of C/N 15:1 and therefore one should add material containing carbon.

Bedding

The bedding, which is added together with the raw material, contributes by optimising the C/N relationship. It also regulates humidity and helps ventilate the compost by preventing it from becoming too dense. The bedding must be rich in carbon, toxin free and fit to absorb moisture. Shredded paper, cardboard and newspaper, leaf mould, peat moss and sawdust can be used. One must make sure that the sawdust comes from untreated wood, as otherwise it may contain toxic substances.

Problems:

Common problems in indoor composting are fruit flies and inconvenient smells. Both problems result from an unbalanced process: erroneous humidity control, lack of bedding, the wrong bedding, or an overload of raw material which may cause anaerobic processes to take place.

Installation:

Installation of the system is easy and requires no use of tools.

Maintenance:

Fresh raw material should be added every week. 1000 worms consume approx 0.25 kg of raw material each day. The worms can be left alone for up to three weeks, but in order to keep up the population they should be fed on a regular basis. The volume of the kitchen waste is greatly reduced by the process. One composting tank is normally filled up after 2 months. When all three tanks are full, the process in the lower tank is completed, and the tank can be emptied.

SOIL FACTORY. A container for the bedding is mounted inside the top module. The bedding, which is added together with the raw material, contributes by optimising the C/N relationship.

Extra equipment:

A grinding mill can be attached to the top module for easy comminuting of the raw material. The system can be insulated for outdoor use.

Component list:

1000 pc composting worms (Eisenia Foetida)
2 pc black PE tanks 40 x 40 x 30 cm
3 pc black PE tanks w. socket, 40 x 40 x 30 cm, with 36 pc holes Ø 18 mm
2 pc stainless acid-resistant steel fittings for mounting of top module
Fly trap: polypropylene tank, 3 liters with hole Ø 2.4 mm, beer or wine
Bedding container: polypropylene tank, 3 liters, sawdust
Fly net
Black plastic sheet for covering.

SOIL FACTORY, St. Gallen, Switzerland 2002

CLEAN AIR MACHINE, 1997

Introduction:

The CLEAN AIR MACHINE enables persons to improve the air quality of their indoor environment. The CLEAN AIR MACHINE cleans the air of dust, viruses, fungus, bacteria, toxic gases, malodorous gases, organic solvents, smog, carbon monoxide etc.

This version of the system is dimensioned for cleaning 600 m³ per hour, which corresponds to an area of approximately 120 m².

The capacity and efficiency can be increased and the system can be extended with functions such as air humidifying, cooling and heating. The machine can be installed separately as a mobile unit or be permanently incorporated in a building and connected to ventilation ducts distributing the clean air to the entire building.

Technical background:

The CLEAN AIR MACHINE takes into account all known sources of air pollution.

Air is sucked into the CLEAN AIR MACHINE by a ventilator and passes through a row of filters capable of both chemical and mechanical cleaning. The cleaned air is then circulated back into the room. The filters are put together in such a way that they ensure an optimum efficiency and long life of the device.

System components:

In order to achieve the high purity of the treated air the following components are used:

Prefilter

A washable PE-prefilter is mounted at the air intake. This filter holds back the biggest dust particles and keeps the ventilator and the sound absorption system from becoming dirty. In addition it increases the life span of the activated carbon filter and the protective filter.

Sound absorption

The protective filter and the HEPA filter demand high air pressure, causing air noise. This is eliminated with a sound absorption system mounted at the air intake and at the air outlet.

Ventilator

The only usable ventilator is a centrifugal type given the required final air

Component diagram:

Lid

Sound absorber

UVC

HEPA filter

Protective filter

AC filter

Control-box

Pressure equalizer

Ventilator

Sound absorber

Prefilter
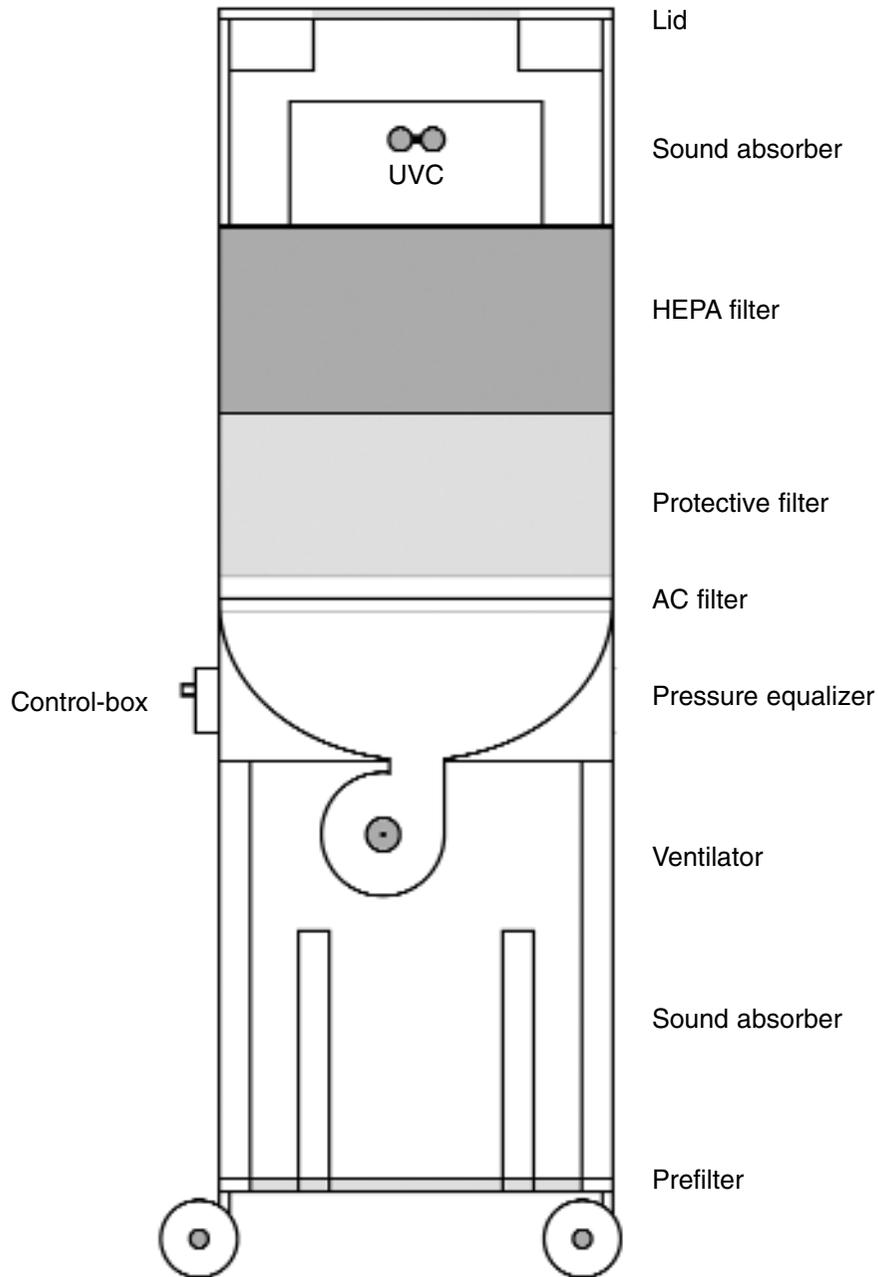
pressure of approx. 500 pa. The one chosen here maintains this pressure at an airflow of 600 m³/h. An RPM (rotations per minute) regulator is mounted in order for the final air speed and pressure to be adjusted manually.

Activated carbon (AC) filter
In order to remove molecular particles such as fine smoke, malodorous and toxic gases, organic compounds, ozone etc. from the air, a very effective active carbon filter is installed. The carbon is put into a bag, which makes changing easy when the carbon is no longer effective. The life time of the carbon varies greatly depending on the local environment.

Protective filter
The most expensive component, and one that needs periodic change, is the HEPA filter. In order to increase the interval between the changes installation of a protective pre-filter is necessary. The filter chosen should ensure the HEPA filter a lifetime of approx. 5 years.

Sterile filter
The sterile filter, or the HEPA filter, is accessible in different degrees of fineness. It is important to evaluate price, life span and pressure loss with the achieved degree of filtration. This filter has the classification EU 13 which has an efficiency of 99.997% at 0.3 nm particle sizes, which ought to be satisfying in most cases.

UVC system
A UVC lamp is built into the system to deactivate viruses and other microorganisms that are not held back in the HEPA filter.
This is to eliminate air-born infectious diseases like influenza and the common cold. The radiation dose is calculated according to an air speed of 600 m³/h, and the efficiency will increase at a lower air speed.

Electricity
The CLEAN AIR MACHINE is constructed for connection to 230 V AC. If it is aimed at instalment in a channel system, three-phase current will be more appropriate.

Extra equipment:

Extra equipment may be added in order to increase the system's efficiency, and the air cleaning may be combined with different comfort functions: Even though smog and other gases are removed in the activated carbon filter there might, if the system is to work optimally, be a need for catalytic oxidation. This is achieved with UVC-activated titanium dioxide.

By adding an ozone generator a 100% sterile airflow will be guaranteed. Furthermore, one or two electric heating cartridges can be installed to regulate the temperature of the air, thus the airflow will be less noticeable. An air humidifier and/or an air dehumidifier can be installed. Finally an exhaust fitting can be mounted in order to steer the direction of the air flow over an angle of +/-45°.

Technical specifications and maintenance:

The components are built into two horizontally mounted cabinets that can be assembled and dismantled without tools. This means that it is easy to change filters and UVC tubes.

Present configuration:
Electricity consumption: Ventilator 410 W, UVC lamp 40 W = 450 W total, by normal operation (reduced ventilator speed) app. 200 W.
Dimensions: 650 x 650 x 2050 mm.
Transport weight: 80 kg.

Components	Type	Dimensions	Effieiency	Change	Remarks
Prefilter	G 80 Polyethylene	610 x 610 x 20	57 %	washable	-
Sound absorption	Polyethergranulate	-	> 50 %	-	135 MK
Ventilator	D2E 160-AB 01-06	270 x 206 x 204	500 pa. at 600 m³/h	-	410 W
AC filter	BGP 8-16	610 x 610 x 50	activated	6 months	2.5 l
Protective filter	Turbo-Flo F8566	610 x 610 x 300	46 %	3 years	-
HEPA filter	EU 13	610 x 610 x 300	99.997 at 0,3 nanom. particle size	5 years	-
UVC lamp	TUV UVC 36 W	429 x 38	16 W at 253.7 nm.	1 years	-

System diagram:
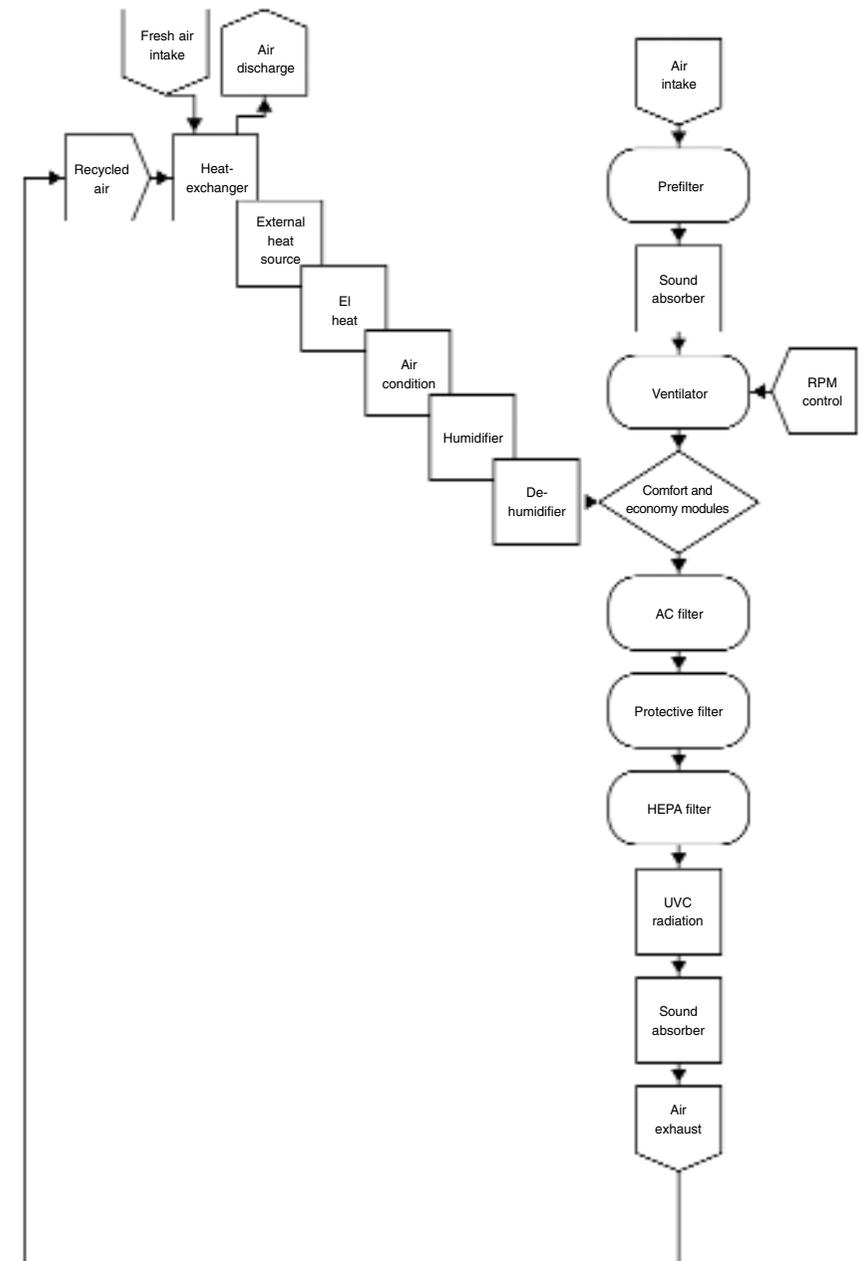
Component list:

Ventilator:
D2E 160-AB 01-06, 410W radial ventilator 1195 m³/h, 1850 revolutions/min.

Noise traps:
Sound absorbent recombined polyether granulate with open cells, 5 cm.

Cabinet:
1 mm stainless, acid-resistant steel (AISI 316 L).

Built-in boxes:
High density fiber plates, 10 mm.

1 pc washable PE pre-filter
1 pc activated carbon filter: 2.5 l activated carbon, type BGP 8-16
1 pc protective filter, polypropylene 30 cm
1 pc sterile filter: HEPA filter 13 EU
1 pc UVC - filter: 36 W TUV UVC tube
4 transport wheels, double rotational wheels, nylon and polyurethane
1 pc RPM controller
Various bolts and nuts.

Manual for

N55 SPACEFRAME

Index:

N55 SPACEFRAME, 1999

N55 SPACEFRAME, 1999

Introduction:

The N55 SPACEFRAME is a low-cost, movable lightweight construction that can easily be transformed. It is dimensioned as a living unit for 3-4 persons and demands practically no maintenance. The construction can be erected by anybody in a short time.

The N55 SPACEFRAME is configured as a truncated tetrahedron with an indoor ground floor of approx. 20 m². According to needs and economy, the size and configuration may be changed, and extra floors and rooms may be included: it is easy to add to the construction in stages.

The entire unit is constructed from small lightweight components which all can be handled without the use of cranes or other heavy machinery. All components are materially minimised, have a low degree of manufacturing and are produced by a few simple machines, which anybody can operate. When stacked, the components take up very little space. The construction is assembled by hand. It can be erected directly onto the ground, since a cast foundation is not necessary. The structure can be dismantled and rebuilt many times over without damaging any of the components. The construction can be moved either fully assembled, or partly dismantled.

Technical background:

By constructing spaceframes one is able to utilize geometry to achieve very strong, self-load-bearing structures and at the same time save materials and work.

N55 SPACEFRAME, indoor

N55 SPACEFRAME, indoor

The building system in N55 SPACEFRAME is configured as a space lattice known as the common space lattice, the octet truss, or the octahedron-tetrahedron complex.

The geometry of this space lattice does not depend on gravity for strength or integrity, and therefore is suitable for employment in satellites and space platforms, in big halls etc, but is rarely employed for housing and other small-scale purposes.

The distribution of tensile and compressive forces, the rigidity and the ability of the structure to deform locally makes it safe under extreme conditions like earthquakes or sudden impacts. Because of the geometry, loads are distributed well throughout the construction.

All the struts in the construction are of equal length, ensuring an economic production with few different components.

The octet truss is among the structures in which one obtains the greatest strength using the least materials.

Construction:

The struts used in the building system for the N55 SPACEFRAME are acid resistant stainless steel, highly durable, prepared for numerous reassemblies and chemically immune to most conditions. The equal-length struts are bent in 70° angles for tetrahedra and 110° angles for octahedra. The struts are assembled by hand using stainless acid resistant bolts and nuts that are tightened with a screwdriver. Two tetrahedra and one octahedron make the basic building "brick", with which one can build walls, foundation and roof.

All parts, except insulating material, can be stacked and stored to fill a minimum of space, e.g. in an apartment.

The structure can be thinned out to use fewer struts. The resulting space enclosure has walls of 50 cm, inclining at angles of 70° and 110°. The walls can be filled with insulating material, or be used as cupboards, to hide electrical installations or for growing plants inside.
On the outside the construction is covered with plates in acid resistant stainless steel, which need no maintenance.
Inside planes are covered with moisture-absorbing plaster-fibreboard plates. The floor is made of birch plywood and polycarbonate is used for windows. The window frame is covered with plates of insulating, light-reflecting polyethylene foam.
The door is a plate of honeycomb aluminium. Polycarbonate is used for skylight. If the walls are properly insulated, there should be no need to heat the room except under extreme conditions. Lighting, sun radiation, cooking and normal activities will provide sufficient heating. All kinds of insulating material can be used: Rockwool, sheep wool, paper, polystyrene, and so on.

Maintenance:

There is no need for maintenance of the main construction or the outside plating. The floor and walls may need extra varnish every now and then.

Technical specifications:

Weight: approx. 4.5 tons.
Height/width: approx. 5.5 m.

Component list:

Main construction:
Approx. 3000 pc 110° / 4500 pc 70° struts, 1 mm stainless, acid-resistant steel AISI 316 L. 144 pc 55° struts for mounting square outside plates.
All struts with 4 pc holes Ø 6 mm. Approx. 8000 pc M6 x 12 mm stainless set screws and M6 stainless lock nuts. Fishplates 80 mm, hole Ø 6.5 mm.

Outside plating:
540 pc 62.5 cm regular triangles / 36 pc 62.5 x 65 cm squares in 1 mm stainless, acid-resistant steel AISI 316 L, M6 x 100 stainless set screw, M6 top nut, 24/ 8 mm disc, M6 stainless nut, 6/10 mm draught strip, nylon wedges.

Inside plating:
330 pc 60 cm triangles, 3 squares in 10 mm plaster/fibreboard, acid proof insex screw M6 x 35 mm, 24/8 mm disc, M6 stainless nut, 6/10 mm draught strip.

Windows:
60 pc 60 cm triangles in 4 mm polycarbonate, stainless insex screw M6 x 35 mm, 24/8 mm disc, M6 stainless nut, 6/10 mm draught strip, nylon wedges. Window frame: 35 mm polyethylene-foam.

Floor:
110 pc 60 mm triangles in 10 mm birch plywood, stainless insex screw M6 x 35 mm, 24/8 mm disc, M6 stainless nut, 6/10 mm draught strip, nylon wedges.

Roof:
6 pc 62.5 cm triangles in polycarbonate, 27 pc 62.5 triangles in stainless, acid-resistant steel AISI 316 L. All plates with 12 holes Ø 7 mm, M6 x 100 mm stainless set screw, 24/8 mm disc, M6 stainless nut, 6/10 mm draught strip, flat rubber washer, nylon wedges.

Door:
Hexagonal 6 mm sandwich plate, 120 cm across, 10 mm rubber strip, rubber handle, lock.

Foundation tanks:
31 pc low density PE tanks with water and disinfectant.
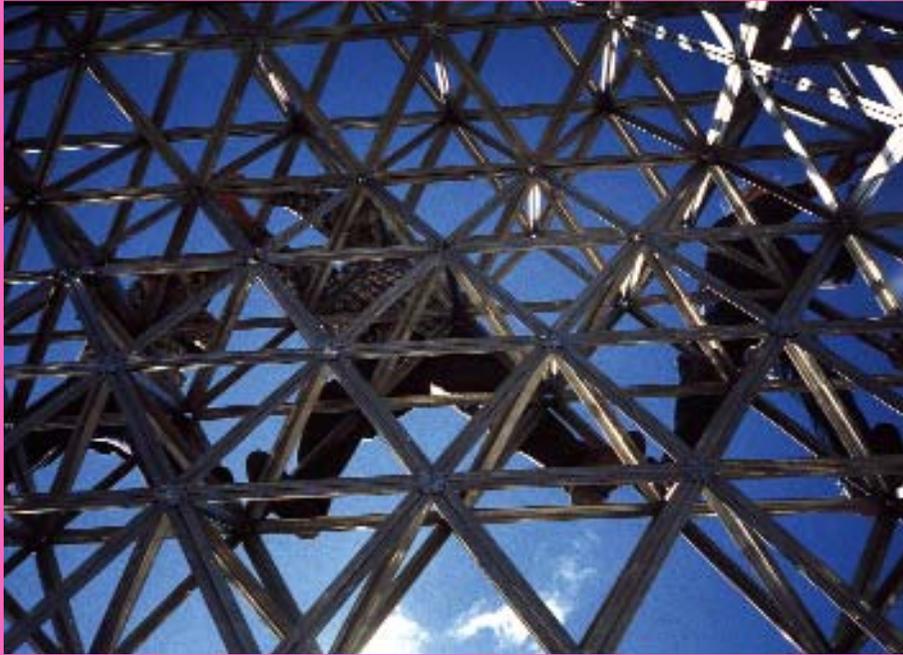
During assembly one may climb in the structure, using a climbing hamess for security

Assembly:

Alternating tetrahedra/octahedra are put together to form girders which are combined to form the base. The walls are built onto the base one girder at the time. During assembly, the struts are bolted only loosely together, and the bolts are finally tightened when all the parts of a layer are in place.

The construction is built using two kinds of struts: Tetrahedra are assembled using 6 pc 70° struts. 12 pc 110° struts for octahedra are then attached to the tetrahedra.
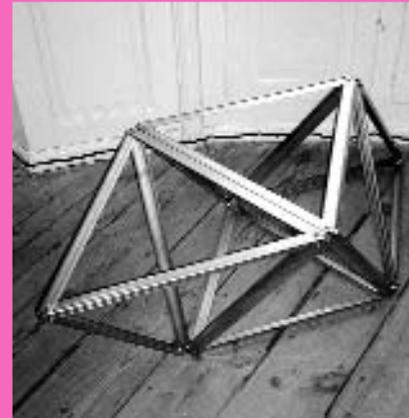
Two tetrahedra, one octahedron: the "brick" in the construction. This configuration fills space in all directions.
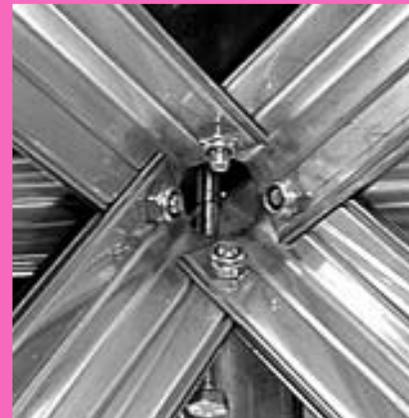
The struts are overlapping each other in a regular pattern.
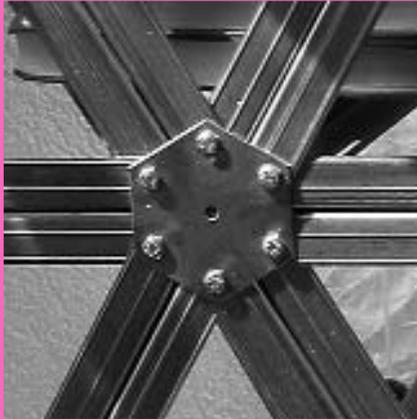
Fishplates are bolted onto all meeting points in order to increase rigidity of the inner and outer plane ("stressed skin").

Door:

The entrance is a hexagonal hole which is closed with an aluminium honeycomb plate. The door is closed by pulling the rubber handle and turning the key.

Foundation:

Polyethylene plastic tanks are built into the lowest level in the construction. The tanks are each filled with approx. 90 liters of water, together adding about 3 tons to the total weight of the construction. One can also use earthspears or fill the lower level with sand. Shields may be attached to prevent moisture and scavengers from entering from below.
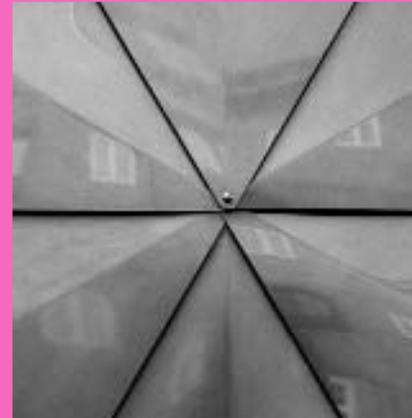
Outside plating:

The construction is faced using stainless acid resistant steel triangles and squares. The plates overlap and the tightness is regulated with wedges. This surface demands no treatment or maintenance.

Roof:

The roof is covered with plates of stainless steel and polycarbonate, mounted with draught stribs and rubber. The roof has one central summit and one in each corner. The height and decline of the plates is regulated with wedges and long screws.

Windows:

The construction is slightly dynamic and is influenced by temperatures. Glass is therefore not suited for windows and polycarbonate is used instead. A slight deformation of the material will not cause it to break. The windows are opened and closed by regulating the long fixture screw at their low corners.

Window frames:

The window frames are covered with plates of polyethylene-foam, which is easy to cut and mount and reflects light.
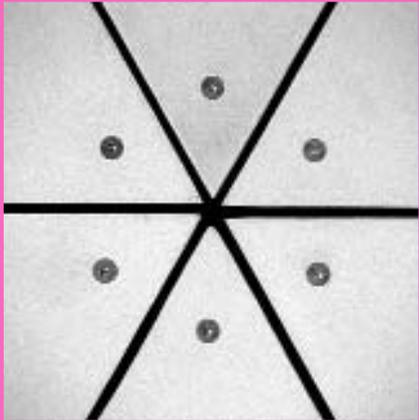
Inside plating:

Plaster-fiberboard plates are used to cover the inner walls. The plates are treated with varnish and mounted with draught strips.
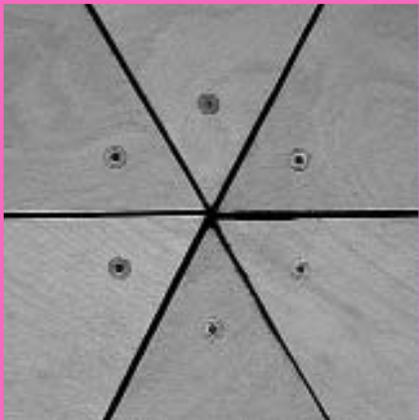
Floor:

Birch plywood, varnished, mounted with wedges and draught strips.
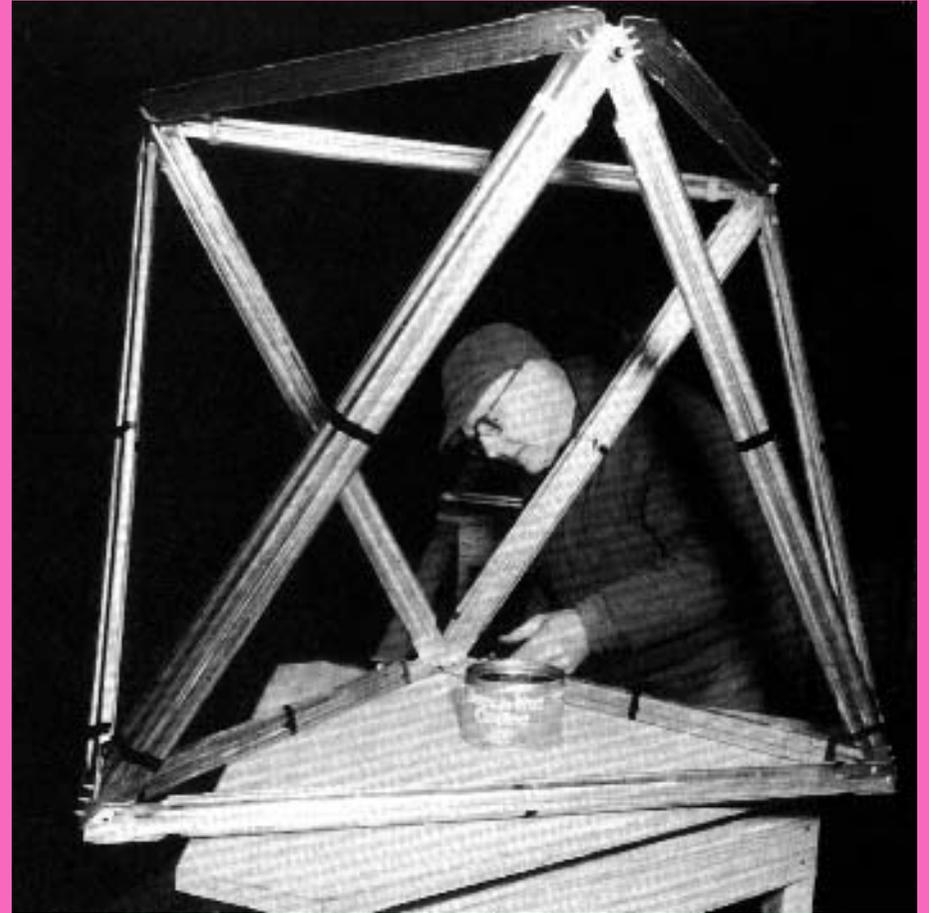
The octahedron-tetrahedron complex has been discovered and formulated within various contexts: chemistry, physics, mathematics and other. A construction system (the "octet truss") which makes use of this geometry was patented in the 1940´s by R. Buckminster Fuller, USA. The system was used as a curved space frame for building the Ford Rotunda in Detroit.

Concert with Anders Remmer at N55 SPACEFRAME, Stockholm, Sweden 2000

Manual for

FLOATING PLATFORM

Index:

FLOATING PLATFORM and N55 SPACEFRAME, 2000

Introduction:

The FLOATING PLATFORM is a modular construction, which is intended to function as a buoyant foundation for N55 SPACEFRAME (see manual for N55 SPACEFRAME), or for other lightweight constructions. It can also be used for other purposes, for example building land.
The FLOATING PLATFORM is a space lattice, comprised of small modules made from stainless steel with built-in buoyant tanks. The small modules in the platform can all be assembled by hand. The modular system facilitates gradual extensions and makes the platform less vulnerable to damage; for example, leaks only have local impact and can be repaired locally. The platform draws approximately 1.2 meters when loaded.

Technical background:

Floating systems that lie still in the water most of the time have other requirements than ships and barges that have to be stable during navigation. For example, stability can be obtained without ballasting, thereby reducing the use of materials. In addition, construction methods that normally are not used on water can be applied.

The floating system can also be shaped according to the intended usage. The FLOATING PLATFORM has comparatively low net buoyancy. This is an economic advantage, but limits the amount of weight that can be added to the platform. However, the modularity of the platform offers the possibility to add more buoyancy when there is a need for it: extra tanks may be connected to the sides of the platform, material may be put into the cavities in the steel truss or extensions can be made from the same building system. Tanks for water and wastewater, toilets etc. can be integrated in ways that do not add load to the construction.

Construction:

The platform is constructed as an "octet truss" space lattice (see Manual for N55 SPACEFRAME) and is shaped as an equilateral triangle. 189 polyethylene tanks make the platform buoyant. They are concentrated in the three pontoons situated in each corner of the platform. The pontoons are constructed from 3 layers of tanks and are shaped as tetrahedra with one vertex pointing downwards and a plane facing upwards.
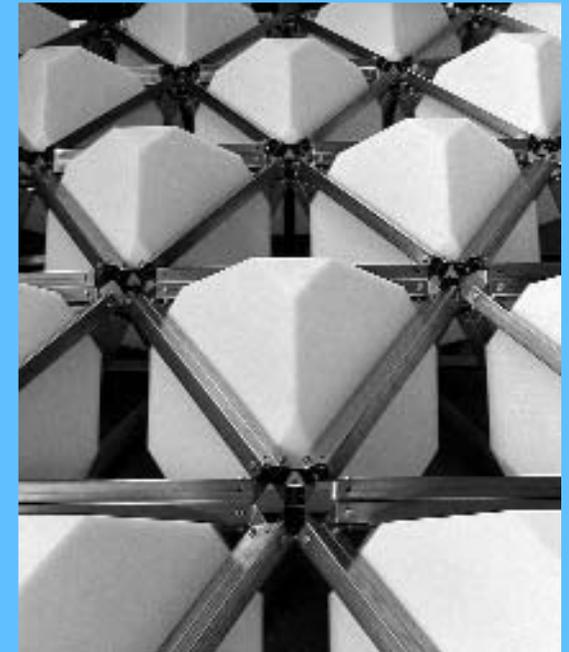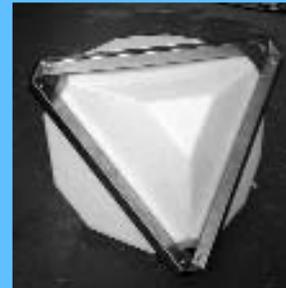
Buoyancy: The tanks are made from low-density polyethylene. They are built into tetrahedra of stainless, acid-resistant steel, which are assembled into a coherent "octet truss" space lattice. The buoyancy of the tanks is reduced at low temperatures because they are made of flexible material (there is an approximated 10% difference between 0° and 20° C).

Due to the stronger buoyancy in the pontoons, leverage creates a strain towards the centre. This is compensated for by reinforcing the platform with a sidepiece consisting of an extra layer of struts.

The cavities between the tanks in the steel truss create turbulence, and thus the effect of the waves is reduced when they meet the platform. The triangular shape also adds stability as the platform floats on three "points".

Boards are attached to the steel truss and plates of birch plywood are fastened on top of them. The plywood functions both as a deck and a floor. It also contributes to the stabilisation of the lattice construction. The top construction is fixed directly onto the wood as well as with bolts through the wood to the platform.

The space lattice in the platform is constructed from a steel type that is the most durable in brackish water, on the condition that plants and algae will grow on it. However, galvanic currents will cause sporadic corrosion on the steel unless measures are taken. Zinc blocs are attached to the steel with a distance of 1 meter maximum. Zinc is a more reactive metal than stainless steel and will therefore provide sacrificial protection. Using this method, one should be able to avoid any corrosion of the steel.

Wind load and mooring:

The construction as a whole is stable and safe in heavy weather and wind up to the strength of a hurricane, provided that it is well moored. The maximum load on the large sides is 3000 kg horizontally and 300 kg vertically in a wind of 33 m/s (i.e. hurricane conditions). To secure the construction under these conditions, it should be moored from each corner with a strength of 3.3 tons and an angle of 12°.

The tanks are concentrated in the corners of the platform.
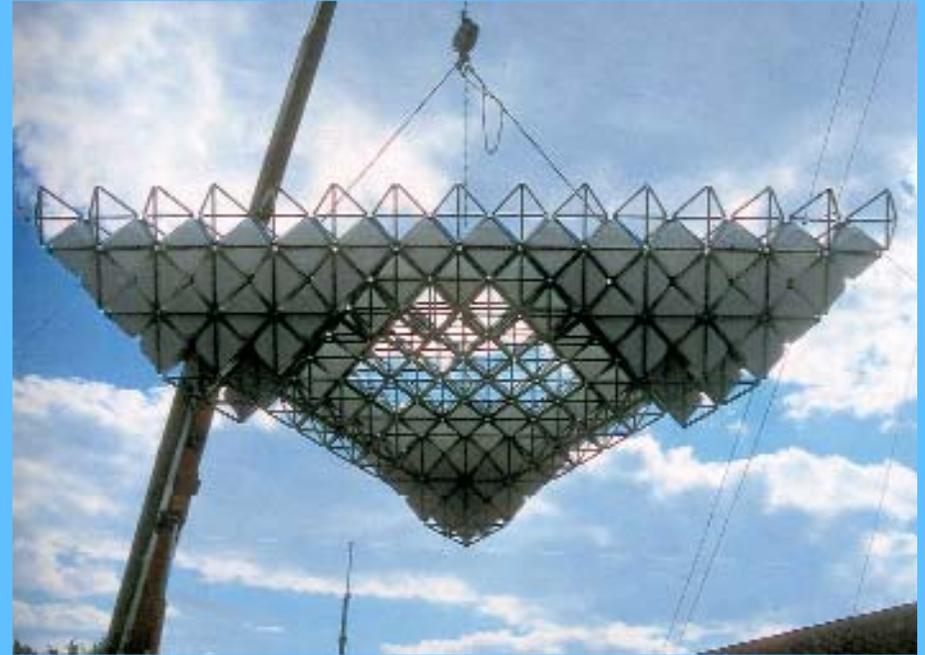
The FLOATING PLATFORM is launched with a crane.

There are mooring chains fixed around 2 of the node points in each corner of the platform. Two bruce-anchors hold one of the corners and the other two are moored to bollards on land.

Extensions:

In order to increase the buoyancy it is possible to attach extra tanks. The tanks can also be used for wastewater, sewage and other purposes.

Maintenance:

Neither the steel nor the tanks are treated: they need no other maintenance than regular checking. The construction can be lifted up in order to check thoroughly for corrosion and leaks.

The zinc blocs must be exchanged when the zinc is gone. The plywood deck must be checked regularly for damage, and the damp seal on the edges must be maintained.

Assembling the FLOATING PLATFORM at FACTORY.

Boards of birch plywood are fixed with bolts to the node points of the construction. The boards are treated against dampness with epoxy and light primer.

The top construction is fixed directly onto the wood as well as with bolts through the wood to the platform.

Technical specifications:

Dimensions: Sides 8.4 m, area approx. 40 m², height: 1.5 m.
Buoyancy in platform: 7500 kg.
Total weight of the construction: 5500 kg.
Net buoyancy: 2000 kg.
Tanks: buoyancy / tank at 20°C: 44.8 l. At 0°C: 41.3 l.

Component list:

Platform:
189 low-density polyethylene cubes, 36 cm x 36 cm, walls 4 mm
Tightening: 100 tanks tightened by PE welding, 89 tanks tightened with nylon thread M10 and Teflon tape
1100 kg welded square tubes in stainless steel AISI 304, 30 x 30 x 1,20 mm, cut in lengths 48.6 cm, each 8 holes Ø 6 mm.

Assembly fittings:
Stainless steel AISI 304, stainless hexagonal bolts M6 x 12, stainless setscrew M6 x 70, stainless lock nut M6.

Plywood deck:
21 mm birch plywood with epoxy and light primer. Stainless set screws M8 x 120. Stainless nylon lock nut M8. Stainless plate screws 6.3 x 38 mm Stainless discs 18/6.4 x 1.6, stainless Pozidriv screws 5.5 x 38 mm.

Mooring:
2 pc 40 kg bruce-anchors with 18 mm steel chain
Polypropylene 20 mm triple mooring rope
Shackles.

FLOATING PLATFORM and N55 SPACEFRAME, Copenhagen, Denmark 2002

FLOATING PLATFORM, N55 SPACEFRAME and MODULAR BOAT, 2002.

FLOATING PLATFORM, N55 SPACEFRAME and MODULAR BOAT, 2002.

FLOATING PLATFORM, N55 SPACEFRAME and MODULAR BOAT, 2002. The batteries for the boat engine are charged by the solar panels on the roof of N55 SPACEFRAME.
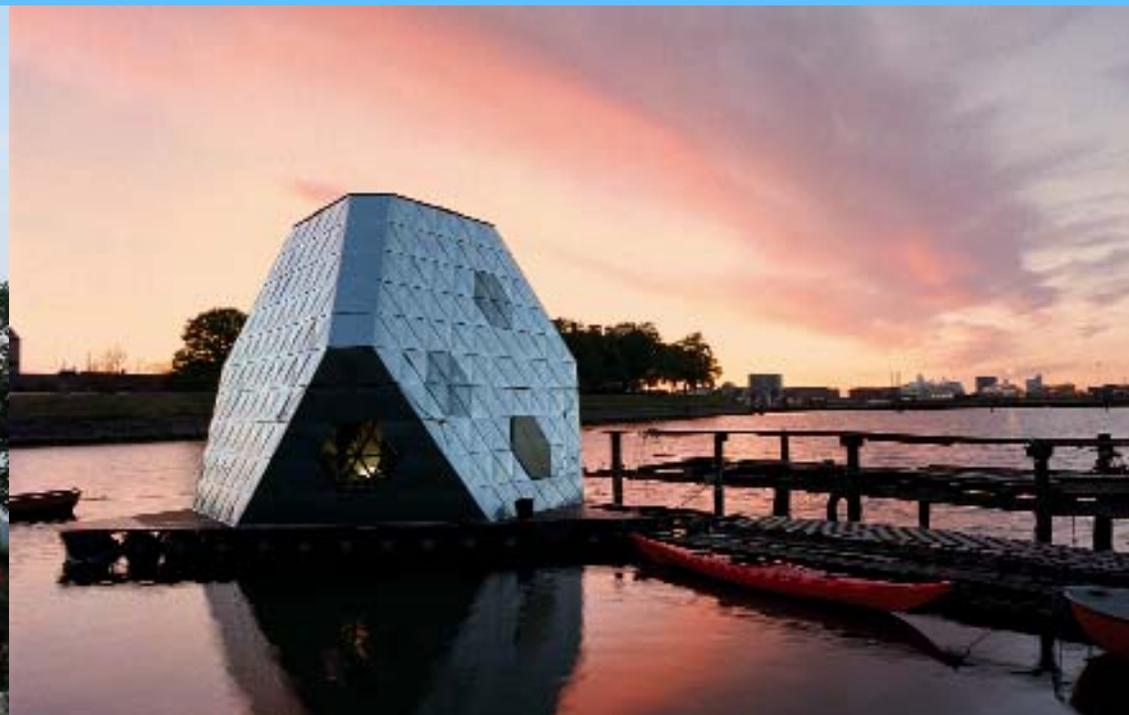
FLOATING PLATFORM and N55 SPACEFRAME, 2001.

N55 SPACEFRAME, indoor 2001

N55 SPACEFRAME, outdoor 2001

N55 SPACEFRAME, indoor 2003. TABLE and DYNAMIC CHAIRs.

N55 SPACEFRAME, indoor 2003. Wood stove, wood from LAND, kitchen.

N55 SPACEFRAME, indoor 2003. Bathroom with shower and toilet.

N55 SPACEFRAME, indoor 2002.

N55 SPACEFRAME, indoor 2002. Planning N55 BOOK.

FLOATING PLATFORM and N55 SPACEFRAME is situated at Quintusholmen, Copenhagen, where a small self-seeded community has emerged.

BEACH, Copenhagen, Denmark 2003. BEACH was constructed from 24 tons of sand in collaboration with other persons living at Quintusholmen, Copenhagen.

BEACH with jetty, Quintusholmen, Copenhagen, Denmark 2003.

Manual for

MODULAR BOAT

Index:

MODULAR BOAT, 2002

Introduction:

MODULAR BOAT is a low cost system that enables persons to stay and transport themselves and various cargos on water. It can be moved by hand using paddles, by sails and by various motors. The motor used in this version is powered by electricity. The batteries are charged by solar panels. It delivers a maximum speed of 5 kilometers per hour (approximately 2 knots). Because the boat is constructed as a catamaran, it is very seaworthy. The boat is lightweight and the materials are highly durable.

Construction:

The MODULAR BOAT is constructed from a space lattice system of stainless acid resistant steel (see "Manual for N55 SPACEFRAME"), which combines optimal strength with low weight. Tetrahedral and octahedral polyethylene tanks are used for constructing the floats including the stem. Half-octahedral tanks are built into the deck that connects the two floats. In combination with polycarbonate lids, they provide flexible space for different functions and items: ladder, anchor, seats, tables, stowage, compass, battery containers, etc. These functions can be fastened and moved around as desired.

With the addition of a rigid deck, the MODULAR BOAT can function as a pontoon bridge, or as a floating platform for various constructions on water. The size of the MODULAR BOAT can easily be adapted to one's requirements. The number of plastic tanks in the floats may be varied, but it is necessary to secure sufficient buoyancy for the planned tasks.

Energy:

The boat is connected to solar panels that charge one of the two batteries within a few hours. Fully charged batteries can each power the engine at full speed for about 1 1/2 hours.

Maintenance:

The MODULAR BOAT requires no special maintenance apart from occasional cleaning. If the boat is stored on land, the steel parts must be washed in fresh water. Since the surface is untreated, barnacles and seaweed will grow on the boat. The friction thus caused results in a drag on the speed of the boat, which is less energy-efficient. In this case, one can remove the organisms mechanically from time to time.

Technical specifications:

Weight: approx. 200 kg.
Dimensions: length approx. 3.90 m, width approx. 2.4 m.

Component list:

32 tetrahedral tanks in low-density polyethylene
12 octahedral tanks in low-density polyethylene
6 black octahedral tanks in low-density polyethylene cut in halves
100 mm polyethylene foam
252 pc 70° struts in stainless, acid-resistant steel AISI 316 L
108 pc 100° struts in stainless, acid-resistant steel AISI 316 L
36 pc 55° struts in stainless, acid-resistant steel AISI 316 L
20 bakelite spheres
6 mm polycarbonate squares, 60 x 60 cm
Rubber straps
2 pc car batteries with charger
12 V light bulb with waterproof switch

MODULAR BOAT, Copenhagen, Denmark 2002

MODULAR BOAT, stowage, compass and table.

21 mm waterproof plywood plate
Engine: 12 V, 2 Hp electric engine
11 mm nylon rope
Rubber straps
Fenders
Ladder, stainless steel
Anchor, stainless steel
Paddles, PP plastic and aluminum
Compass
Rubber protective mats
Various bolts, nuts, discs, stainless, acid-resistant steel.

Manual for

SNAIL SHELL SYSTEM

Index:

SNAIL SHELL SYSTEM, 2001

Introduction:

The SNAIL SHELL SYSTEM is a low cost system that enables persons to move around, change their whereabouts and live in various environments. One unit supplies space for one person. It is mobile both on land and water. One person can move it slowly, either by pushing it like a wheel, walking inside it or on top of it.

On water it can be rowed, moved by a kite or hooked up to a vessel, for example, a ferry. The unit rests on one flat side and can be anchored in lakes, rivers, harbours or at sea. On land, it can be placed in city spaces, fields, forests etc.

The SNAIL SHELL SYSTEM takes up very little space and can easily be placed in a discreet way. It can be buried in the ground, exposing only the entrance. It can also function as a comfortable space inside existing buildings. Several units can meet up and form temporary communities.

The unit can be hooked up onto existing infrastructure like telecommunication lines and electricity cables (for example, by connecting it to street lamps).

If special devices are added, the unit can supply its own energy.

The SNAIL SHELL SYSTEM can also be used for transporting different items and it can provide protection for persons when they participate in situations like demonstrations.

Construction:

The SNAIL SHELL SYSTEM is constructed from a cylindrical polyethylene tank. The tank was chosen for its non-toxic material, low weight and its ability to roll. A spherical tank would also work, but standard tanks of that shape are rare and expensive. Various devices are attached to the tank, adding different functions. Caterpillar tracks of rubber are fixed to rubber knobs on the tank. They protect the tank during transportation, add friction and make it easier to steer the unit. They also function as protective fenders when the SNAIL SHELL SYSTEM is moored. The caterpillar tracks can be removed.

On one of the flat sides, a small and a larger hole perforate the unit, and function as an air intake and entrance respectively. A removable lid covers the entrance, which when left half-open also supplies air, while keeping rain out. Whenever a person is inside the unit, it must be left either halfway or fully open. The air intake provides a constant supply of fresh air.

Three eyebolts, fixed to the surface, function as points to which the unit can be moored on water or whenever it is exposed to strong wind. This can be done by using the rope that is coiled up around the air intake. A paddle as well as a hand bilge pump is attached to the unit. The bilge pump can be used for supplying fresh water or for removing water or other liquid. It also functions as a vacuum cleaner. The bottom is covered by a foam sheet that insulates the unit and also functions as a mattress.

Fixed to this is a box which contains equipment for cooking, a container for drinking water, a torch, a sponge for removal of condensed water, and a tube which can be fixed to the bilge pump. When the box is emptied of these items, plastic bags can be fixed to the box, which then functions as a toilet seat. Because the materials are not fireproof, cooking must be done outside the unit. Elastic strings at the bottom hold the foam mattress in place and can also be used to secure the box as well as other items during transportation of the SNAIL SHELL SYSTEM.

Extensions:

All kinds of extensions can easily be made to the system. More equipment can be made to fit inside as well as outside the unit. Insulating material can be strapped onto the surface (or insulating material like snow, leaves or earth can be piled up around it).

Devices like dynamos, solar panels, wind mills, etc., can be added so the unit supplies its own energy.

Links to combine several units can be attached. Polyethylene can not be glued to other material so all extensions must be fastened e.g. by lashing or screwing. Care must be taken not to damage the plastic or perforate it in ways that could cause leaks.
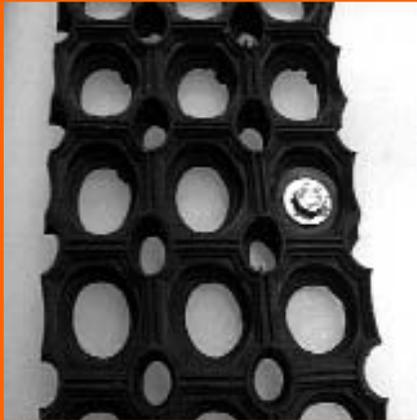
Caterpillar tracks:

The caterpillar tracks are made of rubber doormats. They can easily be removed by lifting them off the rubber knobs to which they are hooked.

Bilge pump:

The bilge pump can be used as a vacuum cleaner as well as for pumping water. Combined with hoses and a flexible tank, it works as a shower.

Entrance/exit:

The lid can be opened either halfway or fully. When a person sits inside the unit, it should be left at least halfway open for better ventilation.
The lid rests on a steel rod. The rod can be used for lifting the unit from resting to transportable position, by threading it through one of the eyebolts.
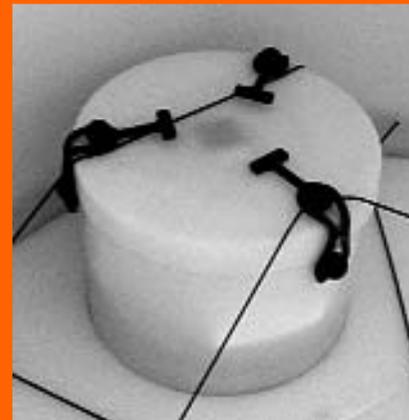
Equipment box:

The box contains a torch, hoses for the pump, kitchen pan, kettle and alcohol burner, foldable water containers that can be used for ballasting as well as for shower and drinking water, and plastic bags.

Air intake:

The air intake provides a constant supply of fresh air while keeping rain out. The chocks can be put under the caterpillar tracks whenever the unit is temporarily parked. The rope is for mooring the unit on water or securing it on land.

Toilet:

A plastic bag can be folded over the knobs whereby the box can be used as a toilet.

More units together can form temporary communities.

SNAIL SHELL SYSTEM parked.

Walking inside the SNAIL SHELL SYSTEM.

It is easy to steer the SNAIL SHELL SYSTEM up and down stairs and through different obstacles.

Paddling the SNAIL SHELL SYSTEM.

Supply Station: information dispenser, water, power (12 V) and phone / data line.

SNAIL SHELL SYSTEM, inside. Music by Anders Remmer.

Supply station:

A supply station for the SNAIL SHELL SYSTEM has been developed.
The supply stations belong to the system PUBLIC THINGS (see Manual for PUBLIC THINGS) and are intended to be put out in publicly accessible places where they can provide access to water, electricity (12 V) and communication lines (phone and data).

Maintenance:

The SNAIL SHELL SYSTEM requires no special maintenance apart from occasional cleaning. If the unit is transported by sea, all rubber parts should afterwards be washed in fresh water.

Technical specifications:

Weight: 90 kg.
Dimensions: Diameter 153 cm, height 105 cm.

Component list:

1 pc cylindrical tank, low density polyethylene Ø 153 cm, h: 105 cm
1 pc paddle, aluminium and PP
1 pc hand bilge pump
11 mm nylon rope
Exit: 3 mm polycarbonate lid Ø 50 cm, bakelite spheres, rubber straps, rubber string
Caterpillar tracks: rubber door mats, nylon straps
50 mm polyethylene foam
1 pc cylindrical tank LDPE, Ø 37, containing alcohol burner, frying pan, pot, handgrip, 10 liter foldable water container, sponge, roll of PE-plastic bags, torch, 20 mm tube
3 pc 8 mm eye bolts, stainless, acid-resistant steel
6 pc 6 mm eye bolts, stainless, acid-resistant steel
Various bolts, nuts and discs in stainless, acid-resistant steel.

SNAIL SHELL SYSTEM, Amsterdam, The Netherlands 2001

SNAIL SHELL SYSTEM, Leeds, UK 2002

SNAIL SHELL SYSTEM, Graz, Austria 2002

SNAIL SHELL SYSTEM, St. Gallen, Switzerland 2002

SNAIL SHELL SYSTEM, Graz, Austria 2002

SNAIL SHELL SYSTEM, Turin, Italy 2002

SNAIL SHELL SYSTEM, Turin, Italy 2002

SNAIL SHELL SYSTEM, Turin, Italy 2002

SNAIL SHELL SYSTEM, Po river, Turin, Italy 2002

SNAIL SHELL SYSTEM connected to the Supply Station, Turin, Italy 2002

SNAIL SHELL SYSTEM and YTEICOS, Turin, Italy 2002

SNAIL SHELL SYSTEM, St. Gallen, Switzerland 2002

SNAIL SHELL SYSTEM, Århus, Denmark 2003

Manual for

SUSPENDED PLATFORM

SNAIL SHELL SYSTEM, Quintusholmen, Copenhagen, Denmark 2001

SUSPENDED PLATFORM at LAND position: N52° 18' 19,7" E 005° 32' 11,7". Zeewolde, the Netherlands 2001

Introduction:

The SUSPENDED PLATFORM is a modular, lightweight and low-cost system that enables persons to live in for example a forest, in mountains, or between buildings. It uses existing structures to carry its load.
Three persons can easily transport a basic living version for up to four persons.
It could be installed in a short time, though this will depend on the conditions of the site. The system can easily be extended to support more persons and functions.

Construction:

The SUSPENDED PLATFORM consists of 3 basic modules: A core module, a sleeping module and a water supply module. Other modules like garden modules, etc., can be added.
The modules are constructed partly from a space lattice system of stainless acid resistant steel (see manual for N55 SPACEFRAME), which combines optimal strength with low weight, partly from polyethylene tanks and acrylic textiles.
High quality rope, aluminium lightweight tackles and snap-hooks are used for the suspension system.

Core Module:

The core module is a rigid platform of steel. It supplies the users with a kitchen function, a storage function, tables, a place to sit, a bath function and a toilet function.
Transparent plates of polycarbonate fixed to the bottom of the module work as footrests. Furthermore the platform is equipped with a hoist. The core module can be entered from all sides by using different devices like ladders, climbing equipment or a simple rope.

Sleeping Module:

The Sleeping Module is made of two different textiles. The upper part, which functions as a cover, is waterproof, and the lower part enables the body to breathe.
The sleeping module works both with and without a cover. By pulling a line, the textile is lifted to make a roof-like cover. The sleeping module is entered via the core module to which it is fixed with a rope.
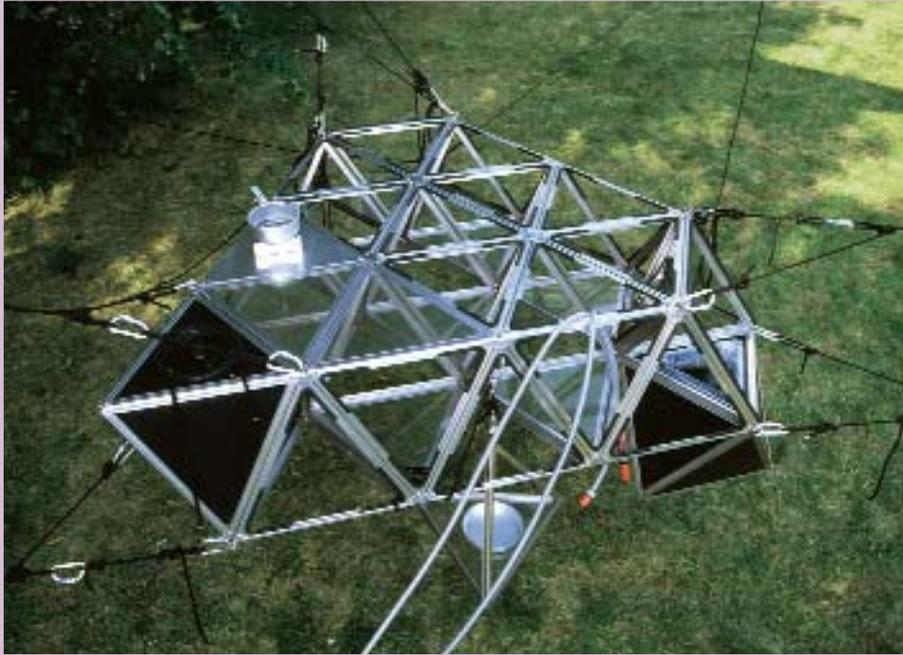
Core Module: Kitchen, seats, tables, toilet, shower, storage, handgrips, suspension system, hoist.

Sleeping Module: Rubber cups are fixed to each end to prevent rain water from seeping in.

Water Collector: Acrylic sheet collects rain water. The water is directed to the water tanks through a hose.

Water Supply Module:

Rainwater is collected by the triangular sail and runs through hoses to the two water tanks.
They function as reservoirs for cold and heated water for the bath and the kitchen.
The water tanks hang from wheels so that they can easily be moved to the desired position.
The black tank provides hot water from direct solar heating.
The water supply module should be placed higher than the core module for water pressure.

Maintenance:

The SUSPENDED PLATFORM is made from very durable materials. However, some maintenance is required for safety reasons.
The ropes should be changed after 5 years of use or if there is any kind of local damage. The same goes for snap-hooks and tackles.
The sleeping modules are made from acrylic textiles to improve UV resistance. But eventually, the textiles will deteriorate and should be renewed.

Hand grips:

Rubber strips are fixed to the corners for a good grip. They mark where to load the construction.

Storage:

A plastic tank with a watertight lid provides room for storage.

Cooking equipment and table:

Alcohol provides heat for cooking.

Floor:

Plates of polycarbonate are attached to the core module.

Chair:

One of the corners can be used to sit in.
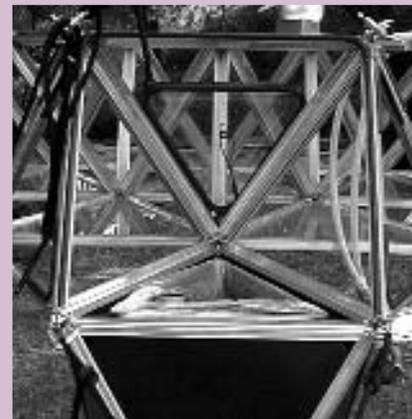
Toilet:

The toilet consist of a plastic tank, plastic bags and a lid. The bags can be removed or left in the tank to compost.

Suspension system:

The core module is suspended from eyebolts fixed to all corners of the construction. The ropes are tightened to trees or to another carrying structure. Half of the ropes are tied to points at lower levels than the platform in order to stabilise its movements. Two kinds of knots are used: bowline knots at the snap hooks and figure eight knots at the points of suspension.
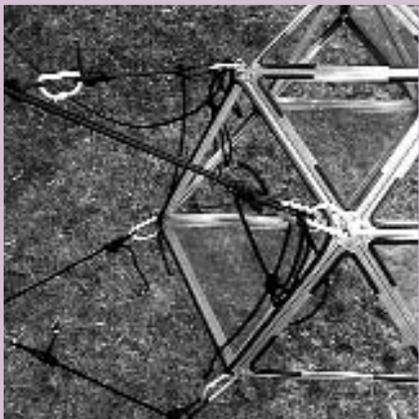
Hoist:

The hoist can be used for transporting things to the core module.

Garden module:

The two tank halves can be used for growing plants inside.
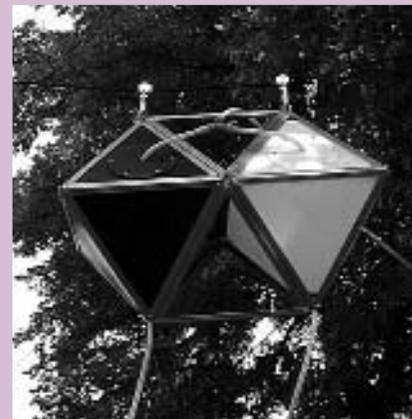
Water tanks:

For cold water and solar heated water.

Component list:

Core Module:
Triangle 60 x 60 cm and struts in stainless, acid-resistant steel AISI 316 L, bolts and nuts M6, 2 pc black octahedron PE- tanks, 90 l, 7 pc 10 mm polycarbonate triangles, rubber strips, alcohol burner, pots and kettles.

Water Supply Module:
Struts in stainless, acid-resistant steel AISI 316 L, plastic hose and couplings, triangular sail with sides 2.4 m, 2 pc octahedron polyethylene tanks.

Sleeping Modules:
Acrylic textile 3 x 3 m with reinforced holes.

Garden Module:
Struts in stainless, acid-resistant steel AISI 316 L, 1 pc octahedron PE-tank.

Suspension system:
650 mm x M8 thread rod in acid resistant stainless steel, bolts and nuts M8, nylon rope 11 mm, aluminium shackles and snap-hooks.

SUSPENDED PLATFORM, Quintusholmen, Copenhagen, Denmark 2001

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PUBLIC THINGS, 2000

Introduction:

PUBLIC THINGS enable persons to use public space in various ways.
The system consists of a number of functions which are accessible for anybody who wants to use them.
PUBLIC THINGS can be placed at different spots in public areas, such as streets, squares, public buildings, parks or roadsides.
Anybody may take initiatives to expand PUBLIC THINGS with more functions.

Construction:

The initial system is constructed from polyethylene tanks.
The tanks hold most of the functions within a framework of acid resistant, stainless steel struts.
All materials are durable and weather proof.
The different elements can easily be reconfigured.
Foundation tanks filled with water add weight to the construction.

Maintenance:

PUBLIC THINGS are maintained by the persons using them.

System components:

Dispenser:

The dispenser is intended for the collection and distribution of different items: booklets, posters, food, and other types of objects. Anybody can fill the dispenser with items that they would like others to pick up, read or interact with.

Components:
Octahedron PE-tank, rubber strips, bakelite knob, elastic cord.

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Public address device:

This device enables persons to address each other in public. Speeches, information, stories, songs are uttered into the end of the transparent hose. The sound is amplified by the funnel.

Components:
PE-tank, PE funnel, PVC hose, rubber strips, bolts and nuts.
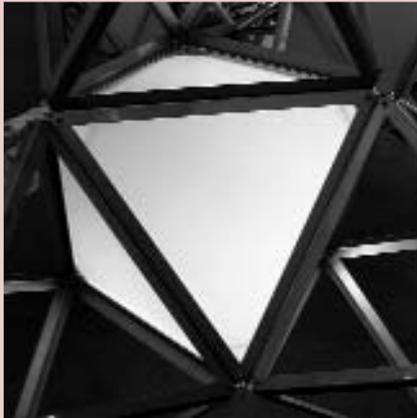
Lamp:

The lamp uses 12 V and poses no security risk. It can run by 12 V AC or be connected to a solar power system.

Components:
PE-tank, 12 V / 9 W bulb, 220-12 V transformer, socket and electric cable.
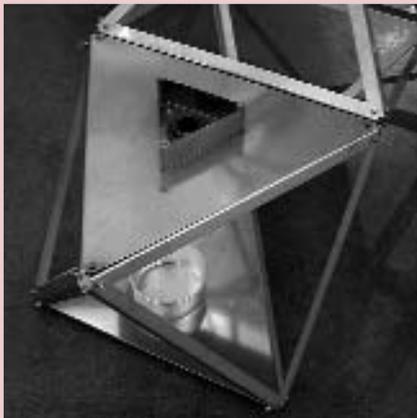
Kitchen:

The heat source for the kitchen is an alcohol burner surrounded by a triangular rest to hold pots and kettles. In order to cook, one must bring water, alcohol and food stuffs.

Components:
Alcohol burner, stainless acid resistant steel plates, rubber knee protectors, pots.

Toilet:

A plastic bag is used to catch urine and faeces. Afterwards, the bag can be buried, composted or burnt. The end product of either one of these processes can be used as fertilizer.

Components:
PE-tank, PE-bag, rubber fixtures.

Bed:

A place to rest or sleep is provided by a thin mattress. It is covered by plastic on all sides. An extra sheet of plastic can be folded over the resting person in order to protect against wind and rain. When not in use, the bed can be rolled up and fixed to the construction.

Components:
PE-foam, PVC sheet, rubber cord.

Chair:

Components:
PE-tank, eyebolt, plastic coated steel wire.
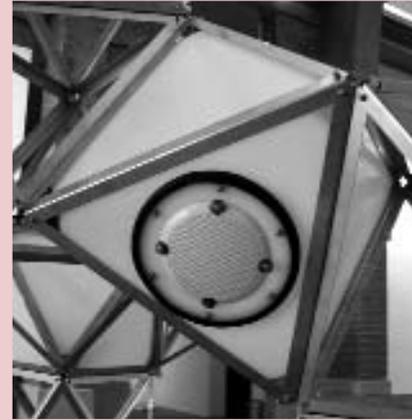
Sound:

Water resistant loudspeakers are built into the tank. They are connected to sound equipment, which are placed in another module.

Components:
PE-tank, water resistant loudspeakers, cables, rubber strips, bolts and nuts.
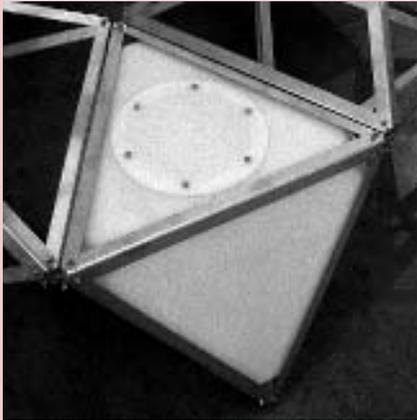
Foundation:

The foundation tank adds weight to the construction.
This is done for two reasons:
1) The construction is balanced,
2) The construction is difficult to move.

Components:
PE-tank, PE-lid, screws.

Table:

Components:
Stainless acid resistant steel plate, PE-tank, nuts and bolts.
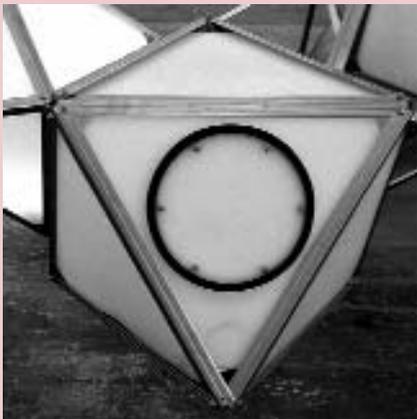
Transformer:

Output: 300 W, 12 V DC.

Telescope:

The telescope can be used to look at objects in the sky or on earth.

Technical specifications:
Model type: Reflector
Focus length: F-600 m
Mirror: 76 mm
Ocular: 24.5 mm: 6 mm=100 x enlargement

Island with anchor:

A number of tetrahedron PE-tanks and a framework of acid-resistant, stainless steel struts make up the floating island.
The island occupies water areas, expanding useable public space. The upper tanks can be filled with soil to allow seeds to germinate and grow.
The structure catches floating debris, branches and garbage, and in time it will grow to occupy more space.

Three anchors hold the island in place.

Components:
28 PE-tanks, stainless acid resist-ant steel struts, bolts and nuts,
3 anchors (PE-tanks, stones, chains).

Dimensions:
2.5 m per side.

Wash basin:

The wash basin can be connected to a water source through the hose that is mounted in the top. Opening the bottom tap empties it.

Components:
Tetrahedron PE-tank, water hose and fittings.

Bathtub:

The bathtub is equipped with a manual pump. The water is pumped from the water source (e.g. a lake or sea) directly into the bathtub. The tank is emptied by swapping the tubes attached to the pump or by tilting the tank.

Components:
60 cm cubic PE- tank, manual bilge pump, water hoses.

Shower:

The shower consists of a black plastic tank. The hose in the top can be connected to a water source. The tank is filled with water when the water supply is turned on. The tank can also be filled through the top hole.
The water stays in the tank to heat in the sun, until the desired temper-ature is reached.

Components:
Black PE-tank, lid with bakelite knob and elastic cord, water hoses, fittings.

PUBLIC THINGS, Bregenz, Austria 2000. Music by Anders Remmer.

PUBLIC THINGS, Bolzano, Italy 2002

PUBLIC THINGS, Venice, Italy 2001

PUBLIC THINGS, Toulouse, France 2000. Bed, wash basin, light, sound and foundation modules.

PUBLIC THINGS, Toulouse, France 2000. Bed, shower, light, sound and foundation modules.

PUBLIC THINGS, Toulouse, France 2000. Kitchen module.
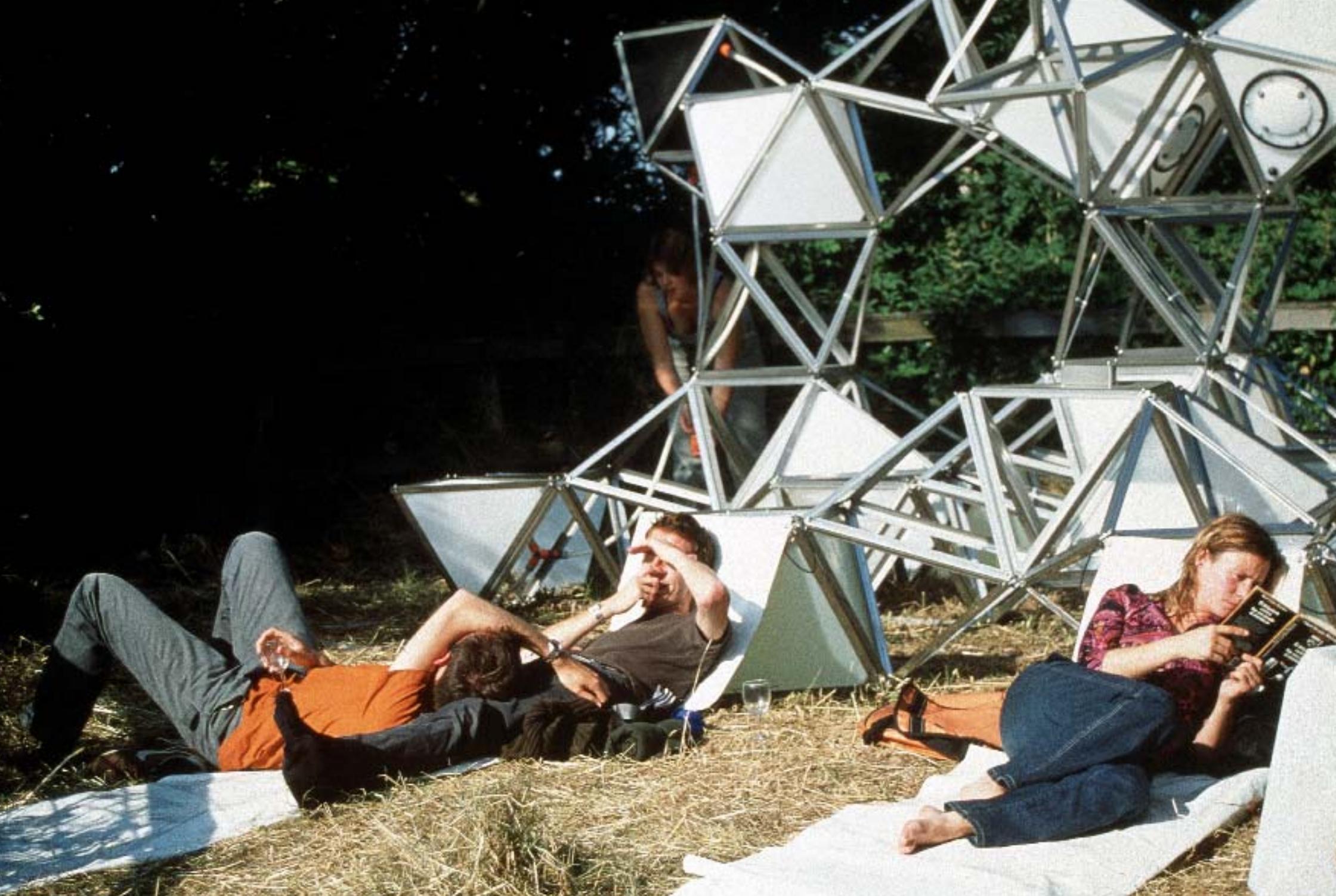
PUBLIC THINGS, Fort Asperen, The Netherlands 2001

PUBLIC THINGS, Mexico City, Mexico 2002

PUBLIC THINGS, Toulouse, France 2000. Bed.
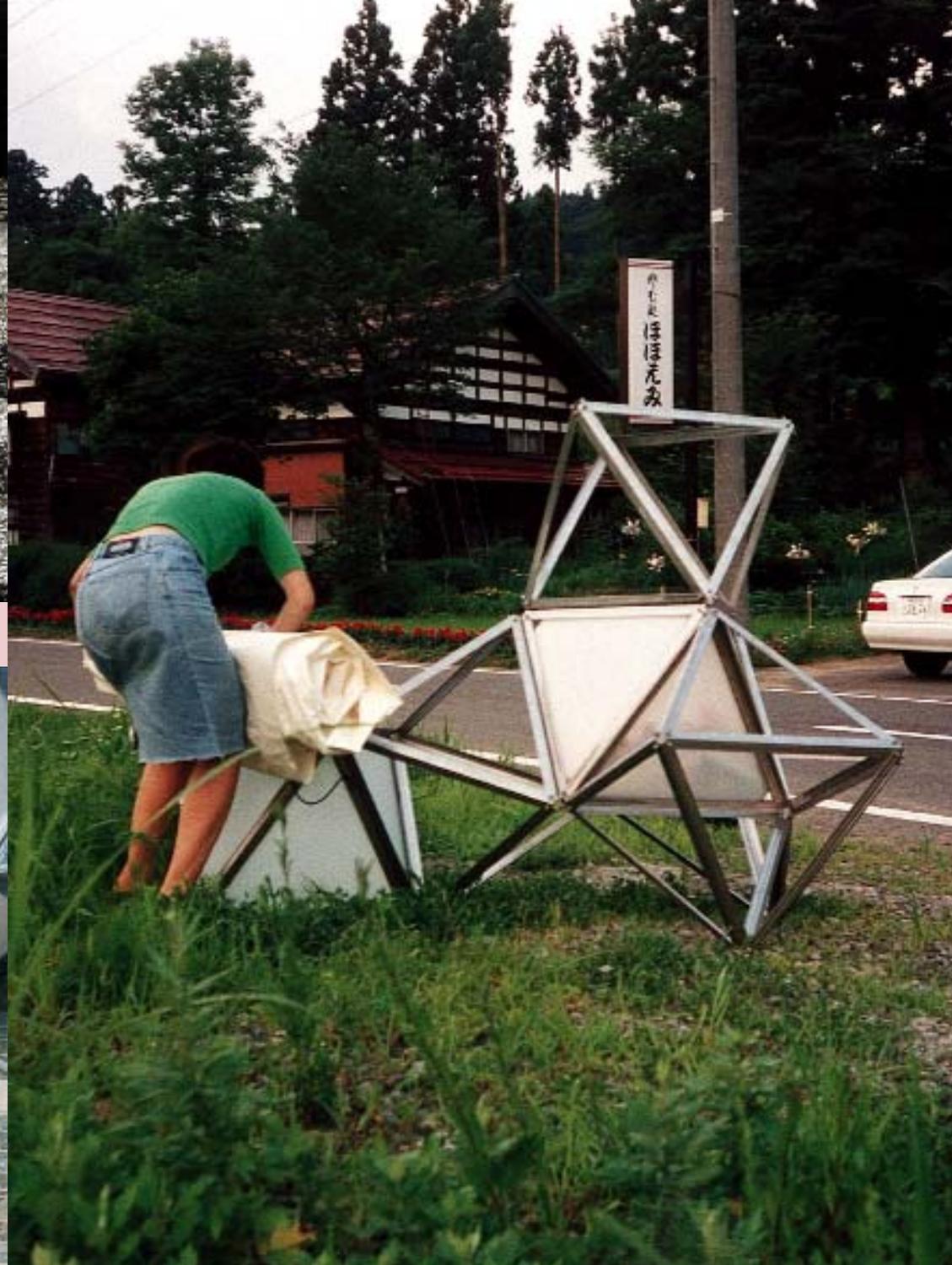
PUBLIC THINGS, Echigo-Tsumari, Japan, 2000. Bed.

PUBLIC THINGS, Canterbury, UK 2000. The island floated in a river where it caught leaves, branches and garbage drifting down the stream.
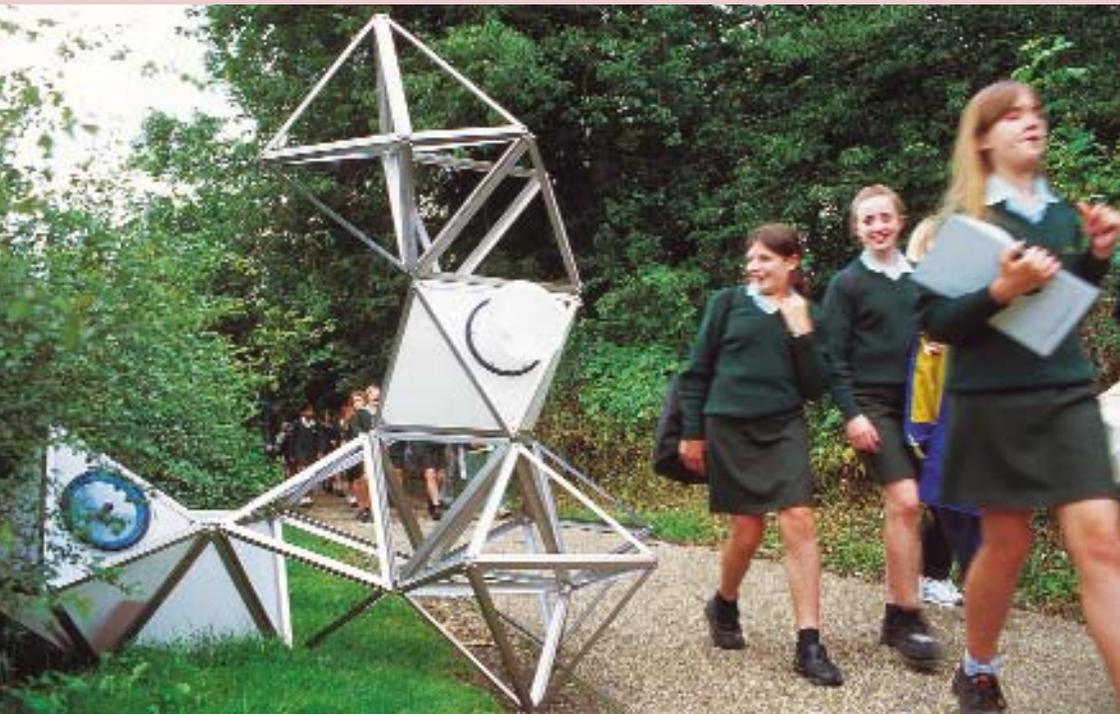
PUBLIC THINGS, Canterbury, UK 2000. Public Address device and dispenser module.

PUBLIC THINGS, Canterbury, UK 2000. Bathtub.

PUBLIC THINGS - ORGY MODULE

PUBLIC THINGS - ORGY MODULE was installed for a weekend at the for-
mer Folkets Hus ("The People's House", built 1959) in Copenhagen, where
there now is a music venue. Three main modules with light, music and drinks
were installed on the two upper floors and on the street outside the building.
The "chandelier" suspended under the ceiling on the third floor held three
tanks that delivered an alcoholic drink for free via tubes to about 50 taps.
Mattresses and dispensers filled with fruit were spread throughout the build-
ing.

PUBLIC THINGS - ORGY MODULE, Copenhagen, Denmark 2002. Fruit dispenser.

PUBLIC THINGS - ORGY MODULE, Copenhagen, Denmark 2002. Chandelier.

PUBLIC THINGS - ORGY MODULE, Copenhagen, Denmark 2002. Mattress and taps for drink.

BASTA

In 2000, N55 was invited to collaborate with industrial workers at Basta, a factory producing bicycle locks in Denmark. N55 decided to accept the invitation despite an obvious critical view on the collaboration between art and business, in order to get concrete experience. After talks with the workers and management at Basta, N55 suggested to build up a communication room for everybody to use at the factory. A version of Public Things with internet access was established, and a notice board was made for daily exchange of information. N55 convinced the management that all employees should be able to leave their work during the day to use the room to relax, browse the internet etc. Groups of managers, workers and designers were formed to initiate long term projects - a garden, a homepage for the employees, a food project where the workers cooked for each other on shift, a large bike that everybody could ride on - all with the implicit aim of breaking down power structures within the company and enhancing consciousness about the situation. Everybody could take two hours a week out of production to work on these projects. During N55s involvement at Basta, a competitor bought the company, production in Denmark was stopped, and the workers got sacked.

PUBLIC THINGS - ORGY MODULE, Copenhagen, Denmark 2002

PUBLIC THINGS, Basta, Korsør, Denmark 2000

PUBLIC THINGS, Malmö, Sweden 1999. Indoor version with music, shelves, light.

PUBLIC THINGS, London, UK 2000. Multiple kitchens version.

PUBLIC THINGS, Utrecht, The Netherlands 2000. Indoor version.

PUBLIC THINGS - KITCHEN, Linz, Austria, 1999. Indoor and outdoor version. The KITCHEN is equipped with the necessary items for the preparation of food.

STREETLAMP, Les Arques, France 2003. Low voltage movable STREETLAMPS in yellow, cyan and magenta with on/off switches were installed in different places around the village.

INFO MODULE, Bremen, Germany 2003

CITY FARMING PLANT MODULES

Index:

CITY FARMING PLANT MODULES, 2003

Introduction:

CITY FARMING PLANT MODULES enable persons to grow plants in cities. The plant modules can be arranged in multiple formations directly on pavement, squares, etc.

Construction:

The plant modules consist of soil, which is wrapped up in semitransparent, semi-permeable fibre cloth made into flexible forms. Water is introduced into every module by hoses that can be connected to drain pipes on buildings or to other water sources. The parts of the hoses that are inside the modules are perforated, which allows the water to seep out into the soil. Rainwater will also penetrate the fibre cloth, which will retain moisture while allowing excess water to escape.

Planting and harvest:

CITY FARMING PLANT MODULES is intended for use by anybody.

Persons can harvest plants and plant new plants. Some of the plants, like potatoes, require a large soil volume and therefore grow best in bigger modules. Herbs and beans need less space and can be grown in narrow rows. The vegetables may be harvested whenever they are ready to use.
If the modules are handled carefully, the cloth can be used several times. However, the soil may need to be fertilized with compost, etc., before reusing.

Maintenance:

The system is maintained by the persons using it. In case of drought, the modules can be watered by hand, or the hoses can be connected to a tap.

Component list:

Polypropylene fibre cloth with fertilised soil, nylon straps
Black permeable PVC hoses
Transparent fibre reinforced PVC hose
Polypropylene hose couplings
Polyethylene funnels.

CITY FARMING PLANT MODULES. Hoses, fiber cloth and fertilized soil.

The ends of the plant modules are fixed with nylon straps.

Connection to a drain pipe.

The plant modules are linked together using hose couplings.

CITY FARMING PLANT MODULES, Bremen, Germany 2003

CITY FARMING PLANT MODULES, Bremen, Germany 2003

CITY FARMING PLANT MODULES, Bremen, Germany 2003

Manual for

SMALL FISHFARM

CITY FARMING PLANT MODULES, Bremen, Germany 2003

SMALL FISHFARM, 2003

Introduction:

The SMALL FISHFARM enables persons to raise fish for their own consumption. It requires access to a sea, a river or a lake with clean water.

Technical background:

The SMALL FISHFARM can provide a good supply of fish protein for a limited number of persons, while avoiding adverse effects on the fish and the surrounding waters.
The SMALL FISHFARM is constructed for extensive (rather than intensive or semi-intensive) cultivation techniques. The fish are not fed artificially, but live from algae, plankton, weeds and detritus that occur naturally in the water and on the sea floor.
This low-impact method results in somewhat slower growth. However, because the fish are less densly populated there is less competition for food and space, which can cause faster growth rates for individual fish. This is useful in selective harvesting. Intensive or semi-intensive techniques raise the fish uniformly faster by adding feed artificially, which also enables denser stocking, but this will negatively affect the well being of the fish. Also, adding

feed only increases growth rate to a nominal extent with a system such as this. And if the farm is overfed, the ecological balance can be disturbed and low oxygen conditions will result.

Construction:

The SMALL FISHFARM is modular, allowing multiple units to be joined together. Three polyethylene pipes are fixed in a triangular arrangement, end to end, using rubber corner fittings. They provide the floats that hold the fish nets. Three thinner pipes erected from the corners meet in the center to provide support for the top net while also adding further rigidity to the construction. All the materials are non-corrosive and non-toxic.
If one raises species that feed off the sea floor, the net must be open in the bottom. This is the case with this version of SMALL FISHFARM. The net is somewhat longer than the depth of the water and is weighed down using heavy steel chains woven along the bottom. In order to be able to lift it, when collecting all the fish at once, or to check the net for damage, ropes are attached in different places to the end of the net. These can be pulled up through the ring that is suspended at the center of the construction. The farm is held in place using three anchors marked with buoys. Mussels can be placed along the bottom, where they will feed off the fish droppings thereby keeping the area cleaner.

Fish:

A large variety of fish can be raised with the SMALL FISHFARM, but some are especially well suited. In addition to one's taste and preferences, the choice
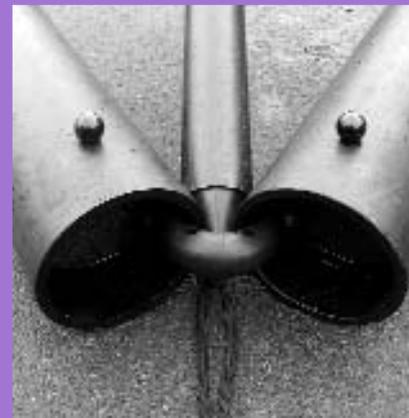
Corner fitting

The nets are hooked on to the knobs.

Ropes, fixed to the bottom of the net.

The chain weighs down the net.

Fish net, fixed to the construction.

Anchor and buoy.

Swan mussels (Anodonta Cygnea).

Common carp (Cyprinus Carpio).

must depend on the salinity, temperature and quality of the water. One must also consider the other organisms that inhabit the water, including algae, seaweed, plants, and other fish species. So as to not disturb the trophic system, it is important to use a fish species native to the body of water being considered. Furthermore, some species require maintenance and feeding while others - if the setting is ideal - can be left more or less to themselves.

For common carp raised in an extensive culture, successful stocking density is around two fish per square meter of surface area. First stocking size should be a minimum of about 15 cm in length. Although growth rate varies with size, it is fast enough to harvest fish every year as long as they are reproducing successfully. Carp will usually reproduce with one major spawning season per year during spring or summer. The male-female ratio should be about 1:2. Other possible fish species are pike, zander, trout, salmon (these species are mainly carnivorous and will have to be fed), tilapia, catfish, (both of these are very hardy and can live in low oxygen conditions) grouper (marine), milkfish, eel, and many others.

Nets:

The drawbacks to cultivating any finfish in nets include the fact that the small mesh size required for reproduction will inhibit good water circulation, it will become covered in algae and subsequently respiring bacteria quite quickly, and the bottom will be covered in fish waste. This will also cause the oxygen levels in the enclosure to become low, which can be unhealthy or even fatal for the fish and other organisms. However, by making sure the area of the farm has lots of plants, and by stocking a few fish that eat the algae on the net, this problem can be avoided. Another possibility is to use a larger mesh size in the main area for better circulation, and either restocking each year, or

having a secondary breeding area with a smaller mesh size used only for spawning and rearing the juveniles to a certain size.

Extensions:

The SMALL FISHFARM can be extended with a small spawning area connected to the main net. The spawning area must provide a shallow, heterogeneous, and protected environment for spawning and for the growth of the larvae and juveniles. In the case of carp, this area must be no more than 30 cm deep and be densely vegetated. The carp will spawn between the plants. The spawning area should have a fine mesh size to prevent the offspring from escaping, however no mesh size is small enough to retain all the eggs and larvae, but this is not a problem because of the abundance of eggs. As an alternative to this method, one can move the reproductively mature fish at the appropriate times to an external enclosure where they can spawn.
For more intensive breeding, a feeding automat can be added. This requires access to electricity, which can be difficult.
One solution could be installing a solar panel or a windmill, including a battery to store the energy.
More SMALL FISHFARM units can be coupled together at the vertices to form hexagonal or rhombic shapes.

Maintenance:

Many fish species will themselves keep the nets clean from algae and weeds by feeding off them. If they don't, some cleansing will be necessary. Occasionally, the nets should be lifted and checked for holes and other damage.
Sick or wounded fish must be removed from the farm.
The largest adults should be harvested first.

Component list:

3 polyethylene tubes Ø 20 cm, thickness 11 mm, length 4 m
3 polyethylene tubes Ø 9 cm, thickness 5 mm, length 2.33 m
corner fittings in rubber
27 bakelite knobs
polyethylene foam
12 x 4 m black nylon net, mesh size 2 x 2 cm
nylon thread
12 m steel chain

SMALL FISHFARM, Bremen, Germany 2003

3 anchors, galvanized steel
3 black buoys
11 mm nylon reinforced rope
bolts and nuts
15 pc common carp (Cyprinus Carpio)
100 pc swan mussels (Anodonta Cygnea).

Manual for

BARMOBILE

x:

Index:

BARMOBILE, Méhari version 2003. Sounding the horn of the Méhari (3 long signals) announces that the bar is open. One long signal closes the bar.

BARMOBILE, Méhari version 2003

Introduction:

BARMOBILE is a mobile non-profit bar that enables persons to establish a bar in local situations, have a drink, meet, listen to music, etc., in any place they find suitable. It can be carried, mounted on a cart, in a car, on a bicycle trailer, or be transported in other ways.

Construction:

The BARMOBILE is constructed from prefabricated plastic tanks that are modified to perform basic bar tasks. In addition, a toilet is available. These functions constitute the main BARMOBILE module. This module, which fits the EUR pallet standard, can be transported by different means.

Battery:
The battery runs the light and sound system for approximately twenty-five hours. It has to be recharged after this.

Light:
The light is switched on next to the loudspeaker at the sound module.

Sound:
A car radio and two water resistant loudspeakers make up the sound system. A special soundtrack was made for BARMOBILE. One can also bring other audio CDs.

Alcohol dispenser:
The alcohol dispenser can be filled with wine or drink mixtures of different sorts. If the adjacent water container is filled with fresh water, the water will keep the contents of the alcohol dispenser cool for a long time.

Money collector:
Money for drinks can be put through the hole in the tank. BARMOBILE is a non-profit bar. The cost of the drinks should only cover the cost of running the bar: refill of drinks, plastic cups etc.

Toilet:
If the BARMOBILE is installed in a car, the toilet can be mounted in the place of the passenger seat. In a non-car BARMOBILE situation, the toilet can be placed directly on the ground. It is important to follow the instructions on how to use the toilet. For hygienic and practical reasons, it is intended for urinating only. The toilet is connected to the water and urine containers. After urinating, one pushes the handle next to the toilet seat to the left, and the toilet

will be filled with water from the water container. After pushing the handle to the right, the toilet can be emptied using the hand pump. Leaving the handle in the left position may cause the toilet to overflow.

Urine collector:
The contents of the urine tank (urine and water) can be used as fertilizer because of its high content of nitrogen.

Water container:
Water is refilled through the large hole. The contents of the water container mixed with urine must not exceed what can be contained in the urine collector.

Waste collector:
Inside the waste collector there is an exchangeable plastic bag. It is important not to put any cigarettes or ashes in the waste container.

Bar stools/tables:
The bar stools can be used alone or in combinations with tables. When not in use, one end of the seat can be inserted under the bar counter (Méhari version). When the BARMOBILE is transported, the bar stools and tables are standing upside down on the counter or are inserted under the plastic tanks.

Extensions:

Refrigerators and other equipment can be built into the system provided one has access to a stable supply of electricity. When BARMOBILE is implanted in a car, the engine of the car can be modified to run on alcohol avoiding the use of fossil fuel.

Using BARMOBILE:

BARMOBILE can be used by anybody for non-commercial purposes.
Those who open and run the bar provide drinks and refill glasses and water. The price for drinks should cover the direct costs of running the bar only. Visitors to BARMOBILE are also welcome to bring their own drinks, food, etc. After use, the counter must be cleaned with a moist cloth, and the waste and urine tanks must be emptied. The contents of the urine tank can be used to fertilize soil.
The person who borrows BARMOBILE is responsible for bringing it back in the same condition. It is strongly recommended that anybody who uses BARMOBILE read the manual carefully.

BARMOBILE. Music by Anders Remmer.

BARMOBILE

Toilet, mounted in place of the passenger seat (Méhari version)

Table

Bar stools

Battery

Fire extinguisher

When the bar is closed, the bar stools and tables can stand upside down on the counter (Méhari version).

Maintenance:

The liquid tanks must be rinsed and the bar stools and tables must be wiped with a moist cloth. The toilet must be cleaned as needed.

Component list:

8 tanks in low density PE, height: 85 cm, width: 29 cm, length: 38 cm
12 V / 11 W light bulb
Battery: 110 Amperehours, 12 V (battery charger: 50/60 Hz/ 115 W)
Car radio with CD player
2 pc water resistant loudspeakers 100 W
Water tap (boat type)
Waste bags, PE-plastic
Tables: 6 pc struts in stainless acid resistant steel, 110°, lengths 20 and 56.5 cm, 3 mm polycarbonate discs Ø 28 cm
Bar stools: 6 pc struts in stainless acid resistant steel, 70°, lengths 20 and 56.5 cm, 3 mm polycarbonate discs Ø 28 cm.
Letters: black tape
Rubber, elastic strings, electrical cord, bolts and nuts
Porcelain toilet (boat type), manual flush control and self-priming pump.

Méhari version:
1 pc Citroen Méhari, model 1972
1 pc fire extinguisher
2 pc counters of 3 mm polycarbonate, length 134 cm, width 37 cm.

Cart version:
1 pc cart of welded steel tubes with 2 wheels and 4 support legs
1 pc pallet in polyethylene and polyurethane, 120 x 80 cm
1 pc bicycle.

BARMOBILE, cart version with bike.

BARMOBILE, cart version with bike.

BARMOBILE, Méhari version, Les Arques, France 2003. Residents of the village Les Arques could get the key for BARMOBILE and use it on different locations within the commune for non-commercial purposes.

BARMOBILE, Méhari version, Les Arques, France 2003

BARMOBILE, Méhari version, Les Arques, France 2003

BARMOBILE, Méhari version, Les Arques, France 2003

BARMOBILE, Méhari version, Les Arques, France 2003

Manual for

MOVEMENT

BARMOBILE, cart version, LAND position N 52° 6' 04,5" E 005° 3' 04,5", Leidsche Rijn, The Netherlands 2003

MOVEMENT

Introduction:

MOVEMENT is a political movement that any person ought to take part in. The aim of *MOVEMENT* is to find ways of living with as small concentrations of power as possible.

Background:

There is a logical relation between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.

The fundamental purpose of politics is to protect the rights of persons. If we deny this assertion we get: the fundamental purpose of politics is not to protect the rights of persons. This suggests that one of the basic tasks of politicians could be, for example, to renounce the rights of themselves and of others. This has no meaning. Or that there is a more important purpose to politics which does not have anything to do with persons and therefore also has nothing to do with the rights of persons. That is plain nonsense. Therefore, we now know that the basic purpose of politics is to protect the rights of persons. In other words we cannot talk about politics in a way that makes sense without the assumption that the fundamental purpose of politics is to protect the rights of persons.

Concentrations of power do not always respect the rights of persons. If we deny this fact, we get: concentrations of power always respect the rights of persons. This does not correspond with our experiences. Concentrations of power characterise our societies. Concentrations of power force persons to concentrate on participating in competition and power games, in order to create a social position for themselves. Concurrently with the concentrations of power dominating our conscious mind and becoming decisive to our situations, the significance of our fellow humans diminishes. And our own significance becomes the significance we have for concentrations of power, the growth of concentrations of power, and the conflicts of concentrations of
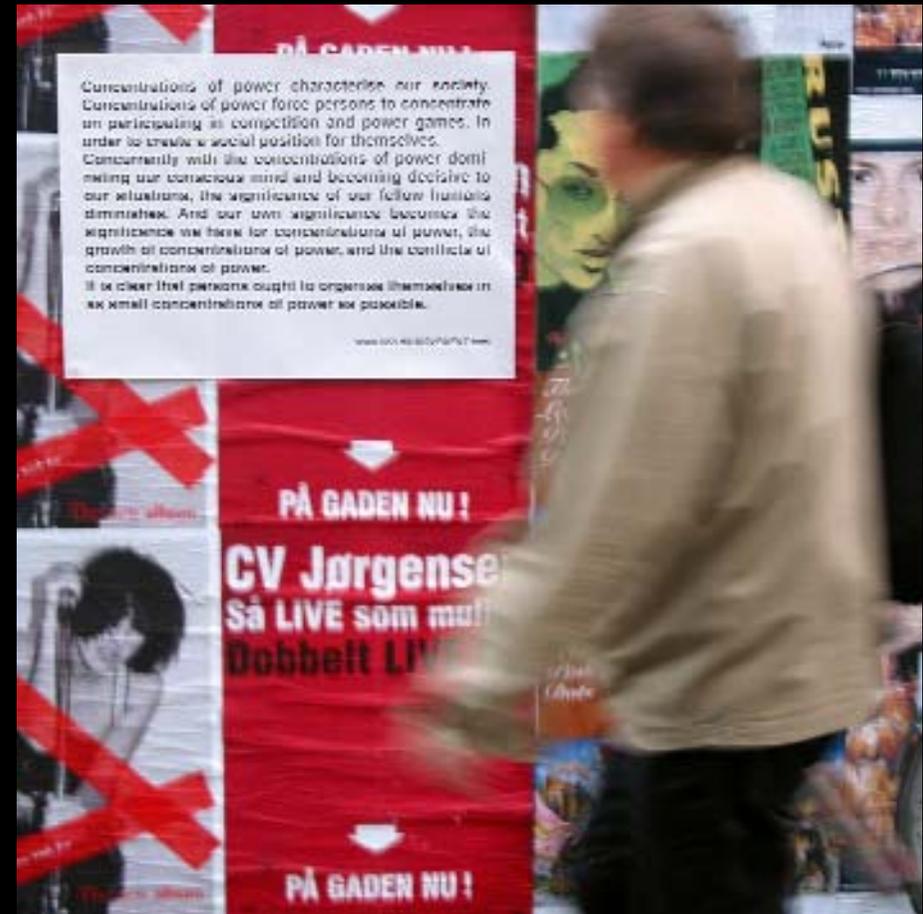
MOVEMENT, poster. Copenhagen, Denmark 2002

power. It is obvious that if we want to protect the rights of persons, we have to organize in as small concentrations of power as possible.

Expanding *MOVEMENT:*

Any person can expand *MOVEMENT* by initiating attempts to live with as small concentrations of power as possible.

MOVEMENT, Copenhagen, Denmark 2002. Opposite the Danish parliament at a demonstration during the EU summit.

MOVEMENT, Copenhagen, Denmark 2003. Demonstration sign and protest-bike with flyers, manuals and posters at a demonstration against war in Iraq.

MOVEMENT, Los Angeles, USA 2003

SHOP, 2002

Introduction:

SHOP enables persons to exchange things without the use of money.
At SHOP, persons can contribute things for other persons to use, persons can use things, borrow things, swap things, or persons can take things they need. All sorts of things can be available at SHOP.

Construction:

A SHOP can be situated inside buildings, outside buildings, or it can be mobile. The things present at SHOP are labelled in different categories in order to show: that they can only be used at SHOP (yellow tag), borrowed (magenta tag), or they can be used, borrowed, swapped or if necessary, taken (cyan tag).

Using SHOP:

Any person can use SHOP. The initiator decides when the SHOP is accessible. The initiator of a SHOP decides which category the things present at SHOP belong to. If persons are motivated by profit to use SHOP, it is suggested that they try to understand the attempt to find other ways of exchanging things than through the use of money and the pursuit of profit.
Attention is directed to the logical relation between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.

Expanding SHOP:

Any person can start a new SHOP. SHOP requires a place, room or some kind of mobile construction. By informing N55 at n55@n55.dk of the position of the SHOP, a list of SHOPs will be published at www.N55.dk/SHOP. If a SHOP is closed down, it is suggested that the things are transferred to another existing SHOP.

Maintenance:

SHOP is maintained by the persons using it.

An N55 version of SHOP was realized at CCA in Glasgow, Scotland 2002. Recycled aluminium boxes from airlines were used for constructing the different functions of SHOP. Music: "Shopping Moods" by Anders Remmer.

SHOP, Glasgow, Scotland 2002. Display.

SHOP, Glasgow, Scotland 2002. Clothes shop.

SHOP, Glasgow, Scotland 2002. Shopping bag.

SHOP, Glasgow, Scotland 2002. Things swapped.

SHOP, Glasgow, Scotland 2002. Kitchen.

SHOP, Glasgow, Scotland 2002. Kitchen: Sink, gas burners, water boiler, cupboards, drawers, herbs.

SHOP, Glasgow, Scotland 2002. Kitchen.

SHOP, Glasgow, Scotland 2002. Bar, library, bookshop and first-aid kit.

SHOP, Glasgow, Scotland 2002. Lecture area. Five discussion sessions were held in the lecture area. They were about: art and reality, specialization, ownership of knowledge, ownership of land and about profit.

SHOP, Glasgow, Scotland 2002. View.

SHOP, Glasgow, Scotland 2002. Lecture area.

SHOP, Glasgow, Scotland 2002. Café.

SHOP, Glasgow, Scotland 2002. Bed.
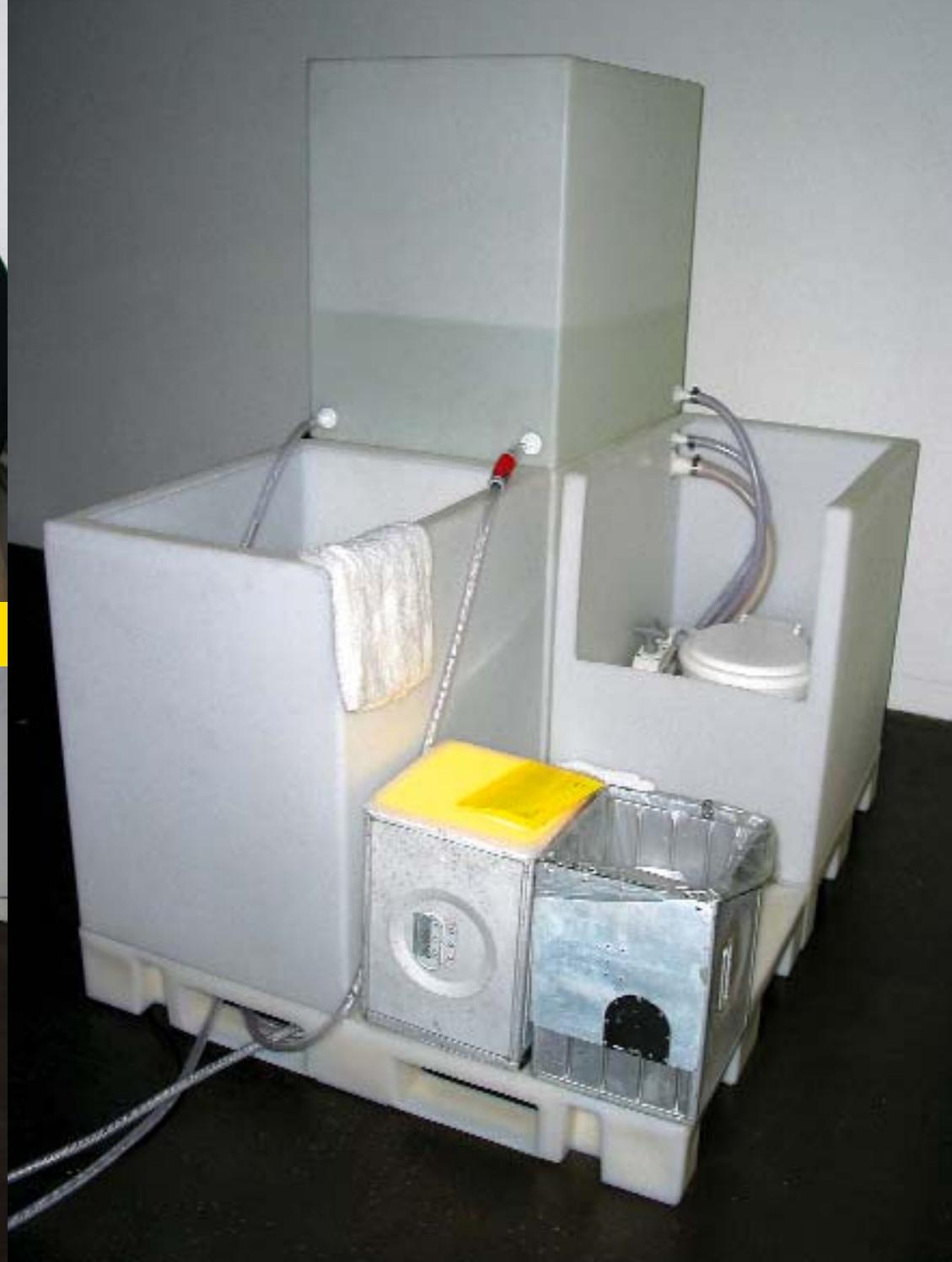
SHOP, Glasgow, Scotland 2002. Bath, toilet and reservoirs for fresh water / wastewater.

SHOP, Glasgow, Scotland 2002. Kindergarten.

SHOP, Glasgow, Scotland 2002. Sewing workshop.

SHOP, Glasgow, Scotland 2002. Tagging things.

SHOP, Glasgow, Scotland 2002. Sewing material.

SHOP, Glasgow, Scotland 2002. Workshop.

BOOKSHOP, a version of SHOP, was realized at Apexart in New York, USA in 2003, in collaboration with Rebecca Gordon Nesbitt. The organizers furnished the room according to instructions from N55.

SHOP, Glasgow, Scotland 2002. Workshop.

BOOKSHOP, New York, USA 2003. Used chairs, tables, bookshelves and lamps. Visitors had access to books, internet articles, newspaper cuttings and documentaries.

SHOP, Iasi, Romania 2003. An N55 version of SHOP was realized at the Turkish Bath in Iasi in collaboration with Oana Felipov. Visitors had access to publications, toys, drawings, clothes, tools and things to swap.

SHOP, Iasi, Romania 2003

SHOP, Iasi, Romania 2003

MINISHOP, Les Arques, France 2003

MINISHOP, Quintusholmen, Copenhagen, Denmark 2003

Manual for

FACTORY

Index:

FACTORY, Copenhagen, Denmark 2003. The tools for bending and cutting metal and plastic have been used by different persons to make a kitchen, transport bikes and parts for a silk-screen workshop.

Introduction:

FACTORY gives access to means of production.
Any person can use FACTORY. FACTORY can be established anywhere and can include any kind of production facility.

Background:

Concentrations of power control most means of production. Concentrations of power force persons to concentrate on participating in competition and power games in order to create a social position for themselves. Concentrations of power are nourished by the illusion that competition is better than collaboration. It is necessary to collaborate and share means of production if we want to organise ourselves in as small concentrations of power as possible.

Construction:

FACTORY is a system that can be used for sharing means of production with other persons.

FACTORY consists of production facilities situated in different places in the world. The production facilities are included in FACTORY by persons who guarantee that anybody can use them according to the function they are initiated with and within given hours and periods of time.
Any person can expand FACTORY by providing one or more production facilities. Positions of FACTORY can be found in Manual for FACTORY. The manual is continuously updated at www.N55.dk/FACTORY.html. A current version can also be obtained by contacting N55.

Using FACTORY:

Persons who offer production facilities indicate a function and a time period for the use of the factory. Unless anything else is decided between the supplier and the user, the user delivers the work.
Any person can use FACTORY. Attention is directed to the logical relation between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore, we can only talk about persons in a way that makes sense if we know that persons have rights.

Expanding FACTORY:

FACTORY can be expanded by anybody by offering a production facility and informing N55 of the position. Formally, the production facility remains the property of the persons offering it, but they guarantee that any person can use the FACTORY according to the indicated functions. Alternatively, persons can collect and distribute information about the positions of FACTORY and set up parallel FACTORY systems.

Maintenance:

FACTORY is maintained by the persons involved.

FACTORY, proposal for Munich, Germany 2003.
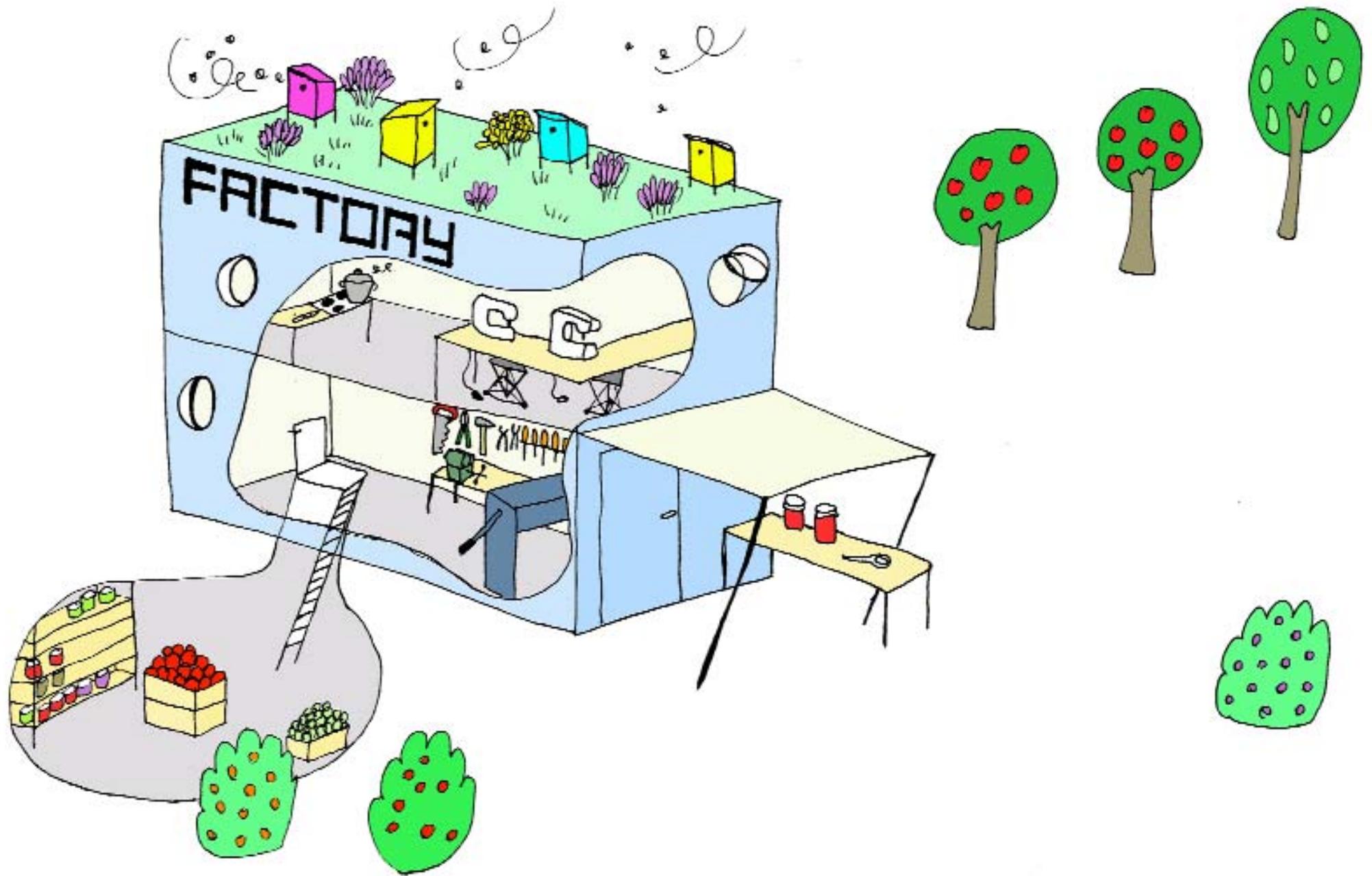
Current FACTORY list:

The N55 FACTORY is situated in Copenhagen. It supplies tools for bending and cutting metal and plastic. Persons who want to use the machinery can contact N55 at n55@n55.dk. Wear and tear is to be covered by the users and the work is supplied by the users themselves.

Manual for

ROOMS

Index:

Introduction:

ROOMS gives access to rooms. Any person can use ROOMS. ROOMS can be established anywhere supplying different functions like rooms for sleeping, making food, reading, meeting, producing things etc.

Construction:

ROOMS is a system that can be used for sharing rooms with other persons. ROOMS consists of rooms in different places in the world. The rooms are included in ROOMS by persons who guarantee that anybody can use them according to the function they are initiated with and within given periods of time.
Any person can expand ROOMS by providing one or more rooms. These rooms can be in existing buildings, they can be mobile rooms, or they can be built for ROOMS. Positions of ROOMS can be found in Manual for ROOMS. The manual is continuously updated at www.N55.dk/ROOMS.html. A current version can also be obtained by contacting N55.

Using ROOMS:

Persons who offer rooms indicate a function and a time period for the use of the rooms. Any person can use ROOMS.
Attention is directed to the logical relation between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.

Expanding ROOMS:

ROOMS can be expanded by anybody by offering a room and informing N55 of the position. Formally, the rooms remain the property of the persons participating in this way, but they guarantee that any person can use the rooms according to their indicated functions. Alternatively, persons can set up parallel ROOMS systems, for example by collecting and distributing information about the positions of ROOMS themselves.

Maintenance:

ROOMS is maintained by the persons involved.

Addresses:

Konsthögskolan Valand, Vasagatan 50, fifth floor,
40530 Göteborg, Sweden.
Tel: +46 0733905725
E-mail: openacademyvaland@hotmail.com
Size: 35 m²
Use: Can be used for any non-commercial purpose. Accessible at all hours.
Period: January 2, 2001 - June 2, 2001. Might be extended.

Room for Northeast Reading, Steindamm 63, ground floor,
20099 Hamburg, Germany.
Projektgruppe,
Tel/fax: +49 404302067
E-mail: info@projektgruppe.org
Size: 30 m²
Use: Accessible from 15.00 to 23.00.
Period: June 9-20, 2002

Kunsthalle St. Gallen, Davidstrasse 40, first floor,
9000 St. Gallen, Switzerland.
Tel: +41 0712221014
Size: 18 m²
Use: open 24 hours. Any purpose related to the local community.
Period: from June 28, 2002

N55, Krudtløbsvej, Copenhagen K, Denmark.
E-mail: n55@n55.dk
Size: 45 m²
Use: open 24 hours.
Period: May 17, 2003 - August 1, 2003

Les Ateliers des Arques, Le Presbytère, 46250 Les Arques, France.
www.ateliersdesarques.com
Tel: +33 5 65 22 81 70
E-mail: ateliers.des_arques@tiscali.fr
Size: 45 m²
Use: open 24 hours.
Period: February 1- March 1, 2004

ROOMS, Les Arques, France 2004

ROOMS, St. Gallen, Switzerland 2002

ROOMS, Copenhagen, Denmark 2003

ROOMS, Hamburg, Germany 2002

ROOMS, Göteborg, Sweden 2001
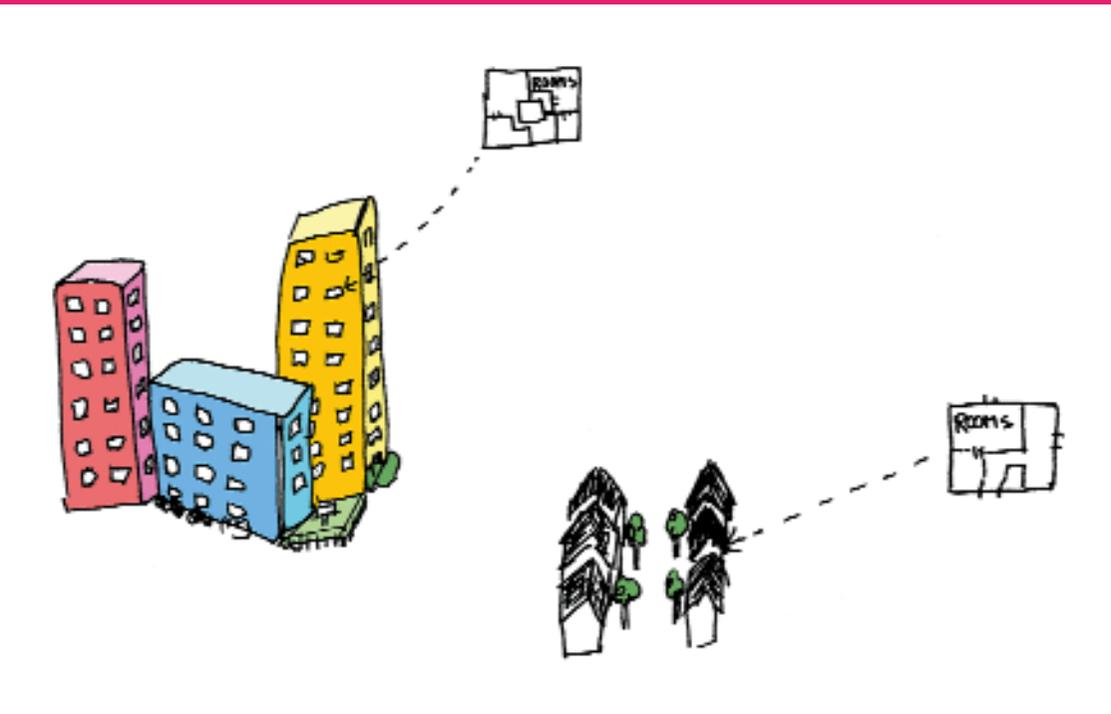
Manual for

LAND

ROOMS, proposal 2003

Index:

LAND, 2000 - ongoing

Introduction:

LAND gives access to land. Any person can stay in LAND and use it.

Construction:

LAND is constructed from pieces of land in different places in the world. The various parts are added to LAND by persons who guarantee that anybody can stay in LAND and use it. Any person can initiate expansions of LAND. The geographical positions of LAND can be found in Manual for LAND. The manual is continuously updated at www.N55.dk/LAND.html. A current version can also be obtained by contacting N55.

Using LAND:

Any person can use LAND. Attention is directed to the logical relation between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here

is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.

Expanding LAND:

LAND can be expanded by anybody who wants to add pieces of land to LAND. Formally, the parts of LAND remain the property of the persons participating in this way, but they guarantee that any person can stay in LAND and use it.
By informing N55 of the position, a cairn will be put out to mark the place and the position will be distributed through the manual.
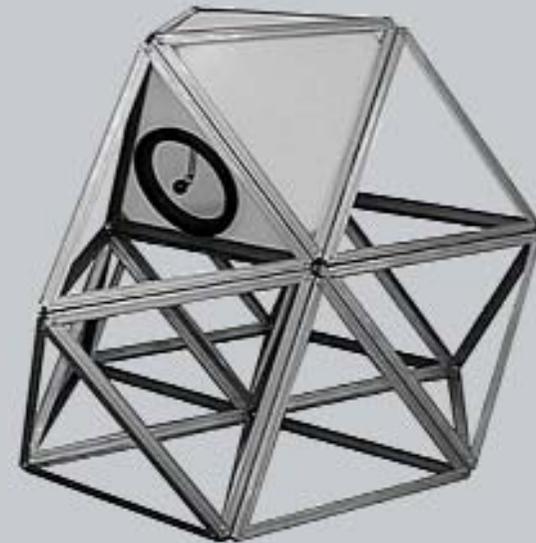
Cairns:

All parts of LAND are marked with a cairn (height 1 m). The cairns have a frame of stainless acid resistant steel and built-in tanks of PE-plastic. The tanks are equipped with a transparent lid of polycarbonate, tightened with rubber strips.
There is a manual and other equipment in the tanks. Apart from this, the configuration and size of the cairns will be modified according to the sites and their requirements.

Maintenance:

LAND is maintained by persons using it. The manuals placed in the cairns will be updated continuously.

Current LAND positions:

N 70° 09' 42,5" E 019° 56' 41,3"

N 41° 53' 03,4" E 087° 46' 06,8"

N 33° 10' 43,9" E -117° 14' 26,7"

N 44° 36' 03,2" E 001° 15' 04,6"

N 55° 14' 24,8" E 011° 56' 22,3"

N 52° 6' 04,5" E 005° 3' 04,5"

N 47° 19' 42,4" E 009° 24' 31,6"

N 52° 18' 19,7" E 005° 32' 11,7"

N 41° 47' 58" E 087° 36' 23"

N 57° 10' 43,3" E 010° 05' 13,1"

N 55° 58' 10,2" E 013° 45' 16,2"

N 57° 20' 04,5" E 010° 30' 56,5"

N 56° 59' 55" E 009° 19' 33,7"

N 43° 17' 48,1" E 000° 22' 21"

N 45° 09' 36" E 029° 41' 24"

Position: N 70° 09' 42,5" E 019° 56' 41,3". Area: 500 m². Skorøya, Northern Norway.

Position: N 41° 53' 03,4" E 087° 46' 06,8". Area: 160 m². Chicago, USA.

Position: N 33° 10' 43,9" E -117° 14' 26,7". Area: 180 m². San Diego, USA.

Position: N 52° 18' 19,7" E 005° 32' 11,7". Area: 1000 m². Zeewolde, The Netherlands.
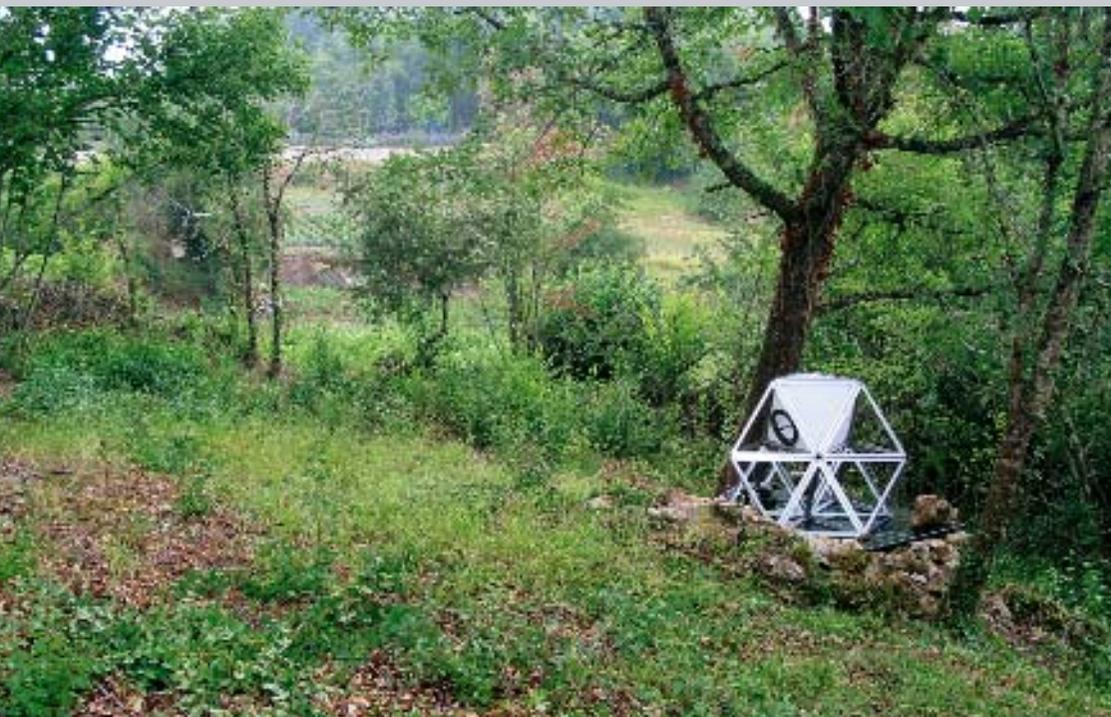
Position: N 44° 36' 03,2" E 001° 15' 04,6". Area: 1100 m². Les Arques, France.

Position: N 55° 14' 24,8" E 011° 56' 22,3". Area: 70 m². Sørup, Denmark.

Position: N 47° 19' 42,4" E 009° 24' 31,6". Area: 60 m². Appenzell, Switzerland.

Position: N 41° 47' 58" E 087° 36' 23". Area: 70 m². Chicago, USA.

Position: N 57° 10' 43,3" E 010° 05' 13,1". Area: 80 m². Hjallerup, Denmark.

Position: N 52° 6' 04,5" E 005° 3' 04,5". Area: 3000 m². Leidsche Rijn, The Netherlands.

Position: N 55° 58' 10,2" E 013° 45' 16,2". Area: 5000 m². Bosarp, Sweden.

Position: N 56° 59' 55" E 009° 19' 33,7". Area: 625 m². Løgstør, Denmark.

Position: N 57° 20' 04,5" E 010° 30' 56,5". Area: 160 m². Sæby, Denmark.

Position: N 45° 09' 36" E 029° 41' 24". Area: 20 m². Tulcea, Romania.

Position: N 43° 17' 48,1" E 000° 22' 21". Area: 400 m². Pau, France.

Manual for

DISCUSSIONS

Index:

Introduction
Background
N55 argumentation
Expanding DISCUSSIONS

Introduction:

DISCUSSIONS is an accumulation of ongoing discussions related to N55. DISCUSSIONS consists of three different parts: N55 TEXTS (by N55) N55 EXCHANGES (by N55 and other writers) and OTHER TEXTS.

Background:

Most discussions in our societies are dominated by habitual conceptions, subjective opinions, social conventions and reference to authorities.

N55 argumentation:

N55 tries to establish discussions that are based on conditions for description and thereby on logical relations and facts.

Expanding DISCUSSIONS:

Anybody can add to DISCUSSIONS, comment on or take part in an exchange by writing to n55@n55.dk. Contributions will be published at www.N55.dk.

ART AND REALITY

Could one imagine art which had nothing to do with persons?

Could one imagine art which had nothing to do with other persons?

Could one imagine art which had nothing to do with concrete situations?

Could one imagine the existence of concrete situations without the existence of things?

Could one imagine concrete situations with persons in which the behaviour of persons had no significance?

There is no meaning in talking about art without imagining persons, their behaviour, things and concrete situations. When one wants to talk about art, one must therefore talk about: persons and their behaviour with other persons and things in concrete situations. As a precondition that these persons are actually practising this behaviour at all, one has to imagine that they are experiencing it as meaningful. From this follows that one has to talk about: persons and their meaningful behaviour with other persons and things in concrete situations. There is reason to presume that this always stands when one talks about art. Otherwise one would be able to imagine:

art which has nothing to do with persons

art which no one finds meaningful and which therefore has no significance

art which has nothing to do with the behaviour of persons

art which has nothing to do with other persons

art which has nothing to do with things

art which has nothing to do with concrete situations

art which has nothing to do with persons and their behaviour, meaningfulness, other persons, things and concrete situations.

Therefore we now know that:
when one talks about art one must always talk about:

Persons and their meaningful behaviour with other persons and things in concrete situations

or about corresponding factors with the same significance and the same necessary relations.

This knowledge enables us to talk about art in a way that makes sense, and without allowing habitual conceptions, social conventions and concentrations of power to be of decisive importance to our experiences.

Notes:

Persons

A person can be described in an infinite number of ways. None of these descriptions can be completely adequate. We therefore can not describe precisely what a person is. Whichever way we describe a person, we do however have the possibility to point out necessary relations between persons and other factors. We have to respect these relations and factors in order not to contradict ourselves and in order to be able to talk about persons in a meaningful way.

One necessary relation is the logical relation between persons and bodies. It makes no sense to refer to a person without referring to a body. If we for example say: here we have a person, but he or she does not have a body, it does not make sense. Furthermore, there are necessary relations between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.

When one does not respect the rights of persons, then one can not respect art, as we know that art is inextricably bound up with persons.

Concrete situations

Concrete situations are the precondition of any use of language, because we know that an assertion can only be understood as something that is made by a person in a concrete situation. If for example we say: here we have an assertion, but this assertion was not made by a person in a concrete situation, it does not make sense. We can, in other words, not refer to anything without referring to concrete situations.

Concrete situations are what we talk about all the time, what we take for granted. We for example say: they sat there and they were fine. Nothing is as easy as identifying concrete situations via persons, mental states and the things of daily life in space and time. At the same time it is absolutely impossible to describe a concrete situation in an exhaustive way. This thing that a situation can be described in a vast number of ways is not an accidental property of situations, but on the contrary it is what characterizes situations. A situation that can be described in only one way is not a situation. When we try to define a situation based on one single description we prevent ourselves from experiencing it.

There is no reason to believe that a request to art that it should continue to find new forms is relevant. The historical consideration that such a request will have to be founded on, requires an impossible comparison of situations. History is concerned with descriptions from specific points of view and is not reality. In the attempt to compare situations, one reduces situations to something that can be fully understood. This is not in compliance with our knowledge of situations. If one attempts to define what art is, one only sees one's own description of it, and this description can never be exhaustive.

Things

Things have significance for concrete situations: when we say: here we have a concrete situation, but no things are of significance to this situation, this is not in compliance with our experiences.

Significance

Though concrete situations can only be identified in space and time, they can not be reduced to only existing in space and time. In any concrete situation significance plays a decisive role. If we say: they sat there and they were fine, but nothing was of significance, it does not make sense. Significance is decisive for concrete situations, but significance does not exist in time and space. What is the durability of significance and where does it exist? We do not know what significance is, but we know that significance is something which is decisive to our experience of the world. If we do not assign persons, their behaviour, things and concrete situations any significance, then there is no reason to concern oneself with persons, their behaviour, things and concrete situations.

If one does not assign persons, their behaviour, things and concrete situations significance, there is no reason to be concerned with art. Art

has significance for our daily existence, because persons, their behaviour, things and concrete situations have significance for our daily existence.

Logic

Most of our thinking and our discussions are conducted on a level where we repeat and repeat our habitual conceptions to each other. We assume that there are no other conditions to decide whether something is right or wrong, except that one does not contradict oneself nor is inconsistent with facts. Beyond this there exists only more or less thoroughly grounded subjective opinions. However, there is a level so basic that it normally does not appear in our conscious mind, where everything does not revolve around subjective opinions. At this level things are simply right or wrong.

Logical relations are the most basic and most overlooked phenomenon we know. Nothing of which we can talk rationally can exist, can be identified or referred to, except through its logical relations to other things. Logic is necessary relations between different factors, and factors are what exist by the force of those relations. The decisive thing about logical relations is that they can not be reasoned. Nevertheless, they do constitute conditions necessary for any description, because they can not be denied without rejecting the factors of the relations. Persons are, for example, totally different from their bodies. Persons can go for a walk and they can make decisions. Bodies can not do that. Nevertheless, we can not refer to persons without referring to their bodies. If we say: here we have a person, but he or she unfortunately is lacking a body, it does not make sense. Persons are totally different from the concrete situations they are in. Nevertheless, we can not refer to persons without referring to the situations they are in. If we say: here we have a person, but this person has never been in a concrete situation, it does not make sense. Language is totally different from reality. Nevertheless, we have to perceive language as something that can be used to talk about reality. If we say: here we have a language, but this language can not be used to talk about reality, it does not make sense. Logical relations have decisive significance. The absence of logical relations would mean that nothing could be of decisive significance: as long as one does not contradict oneself nor is inconsistent with facts, any point of view may be as good as the next, one can say and mean anything. Logical relations are conditions for talking rationally together. The part of the world we can talk rationally about, can thus be defined as the part we can talk about using logical relations. But we do not have any reason to assume that the world is identical with what we can talk rationally about. Logic is something more basic than language. Logical relations are what makes language a language and what assigns meaning to words. Therefore, it is impossible to learn a language, without learning to respect logical relations. But as

we grow up and learn to master language, logical relations are not present on a conscious level. If we are conscious of logical relations, it is possible for us to decide whether something is right or wrong and not to allow ourselves to be ruled by for example habitual conceptions and subjective opinions.

When one wants to talk about art in a way that makes sense and without allowing oneself to be ruled by for example habitual conceptions and subjective opinions, one has to respect the logical relations and the factors which have to do with art. Therefore one has to talk about persons' meaningful behaviour with other persons and things in concrete situations, when one talks about art. There is no reason to believe that what we can talk rationally about when we are talking about art, is exhaustive to what we talk about when we are talking about art.

Norms

Norms are the expression of objective knowledge. Objective knowledge is that which can not be denied. Norms are in contradiction to the view that everything depends on subjective opinions, and that one therefore can do or say anything, as long as one observes social conventions. Norms are the things we can not disagree about. Norms will always be valid. The fundamental ethical norm is that persons have rights. We are unable to talk about ethics in a way that makes sense without respecting this norm. The fundamental ethical norm does not tell us exactly what we should choose in concrete situations. Strictly speaking, this norm only tells us that persons should be treated as having rights. But if we do not observe this norm we do away with persons and the rights of persons.

It is a norm for art that when one talks about art one has to talk about persons and their meaningful behaviour with other persons and things in concrete situations. By respecting this norm one can create space for art, without consideration to social conventions. This is important because social conventions do not always respect norms. Subjective opinions about art can have significance, but one should not use them as the foundation of social conventions.

Concentrations of power

Concentrations of power do not always respect the rights of persons. If one denies this fact one gets: concentrations of power always respect the rights of persons. This does not correspond with our experiences. Concentrations of power characterize our society. Concentrations of power force persons to

concentrate on participating in competition and power games, in order to create a social position for themselves. Concurrently with the concentrations of power dominating our conscious mind and being decisive to our situations, the significance of our fellow humans diminishes. And our own significance becomes the significance we have for concentrations of power, the growth of concentrations of power, and the conflicts of concentrations of power.

It is clear that persons should be consciously aware of the rights of persons and therefore must seek to organize the smallest concentrations of power possible.

Examples of concentrations of power which have interests in art include: Mass media (represented by journalists, critics, etc.), capital (represented by collectors, gallery owners, etc.), governments (represented by politicians, civil servants, etc.), and science (represented by historians, theorists, etc.). One can not permit these concentrations of power to have decisive influence and at the same time respect persons, the rights of persons or art.

Politics

The fundamental purpose of politics is to protect the rights of persons. If we deny this assertion we get: the fundamental purpose of politics is not to protect the rights of persons. This suggests that one of the basic tasks of politicians could be, for example, to renounce the rights of themselves and of others. This has no meaning. Or that there is a more important purpose to politics which does not have anything to do with persons and therefore also has nothing to do with the rights of persons. That is plain nonsense. Therefore, we now know that the basic purpose of politics is to protect the rights of persons. In other words we can not talk about politics in a way that makes sense without the assumption that the fundamental purpose of politics is to protect the rights of persons. Concentrations of power do not always respect the rights of persons. If one denies this fact one gets: concentrations of power always respect the rights of persons. This does not correspond with our experiences. It is obvious that if we want to protect the rights of persons we have to organize in as small concentrations of power as possible. Since the fundamental purpose of politics is to protect the rights of persons it is of decisive importance to politics that we seek to organize in as small concentrations of power as possible. It is clear that we can not leave it to others to protect the rights of persons. The notion that it is possible to elect a small number of people to protect the rights of a vast number of people is absurd, because here we are by definition talking about concentration of power, and thus about a concentration of power. And we know that concentrations of power do not always respect the rights of persons. It is clear that if one is conscious of persons and

the rights of persons one must be concerned with politics. It is clear that if one is a person and thus concerned with politics and conscious of the rights of persons, it becomes of decisive importance to organize in as small concentrations of power as possible. It becomes of decisive importance to find ways to live and behave which correspond to our knowledge of persons, the rights of persons, etc. It is clear that this is our most important task as our whole existence is threatened.

It is obvious that artists too must be conscious of persons, the rights of persons and the influence of concentrations of power and thus must be concerned with politics. It is obvious that nothing can be more important than to concern oneself with this exactly. Artists must first and foremost be concerned with creating consciousness about this, and with trying to organize in as small concentrations of power as possible. In this way we have a case where the fundamental ethical norm, and thus ethics, become decisive for aesthetics and politics become decisive to the performance of art. Aesthetics must first and foremost be an examination of, and a science about, possibilities to exist with as small concentrations of power as possible and organize ourselves in a way so that we respect each other's rights. In a way that makes room for persons and that which has significance to them in their daily life.

ABOUT ownership of land

Logic

Logical relations are the most basic and most overlooked phenomenon we know. Nothing of which we can talk rationally can exist, can be identified or referred to, except through its logical relations to other things. Logic is necessary relations between different factors, and factors are what exist by the force of those relations. The decisive thing about logical relations is that they can not be reasoned. Nevertheless, they do constitute conditions necessary for any description, because they can not be denied without rejecting the factors of the relations. Persons are, for example, totally different from their bodies. Persons can go for a walk and they can make decisions. Bodies can not do that. Nevertheless, we can not refer to persons without referring to their bodies. If we say: here we have a person, but he or she unfortunately is lacking a body, it does not make sense. Persons are totally different from the concrete situations they are in. Nevertheless, we can not refer to persons without referring to the situations they are in. If we say: here we have a person, but this person has never been in a concrete situation, it does not make sense. Language is totally different from reality. Nevertheless, we have to perceive language as something that can be used to talk about reality. If we say: here we have a language, but this language can not be used to talk about reality, it does not make sense. Logical relations have decisive significance. The absence of logical relations would mean that nothing could be of decisive significance: as long as one does not contradict oneself nor is inconsistent with facts, any point of view may be as good as the next, one can say and mean anything. Logical relations are conditions for talking rationally together. The part of the world we can talk rationally about, can thus be defined as the part we can talk about using logical relations. But we do not have any reason to assume that the world is identical with what we can talk rationally about. Logic is something more basic than language. Logical relations are what makes language a language and what assigns meaning to words. Therefore, it is impossible to learn a language, without learning to respect logical relations. But as we grow up and learn to master language, logical relations are not present on a conscious level. If we are conscious of logical relations, it is possible for us to decide whether something is right or wrong and not to allow ourselves to be ruled by for example habitual conceptions and subjective opinions.

Persons

A person can be described in an infinite number of ways. None of these descriptions can be completely adequate. We therefore can not describe pre-

cisely what a person is. Whichever way we describe a person, we do however have the possibility to point out necessary relations between persons and other factors. We have to respect these relations and factors in order not to contradict ourselves and in order to be able to talk about persons in a meaningful way. One necessary relation is the logical relation between persons and bodies. It makes no sense to refer to a person without referring to a body. If we for example say: here we have a person, but he or she does not have a body, it does not make sense. Furthermore, there are necessary relations between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.

Concentrations of power

Concentrations of power do not always respect the rights of persons. If one denies this fact one gets: concentrations of power always respect the rights of persons. This does not correspond with our experiences. Concentrations of power characterize our society. Concentrations of power force persons to concentrate on participating in competition and power games, in order to create a social position for themselves. Concurrently with the concentrations of power dominating our conscious mind and being decisive to our situations, the significance of our fellow humans diminishes. And our own significance becomes the significance we have for concentrations of power, the growth of concentrations of power, and the conflicts of concentrations of power.
It is clear that persons should be consciously aware of the rights of persons and therefore must seek to organize the smallest concentrations of power possible.

Ownership of land

It is a habitual conception that ownership of land is acceptable. Most societies are characterized by the convention of ownership. But if we claim the ownership of land, we also say that we have more right to parts of the surface of the earth, than other persons have.
We know that persons should be treated as persons and therefore as having rights. If we say here is a person who has rights, but this person has no right to stay on the surface of the earth, it does not make sense. If one does not accept that persons have the right to stay on the surface of the earth, it makes no sense to talk about rights at all. If we try to defend ownership of land using

language in a rational way it goes wrong. The only way of defending this ownership is by the use of power and force. No persons have more right to land than other persons, but concentrations of power use force to maintain the illusion of ownership of land.

ABOUT ownership of knowledge

Logic

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One necessary relation is the logical relation between persons and bodies. It makes no sense to refer to a person without referring to a body. If we for example say: here we have a person, but he or she does not have a body, it does not make sense.

Furthermore, there are necessary relations between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.

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Patents - ownership of objective knowledge

Science is about making right assertions. Right assertions represent objective knowledge. Objective knowledge is something which can't be denied meaningfully, if we want to talk rationally together. Objective knowledge can be knowledge about facts: at four o'clock they sat down and did this, or this mountain is 3000 meters high. Objective knowledge can also be knowledge about logical relations.

To take a patent on for example knowledge about the human genome or a new type of medicine, is to claim ownership of objective knowledge. This means that some persons claim the ownership of logical relations and knowledge about facts. This ownership means that other persons must, for example, pay in order to use objective knowledge, or that other persons are not allowed at all to use it. If we claim a patent to objective knowledge, we also say that some persons can use logical relations and facts and some can not: Here we have a person, who should be treated as a person and therefore as having rights, but this person is not allowed to use logical relations or knowledge about facts. It does not make sense to claim ownership of objective knowledge. If we try to defend ownership of objective knowledge using language in a rational way it goes wrong. The only way one can defend ownership of objective knowledge is by using power and force. No persons have more right to use logical relations or knowledge about facts than other persons, but concentrations of power use force to maintain the illusion of ownership of objective knowledge.

ABOUT ideologies

Logic

Most of our thinking and our discussions are conducted on a level where we repeat and repeat our habitual conceptions to each other. We assume that there are no other conditions to decide whether something is right or wrong, except that one does not contradict oneself nor is inconsistent with facts. Beyond this there exists only more or less thoroughly grounded subjective opinions. However, there is a level so basic that it normally does not appear in our conscious mind, where everything does not revolve around subjective opinions. At this level things are simply right or wrong.

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deny this assertion we get: the fundamental purpose of politics is not to protect the rights of persons. This suggests that one of the basic tasks of politicians could be, for example, to renounce the rights of themselves and of others. This has no meaning. Or that there is a more important purpose to politics which does not have anything to do with persons and therefore also has nothing to do with the rights of persons. That is plain nonsense. Therefore, we now know that the basic purpose of politics is to protect the rights of persons. In other words we can not talk about politics in a way that makes sense without the assumption that the fundamental purpose of politics is to protect the rights of persons.

Ideologies and religions

Ideologies and religions are systems of thought that shape and decide the way persons and groups of persons think and act.
Ideologies and religions don't necessarily first and foremost respect conditions for description, and hereby logical relations and facts, but are also often the expression of subjective opinions, social conventions and habitual conceptions. Because subjective opinions, social conventions and habitual conceptions are not necessarily in compliance with conditions for description, religious and ideological assertions are often a mixture of right assertions and wrong assertions.
This is a fundamental problem that is shared by for example ideologies like representative democracy, anarchism, neo-liberalism, communism, capitalism, nazism, and religions like christianity, hinduism, judaism, islam, etc.
Experience tells us that religions and ideologies usually don't first and foremost aim to respect conditions for description and hereby the logical relation between persons and persons' rights.
Persons might have personal reasons to believe in ideologies or religions, but ideologies and religions that don't first and foremost aim to respect persons' rights, should never be used as the basis of political action, because the fundamental purpose of politics is to protect the rights of persons.
Instead of using ideologies and religions as the basis of political action, persons ought to use conditions for description as the basis of politics and thereby first and foremost try to respect persons' rights.

LARS BANG LARSEN AND N55 EXCHANGING

Lars Bang Larsen:
In many respects your project is on the same wavelength as the Danish artist Poul Gernes' ideas about artistic practice, communication of art, and the role of art in the social sphere. Similar to Gernes, one could say, you wish to go over and beyond the singular object towards a greater totality. In his paper collage work with geometric elements of form Gernes inserted what he called "friendly, built-in mistakes" in the paper: folds and holes that disturbed the strict geometry. These friendly mistakes may be interpreted as existential correlates to the discipline of form. Where are the friendly, built-in mistakes in N55?

N55:
At the moment your only option as an art historian is to concern yourself with facts, if you want to propose right assertions about art. You can establish the fact that this person did this and that, made this assertion and that object had those dimensions. You have no options to make assertions that you know represent objective knowledge beyond facts, as art historians have no objective founding to talk about art beyond facts. Art historians repeat and repeat habitual conceptions about art. They assume that there are no other conditions to decide whether something is right or wrong, except that one does not contradict oneself nor is inconsistent with facts. Beyond this there exists only more or less thoroughly grounded subjective opinions. Art historians make their living by making assertions about art. Art historians represent science, which is a concentration of power. This is a fact. This is a problem since those assertions made in art history that go beyond facts, rest on subjective opinions, which can be more or less thoroughly grounded. These assertions have influence on art and thus on the persons which have to do with art. This is of course completely absurd. Therefore, we would like to introduce a possibility to talk objectively about art beyond pure facts. As demonstrated earlier (see "ART AND REALITY" by N55), it is objective knowledge that when we talk about art, we must always talk about: Persons and their meaningful behaviour with other persons and things in concrete situations, or about corresponding factors with the same significance and the same necessary relations. If we talk about art in such a way that we say, for example, that art has nothing to do with persons, it makes no sense because we cannot talk about art without talking about persons. There is a logical relation between persons and art. Furthermore, we can show that what characterizes a situation that has to do with art is that there is a consciousness that this situation has to do with art.

If we say: "Here is a situation that has to do with art, but nobody is conscious that this situation has to do with art", it makes no sense. This also means that we have no possibility to deny meaningfully that something has to do with art, if there is a consciousness that something has to do with art. We also know that there is a logical relation between ethics and aesthetics. We know that persons should be treated as persons and therefore as having rights. We know that art has to do with persons. We know that the fundamental ethical norm is that persons have rights. Therefore, we also know that aesthetics, which has to do with persons, also must be concerned with protecting the rights of persons. That means, be concerned with the way we should act. Naturally, this does not mean that ethics and aesthetics are identical. Aesthetics can be concerned with other factors as well. However, it is clear that ethics are of decisive significance for aesthetics.

Let us sum up. We have the option of talking rationally about art by means of facts and logical relations. Furthermore we know that the logical relation between aesthetics and ethics is decisive. Thus, it should be possible by now to make right assertions about art, beyond assertions about pure facts. This is a completely new possibility for talking about art.

Let us try to look at your assertion: "In many respects your project is on the same wavelength as Poul Gernes' ideas about artistic practice, the communication of art, and the role of art in the social sphere". It is not a fact that N55's practice is on the same wavelength as Poul Gernes' ideas about artistic practice, communication of art, and the role of art in the social sphere. Using the term "wavelength" is very poetic, but it makes no sense talking about wavelengths in a comparison between Gernes and N55.

It is clear that there are decisive differences between the way Gernes could talk about art and the way we can talk about art. Gernes had, for example, no possibilities to make assertions about art, which he knew represented objective knowledge, beyond facts. This must also be decisive for artistic practice, the communication of art, and the role of art in the social sphere, as we by artistic practice, the communication of art, and the role of art in the social sphere, understand something that has to do with art. The way we can talk about art and the way we understand art has influence on art. If we say: "Here are some persons and their meaningful behaviour with other persons and things in concrete situations, but these persons' way of talking about art and understanding art, has no influence on art whatsoever, it makes no sense." Further: "Similar to Gernes, one could say, you wish to go over and beyond the singular object towards a greater totality". We would never say that we wish to go over and beyond the singular object towards a greater totality. We would say, for instance, that we work with persons and their meaningful behaviour with other persons and things in concrete situations. Further: "In his paper collage work.... Where are the friendly, built-in mistakes in N55?" Since it is of decisive importance for us to try to respect the rights of persons,

of course we should try to act right in the situations in which we find ourselves. Presumably this is also a kind of friendliness.

In answering your questions, we have made an effort to talk rationally. Of course we may be wrong at times, but we can see no reason to endeavour to be wrong. What do you endeavour to do as an art historian and an art critic, and thus as a person who has influence on art situations?

Lars Bang Larsen:
I am very interested in the performative aspects of your argumentation and practice. That is, both in the sense that theory and practice aren't hierarchically organized in relation to each other, but rather supplement each other in the direction of agency in concrete situations; and in the sense that the performative is used as a way to make differences and conflicts come to a head and thereby make them appear in fundamental discussions about power relations, rather than oiling these with consensus ideology.
From the vantage point of my own practice, I perceive the art critic/curator as a person with an orientation that makes him/her able to convey artistic projects between different public spheres, for instance Danish/international, art sphere/non-professional audience, ethnic/Danish, cultural establishment/ "young art" etc. I see this as a way to further develop artistic ideas and discussions in a dynamic that stems from the direct interaction with the agents, art professionals as well as non-professionals. And to art, I wish to contribute a cultural perspective between different levels in the existing hegemony - whatever that may be at a given time - to frame and analyse singular aesthetic expressions and locations in culture.

A concept I really find problematic is "the art world", because it is excluding on several levels. "The art world" sounds to me like an elitist micro cosmos of aloof ideal consumers going around confirming codes and the state of the market between themselves. I can't help thinking of those persons who aren't "art world", and to whom I would like to communicate. "The art world" sounds like emphasizing economic and cultural privilege: in part because it suggests the art sphere's lack of transparency (in terms of poor conveyance and the economical and political power relations that deflect art); in part because "the art world" as idea denigrates art's possibility for exchange between different fields of knowledge. It is also a rather claustrophobic concept which does justice neither to the social diversity which the art sphere, in spite of all, also has space for (and which makes it fun to work with art), nor that sensibility to the specific cultural sign which the category of the aesthetic guarantees.

As a theoretical concept, "the art world" has been given a central role due to the common assumption that since Duchamp - in order to deliver another art historical average reflection - has been produced for "the art world" as its legitimising instance. Institutional critique can be said to be a result of the art-

world art and is very interesting as such, because the experience of institutional critique is a form of discursive specialization in the direction of self-reflexivity, which one must be able to employ productively in connection with a way of relating to performativity not only in art matters, but also to overall social and cultural performativity. The thing is to have the experience of institutional critique directed towards a place where it is not only a matter of "the art world" and its institutions, because they are, in spite of all, just a part of the problem. Today it is difficult to conceive of a kind of art without an institutional critical component, but in your own words - we have to relate to concrete situations, also in a wider perspective. It must be possible to employ the cultural apparatus of legitimisation to something constructive also beyond the art institution. The bottom line in the orientation of my work as a critic/curator is, I think, to take the processes of democratisation seriously in a time when power is slipping out of the hands of representative democracy. And then my work is about collaborating with Pia, Palle and Poul. I would like to ask you to elaborate the political aspects of your project from the vantage point of your new project LAND.

N55:
LAND consists of pieces of land in different places in the world, where the formal owners guarantee that any person can stay and use the land. They use their ownership to claim that ownership is invalid. These plots of land of different size and location are chained into a new LAND. All persons have equal rights to deal with LAND. Anybody can extend LAND by incorporating their land in LAND. We are making a Manual for LAND at the moment. We hope that persons who have to do with LAND will respect that persons should be treated as persons and therefore as having rights; that persons will try to organize in as small concentrations of power as possible.
One could say that we use logic, and we know that logic is necessary relations between different factors, and factors are that which exist by the force of those relations, against the concentrations of power which influence our daily lives. The fundamental purpose of politics is to protect the rights of persons. If we deny this postulate we get: the fundamental purpose of politics is not to protect the rights of persons. This suggests that one of the basic tasks of politicians could be, for example, to renounce the rights of themselves and of others. This has no meaning; or that there is a more important purpose to politics that has nothing to do with persons and therefore also has nothing to do with the rights of persons. That is plain nonsense. Therefore, we now know that the basic purpose of politics is to protect the rights of persons. In other words, we cannot talk about politics in a way that makes sense without the assumption that the fundamental purpose of politics is to protect the rights of persons.
Concentrations of power do not always respect the rights of persons. If one denies this fact one gets: concentrations of power always respect the rights

of persons. This does not correspond with our experiences. It is obvious that if we want to protect the rights of persons we have to organize in as small concentrations of power as possible.
Since the fundamental purpose of politics is to protect the rights of persons, it is of decisive importance to politics that we seek to organize in as small concentrations of power as possible. It is clear that we cannot leave it to others to protect the rights of persons. The notion that it is possible to elect a small number of people to protect the rights of a vast number of people is absurd, because here we are, by definition, talking about concentration of power, and thus about a concentration of power. And we know that concentrations of power do not always respect the rights of persons.
It is clear that if one is conscious of persons and the rights of persons, one must be concerned with politics. It is clear that if one is a person and thus concerned with politics and conscious of the rights of persons, it becomes of decisive importance to organize in as small concentrations of power as possible. It becomes of decisive importance to find ways to live and behave which correspond to our knowledge of persons, the rights of persons, etc. It is clear that this is our most important task as our whole existence is threatened.

Let us return to your perception of yourself, as a person who has influence on art situations. It is clear that your opinions about art are very likeable, and we interpret your position as fundamentally characterized by a political view that in all probability is in correspondence with our knowledge about the fundamental purpose of politics. At the same time, it is clear that your position is based on opinions. Our postulate is that by expressing subjective opinions only, one leaves everything to power games. If we do not make clear what is right and wrong we can say and do anything.
If one chooses to see your assertions as poetic/aesthetic assertions, as we for example do, one cannot make demands on the rationality and consistency of what you are saying. However, what one obviously can demand, is that you in your work try to respect persons' rights.
If one sees your assertions as assertions which contribute to the so-called discussion of art, as well as being a part of what you call the cultural apparatus of legitimisation, where you speak as art historian/art critic/art mediator, one must demand that what you say is right, meaning that it cannot be denied and that you constantly try to respect the rights of persons. Failing this, what you are doing is only participating in an ongoing game of power.

The question is: Is it possible to regard your work as parallel and overlapping work, which has no special authority in relation to other kinds of work with art?

Lars Bang Larsen:
My aesthetic work is fundamentally in continuation of the tendency towards re-socialization in art which has taken place after postmodernisms' revalua-

tion of value. My practice is not founded on a logical premise. However, I am of the conviction that its bottom line is rationally founded and presumably coterminous with the conclusion of your rational argument (which is supplemented in your practice with, for instance, objects).

My goal is that my practice be experimental. This fundamentally means three things: a) to investigate what you can make the art institution answer for, b) to investigate what you can make the concept of art answer for, in relation to specific and concrete situations and the people who act in these situations (or in other words: what can art say about art while it develops as art?), c) to actively and consecutively revalidate my own role. This implies, what you aptly call the fundamental purpose of politics, to develop one's liking for other peoples' ideas and practice in concrete situations, and from this to produce meaningful aesthetic/cultural utterances.

This is a practice that in different ways involves collectivity, especially when I work as a curator, but also when I write articles, etcetera. I try to establish the situation of writing as an act of communication between those I write about, and me as a writer. It is a discussion, which hopefully can be expanded through publication. Writing in a communication with people and organizing exhibitions in collaboration with others is thereby a way to embody my work, making it a realized experience. In general, you could say that this understanding of practice has to do with an ethics derived from the meeting with the specific other in his/her/their concrete situation, in the perspective of an understanding of the folding-in of the common in the field where the communication takes place. From this follows that I perceive of my role as art critic/ curator/ art historian without any special authority in relation to other forms of aesthetic practice. What I would like to do is to go over and beyond my own authority as art critic/ curator/ art historian in the direction of establishing possibilities for cultural agency.

To be a cultural producer (to use that expression) seems to me to be an obvious thing to do at this point. Today, the social sphere is thoroughly aestheticised. The term "cultural society" is being used, and discussions abound about the way that mass media has stimulated, but not redeemed cultural need. The transition from a society of production to a society of service has conveyed individualization in the ways to act in the social, and in the ways to acquire (cultural) experience. It has also implied a subtle capitalization of human relations, due to the growth in the forms and scale of immaterial work. This creates new, advanced forms of power play. The aesthetic is currently being eaten up by the general aestheticisation of the market, and pseudo-aestheticism has become a substitute for content. For the cultural producer, this pushes certain ethical demands to their logical conclusion. The growing cultural field is developing at a tearing speed where it is in the process of

becoming politically invested, something which on the other hand opens up for possibilities to affect and redefine the political as such. Among other things this means that art and the art circuit - at least the way that corner looks where we find ourselves - is a privileged place to instigate elementary and principal discussions about democracy and value.

REBECCA GORDON NESBITT AND N55 EXCHANGING

This is an edited version of conversations that took place between N55 and Rebecca Gordon Nesbitt while working on two different versions of the SHOP project. The first of these, at the Centre for Contemporary Arts (CCA) in Glasgow (5 October - 11 November, 2002) was the first comprehensive version of SHOP and included a display area, clothes shop, kitchen, café, bathroom, bookshop, discussion area, workshop area and kindergarten. N55 were based in Glasgow to run SHOP for the first half of the project. Five discussion sessions were held in the lecture area. They were: about art and reality, about specialization, about ownership of knowledge, about ownership of land, and about profit.
Following this, a version of SHOP was created for apexart in New York (15 March -12 April, 2003) centered on the use of the bookshop for the dissemination of a wide variety of literature that questioned the use of propaganda in the western economic system. N55 advised on the overall look of the bookshop but, consistent with the aims of SHOP, passed the day-to-day running of the initiative to apexart. This was part of a group project that also included artworks and publications by Ross Birrell, Jakob Boeskov, Steven Duval, Gardar Eide Einarsson & Oscar Tuazon, Regina Möller and documentaries by John Pilger.

Rebecca Gordon Nesbitt is an independent curator and writer based in Glasgow.
Based on conversations in December 2002 and June 2003.

Rebecca Gordon Nesbitt:
Can we talk a little about how SHOP came about at CCA?

N55:
Our proposal to make SHOP came about as a result of the CCA refusing our first proposal, which suggested implementing work in a very comprehensive way to try to make the institution more useful.
During our first visit it soon became clear that art seemed to be an excuse for the rest of the things that were going on at CCA: the big office, the café and all the other activities. We also heard about how it had grown from being a peoples' place into a smooth, modern institution with more money. We read somewhere that they invested £10 million in restoring the place, and that's a really expensive café. So, our starting point was to see how we could work with this place in a way that might make sense to people in the local environment. Make sense of what was going on there instead of just trying to profile a place internationally in the art world. It's really crazy, but most institutions like that are working with the concept of the art world and see themselves as part of that. We don't see ourselves as part of any art world, but as part of the world. We think most people see themselves as part of the world. We wanted to try to break down this wall around the institution and make it useful in a sense that it could have a positive effect in the local environment, so that people would start to relate to the place and the concrete situation instead of supporting a very hierarchical, stupid way of thinking. The first proposal was discussed to death and instead we suggested SHOP. SHOP had already been issued in the form of a manual but it hadn't been implemented anywhere. When we arrived to start building up SHOP, we learned that the day before there had been a conference at CCA held by the Ministry of Defence and this had caused a lot of rage amongst the artists in the local environment. They had an email correspondence going on about boycotting

the CCA and we landed just in the middle of that.

RGN:
Yes, it was a pretty tough time for you to arrive.

N55:
But it made sense to us to implement SHOP, as a kind of parallel system that grew through the rooms and mirrored the functions that were already there, introducing another kind of thinking and another kind of exchange.

RGN:
So, SHOP developed on two levels, the real and the metaphorical, as often happens in your projects. The real is the economic situation where people find themselves in CCA surrounded by the different elements of SHOP - the bookshop, the clothes shop or the workshop - and in many cases they can engage with the project by exchanging things or by using things. Maybe you can expand a little on the economic model you were trying to explore and its metaphorical significance.

N55:
It's about re-introducing a broader understanding of exchange. In the current economic system that we live under, every human relation is something that can be capitalized on, and the reason one has friends is to make business in many places. Any kind of need - whether you need education or you need to sleep or go to the toilet - everything has become an opportunity to make a profit. This is increasingly so, even if it is very often disguised as hip or has all these symbolic levels that people feel attracted to. With SHOP there is no money involved. If you want something, you can swap it, borrow it or use it at the space. But you can't use money. And then again, the question is not really about money - it's more about removing the profit motive, because there can still be a profit motive, even if there is no money involved. If somebody wanted to swap something, there was no valuation system, so it was up to them if they wanted to profit from it by swapping a pencil for a DVD.
This works on different and very interesting levels. Overall, we try to work with aesthetics in a way that we try to find ways of existing with as small concentrations of power as possible. That's really important for us. We try to develop real, existing structures that work in this direction. Trying to find ways of exchanging things that already exist, or are being produced, without money, in local situations, is part of this effort. If you want to remove the interest of concentrations of power in a local situation, you can take away their ability to make a profit by making structures like this. Another level has to do with working with small group ethics in a larger situation. If you take a small group of persons, you'll find that they don't have to vote about things - they would normally be able to communicate in such a way that they would just solve prob-

lems, or do what they have to do to construct something. But, as soon as there is a larger group, you normally think that you have to introduce laws and rules in order to communicate, and that is wrong. It should be possible to expand smaller group ethics into larger situations if people are conscious about what they are doing, and if you are generous yourself. If you believe that persons are able to think for themselves and do the right thing in a situation, you don't need rules. And that's one of the levels we've been trying to work with in the SHOP situation.
Another thing we have had to deal with is that most of our institutions, that have been built up in the last 50 years in the western world, are being stolen at the moment by politicians and large corporations. This happens under what they call privatisation, but it's really about trying to make a profit out of situations where people have created institutions that take care of certain things - like hospitals, transport, education - in society. This whole concept of privatising is based on the misconception that it's cheaper for society to let a private company go in and take care of a certain function - even though they have to make a profit - than it is to solve things in a co-operative way. That's basically wrong and stupid, so, what do we do about it? At the moment it seems that people are not consciously aware that they should use their democratic power to stop things like that - that they should do things in order to minimize concentrations of power, and to stop privatising. Our suggestion in SHOP is to try to build new institutions. So, part of SHOP is a library or a workshop, trying to let people share means of production - there's even a small hospital or emergency box that represents a hospital. One of the levels of SHOP is to try to reintroduce institutions that we share instead of letting someone try to make a profit on them; that's very important.

RGN:
There's also a question of hierarchy. You've made a more uniform structure. You've replicated the functions that CCA has and made a parallel structure with the café and bookshop facilities, but on a much flatter basis.

N55:
In a very horizontal way, yes.

RGN:
One issue that's very interesting for me is that of context - you as Scandinavian artists doing this in Glasgow. This is something we could maybe touch on. To me, it seems that Scandinavia has always dealt with issues around society and very consciously made decisions in certain directions. So, obviously someone is deciding to go in the direction of privatisation at the moment. Whereas, in Britain, things are perhaps further advanced down that route - partly because we had a Conservative government for so many years and we've followed the American model: most of our public serv-

ices, railways and utilities are privatised now.

N55:
And it's breaking down?

RGN:
Absolutely. It's proven not to work. But, when you come and do something like this in Glasgow, I feel perhaps these kinds of systems of exchange do exist in Denmark already. I recently heard about systems for swapping clothes; there do seem to be these open models of exchange that people are conscious of. One point that was raised in Scotland was that of surplus. Glasgow is a post-industrial city, which doesn't have much money and there isn't a surplus. There are no spare things around. In certain situations, people will organize exchange systems based on the surplus that society has which may function in one context but not be relevant in another.

N55:
This small society, small-scale exchange can happen for different reasons. In Argentina, for example, the money system has broken down completely, so there are barter shops for work and food and things. In Scandinavia maybe there was a notion of sharing because of a consciousness that it was possible, or that other persons are important for your existence, and not only your career or the things you have to do in the next hour. But this is eroding very much in Scandinavia at the moment. It was maybe there ten years ago, but it is very hard to find now.

RGN:
And how did that awareness come about? Was that through education in schools or something your parents would speak to you about or just a general consciousness?

N55:
A general consciousness on most levels of society, and a very positive effort in order to change things, starting in the 50s with the whole welfare idea. By the way, it's wrong to say there's no surplus in Glasgow because, of course, there's a huge surplus; it's a matter of distribution. Great Britain is one of the greatest economies in the world. On this map of the world with different economies, where you have a larger area the bigger your Gross National Product, Great Britain was really really big. There are some really wealthy concentrations of power there.

RGN:
Yes, but very little of the wealth flows to Scotland in general and Glasgow in particular.

N55:
There is a lot of economic surplus in western societies at least, and it is possible to educate people in such a way that they start distributing it properly. Of course there's a surplus. But Britain is in a more radical situation than Scandinavia; there is of course more equality of income and living conditions in Scandinavia. However, that equality is disappearing at the speed of light. At the moment we are adopting the American model for society. That's incredible, because in high school we would look at statistics and understand that the American hospital system was very expensive and didn't cover more than 20% of the population. The Scandinavian health care system was cheaper, public and it covered the whole population. Ever since we left high school, Scandinavia has been approaching the American model and that's interesting. Why are we doing this? Why is the Western world changing to the American system when everyone knows that it's undemocratic, it's insane and it's perverted. Why do we do this?

RGN:
So, what is your ultimate aim? Your interventions into situations like the CCA in Glasgow will have an impact on a local level and do you see that, as long as you manage to engage with a few people in that situation, something worthwhile has happened?

N55:
Yes, of course.

RGN:
You're not so interested in operating on a macro level and being evangelists for a new way of thinking?

N55:
One of the problems that you have if you want to change things is that you can' t work with ideologies. You really have to believe that people are able to understand for themselves. That's the only way of avoiding ideologies. Religions and ideologies are proven to always end up being repressive. So, how do we avoid that? How do we make real changes? One of the things we have to start with is not to form new ideologies or re-introduce old ideologies or religions. So, you can't work with "the masses" using mass media or whatever, because you will become part of an ideological thinking and then the whole reason why you started this has gone. That's one of the problems that you have if you want to communicate. You have to believe in persons, basically, in order to change things.
At the moment, the world is so fixated in mass communication. In this situation, it is satisfactory if you can have something that makes sense for maybe ten people, or five, or two. Our experience is that if you think that what you

are doing makes sense and that you are in the center of the world, the center is not everywhere else, it can create a meaning that can extend beyond that situation and mean something for others somehow, in time maybe, or by different means. But, of course, it is also a choice to say that and to believe in that.

RGN:
There are two sides to that - one is that mass communication has been so co-opted by big business that there is no easy way to use it, the sort of media that you are talking about, like television and film. But then I get frustrated that artists can only reach a small number of people because the message that you are trying to put across should be communicated to more people. I suppose one way of doing this is via the internet (as with your YTEICOS project) but that relies on people seeking out the information that you are providing.

The project in New York, which included SHOP coincided with the war on Iraq and was intended to provide access to information not normally represented in the American media, across all platforms - newspapers, books, magazines, television documentaries, the internet - to steer people in certain directions. Subjects ranged from the environment to biotechnology and the media industry itself, who controls it, the extent to which it is led by advertising and the interests of big business. This touches on the idea of ownership to knowledge - by providing access to certain information - that you have discussed. Perhaps inevitably, the illusion of freedom of information that persists in the States meant that very few people sought out this information. How do you get around this kind of apathy?

N55:
The situation in the US illustrates the dangers of believing in and supporting huge concentrations of power. A few people controlling the government, the arms industry and the media create an apparatus able to identify a foreign dictator oppressing his people and thereby justify attacking Iraq. At the same time they propagate the illusion that they represent "freedom". They don't openly kill political opponents, but keep people at a level of fear and poverty where they commit what are defined as crimes, then put them in prison and get rid of them in that way. So, there are more subtle ways of oppressing people. It becomes very easy to create grotesque figures of oppression and at the same time disguise your own oppression.
You quoted 1984 in your text for the exhibition and in that book, Winston Smith writes in his diary "freedom is the freedom to say 2+2=4" and that is pretty much the same as when we say "persons have bodies, persons have rights, concentrations of power do not always respect the rights of persons".

RGN:
So, what do you do if people are so convinced that their government is providing them with all the information that they don't bother to seek out anything extra?

N55:
What you have to do is not become like that yourself and keep on saying the things you think are right. What we see is also how habitual conceptions are dominating everything and how they condition and form everyone's behaviour. So it is important to try and resist that.

RGN:
Another key issue in SHOP, which touches on a number of your other projects, is ownership. In Glasgow, we organized discussions that people took an active part in, about issues like ownership of land and ownership of knowledge. Perhaps you can explain some of the thinking behind that.

N55:
The SHOP system has something in common with the LAND project. The manual for LAND describes how people can add land to LAND by including land and guaranteeing that everybody can come there and stay and use it. So, it's something that invites people to act and do things - they can start their own SHOP, they can also add land to LAND, or start a similar system. Both projects are about sharing things and resources rather than excluding others. In relation to LAND, we talk explicitly about ownership. Ownership of land cannot be defended in a logical way; it can only be defended using power and force. This is what our laws are geared up to do, because our economic system is based on private ownership. This is the basic assumption of almost anybody who talks about economy and exchange: they don't challenge this notion of ownership. The notion of ownership was justified by philosophers. Current ownership thinking has its roots in (among others) John Locke who is frequently quoted as saying "if you have sown, you also have the right to harvest". This kind of thinking is also at the core of capitalism: you have the right to use land if you can make the land profitable. If you only have title to it, you don't automatically have the right to it. On some occasions, this argument could have made sense. For example, when it was used in the fight against the feudal lords. People questioned why the lords should have all this land when people were starving. But the same argument was also used to drive out the native population from America: a European settler could get more profit out of a plot of land than a native American could. If you look at it from the point of view of logical relations, which we talk about all the time, you can't argue that some persons have the right to exclude other persons from access to land. We know that persons have rights. If you try to say that this person doesn't have rights, it doesn't make sense. If you say that this person has

rights, but has no right to stay on the surface of the earth, it makes no sense. This is a very basic thing that you can derive from language and language is what we have in common. You don't need ideologies or religions to find out what is right.

How does one avoid ideologies or religions? Our starting point is to look at language because language is what we have in common. Until recently, nobody has tried to claim ownership to language. That is, however, happening at the moment, because when you claim patents to different things, you are claiming ownership of objective knowledge. So, language, which is generally understood as something that you can't own, is also becoming owned at the moment. Ownership implies power over others and that is how it ought to be viewed. Looking away from logic, and what we have in common, we are left with power and force, and that seems to be the case at the moment.

RGN:
This kind of discussion is very pertinent in Scotland at the moment, where the Scottish Socialist Party made big gains in the recent elections and is explicitly opposed to this kind of private ownership. As you know, Andy Wightman, who took part in our discussion about ownership of land, has articulated this in his book "Who Owns Scotland?"[1]

N55:
There seems to be a strong sense of local meaning and history in Scotland and that's a good basis in this situation. This feeling of local democracy is very important in order to resist market forces and the interests of large concentrations of power. We are now making a version of SHOP in Romania, where, like in New York, we provide the system and we will collaborate with people there who have collected a lot of things. It is taking place in a particularly poor area, with many Roma people who are excluded from having a part in a 'normal' economy in an already completely desperately poor country. So, it will be interesting to see how it works out. The eastern European countries are in a difficult position at the moment - there is an extreme pressure to conform to the free market economic model and there is little time or possibility to establish other economic systems. There are attempts to draw on local experience and socialist models, but they get overrun by privatisation and western companies. On the same occasion, LAND will be expanded with a plot of land in Romania. Because of the transition from the old system, they have many types of land legislation that contradict each other and which seemingly all apply at the same time.

RGN:
It is possible to distinguish between LAND and SHOP on the basis that SHOP is much more concrete in that you are undermining the value of commodities.

N55:
LAND is very concrete as well.

RGN:
But, in a much wider sphere. In a sense, SHOP is very focused and concentrated on one place and people don't question the value of commodities as readily (no matter how much they might agree with you) in the LAND project. Almost everybody universally agreed in our discussions in Glasgow that land ownership was wrong, but if we think about the value of the books in the SHOP, people might argue that they had a tangible value. What was your experience of that?

N55:
It was very positive, we had some very nice experiences with children, because it seemed that the children had no profit motive. They really loved to barter but they didn't aim to get a profit. What they really liked was that they were able to change things - we would see a toy disappear and then come back again. What they enjoyed was to have new stuff. That was interesting, but, of course, with grown ups it was different - one out of twenty was an asshole - but most people respected the SHOP situation when they exchanged things. Most of them actually brought more things in than they took out, and that's a way of showing that they appreciated the situation. And then you have the assholes, but you will never get rid of that factor and that's part of the situation. There have been cultures where they had no experience of theft or rape but it seems that these things are part of Western culture. But, it also seems that the more generous you are with people, the more you can trust them. Maybe some of the bad experiences we had have to do with the situation at CCA and the disrespect there.

RGN:
You began by talking about the Ministry of Defence Conference and that there was a big resistance within the artistic community to coming to CCA, but I think during the time that you were there, we managed to counteract that, not only through people coming to the discussions that you had organized and saying that this was the first time they had been to CCA since it re-opened, but also to actually be able to host a protest dinner against the fact that this conference had happened, within SHOP.

N55:
Yes, the dinner was initiated by Gair, a local person who invited a group of people to dinner (cooked in the SHOP kitchen) because he said "if the Defense Ministry can use these premises, we can as well". That's a constructive attitude. It's a really interesting way of approaching institutional critique, to say that these art buildings exist all over the world, they are multi-

plying faster than rats and if we can find a useful purpose for them, let's do it. That's basically the reason we work with curators as well.

You had some ambitions for this project too. Were they realized?

RGN:
Yes, I think my main ambition for this project was to address the local artistic community in Glasgow - firstly through the content of the work - and I think you did that really successfully through the discussions. However, I have to say the audience that attended the discussions wasn't maybe the one I thought would attend - there is a strong "school" of artists in Glasgow using architecture and design in their work and I thought there might be some discussion around that. But, what actually happened was that the discussion operated on a more theoretical level. Also, the pure act of engaging people in the institution and making it a success on that level was a really important aim and one that we have achieved.

I want to elaborate on a discussion about commodities - because the objects in SHOP can all be considered as commodities (apart from the facilities provided in the workshop). We've talked about the profit motive and in SHOP this functions in a very tangible way because people are really asked to question the mechanism of exchange that you've set up. I wondered what your thoughts were on this specifically and, in relation to your own practice, I think it's important to discuss how you view art and art objects in terms of commodities and how you resist that.

N55:
By saying that the work is not for sale generally we try to shift the emphasis from art that can be sold - and therefore art as commodities - into art as belonging to and being dependent on a social situation. And you can't buy a social situation. For us, it's important to maintain the emphasis on the social situation and therefore it is problematic to sell things. However, we do sell things to public institutions that promise to keep them accessible to the public, and not use them for any commercial purposes.

RGN:
You mentioned that it's not possible to commodify a social exchange, but in a sense, what the institutions do when they invite you in to undertake a social exchange could be seen as a form of commodification.

N55:
Yes, but then it's a situation where other people have access too, not just us and the people who invite us. It's open to the public and that's an important aspect. So, it's not an optimal situation, but we try to make it as collaborative as possible.

What's very important for us is that it doesn't stop here - SHOP will mutate into new situations and come alive again, and some of the stuff from Glasgow that people exchanged traveled on. Somebody will start a SHOP in Dundee, they just wrote and told us, and we got a lot of stuff from a similar project in Edinburgh. This summer we will make a MINISHOP in a small French village.

Notes:

[1] Andy Wightman: Who Owns Scotland, Canongate Books Ltd., 1997
www.whoownsscotland.org.uk

BRETT BLOOM AND N55 EXCHANGING

Brett Bloom lives in Chicago and works with the group Temporary Services (www.temporaryservices.org). This exchange is based on an email conversation that took place in the spring of 2001, before LAND nearby Copenhagen was included in LAND by N55.

Brett Bloom:
What ever happened to your idea of getting some land/LAND in the country and creating an open community there? This could be something that we could work on here in the USA as well.

N55:
We investigated the possible sites near Copenhagen. We found that we would spend too much time making the places we could afford liveable (we can't and won't use bank loans), and that the risk of being isolated and marginalized was too strong. We decided to stay in the city, live on the water and we made FLOATING PLATFORM as artificial self-made land. As you know, Quintusholmen (the harbor area in Copenhagen where FLOATING PLATFORM is situated) has been like a little self-seeded village or kind of a collective. It is a very satisfying experience. Perhaps the best social situation we have ever lived in. However we know that this situation is going to be destroyed by concentrations of power. And at the moment, as you are experiencing it as well, concentrations of power are dominating cities totally. City-centers are being taken over. So no matter where you start fighting entropy and create some energy locally, you end up being thrown out. (One of the funny things is that, without wanting it, you are helping to make areas more attractive for capital interests to invest in, by doing what you do.) At the moment the N55 response to this situation is to be more mobile, to move around and do things with a local consequence.

The family of LAND-related projects (ROOMS, SHOP, WORK) and the YTE-ICOS project could be seen as ways of creating a large, dynamic collective, that would enable persons to "live together" and use "small group behavior and ethics" on a larger scale. If you look at a small group, like a village, a family or friends, they are sharing a lot of things without the use of money or many rules. In fact, most rules are actually implicit. We are trying to make systems that would make some of the behavior that is defined implicitly in language explicit: in easy understandable forms like "manual for ROOMS". The hope is that we don't need ideologies or religions to control our behavior. All our efforts point in the direction of trying to exist with as small concentrations of power as possible.

We now clearly see the line of work from our Studiestræde apartment, trying to communicate with basic things from everyday life that anybody could relate

to. Making art useful, as visions and signs, and also on a prosaic level. Removing the snobbish aura. Rebuilding the city from within. Indoor farming with HOME HYDROPONIC UNIT. Changing things by changing your own behavior and taking the consequences of what you have done, learning and trying to do it better the next time. Concentrate on significance and the situations we live in together with other persons. When we moved out of Studiestræde, we also started to work directly in public space: N55 SPACE-FRAME and PUBLIC THINGS, and we even created new public space with FLOATING PLATFORM and tried to produce land with SOIL FACTORY. You see a movement towards larger and larger social structures and how to deal with them.

BB:
Your concerns about moving to the country are the same ones I have. It is frustrating that you have to be in a city to feel like you are connected to the things you want to do - or for people to pay attention or feel connected to what you are doing. Maybe when you come we could try and secure some cheap land for LAND.
I don't think you can really understand how hard it is to live in the US until you have done it for a while yourself. Here in the US, most of the accomplishments that were won in the 60s are being eroded right now. The right wing has become the mainstream and downright vicious. America is prosperous right now and that breeds apathy. Most Americans are apathetic and unwilling to personally risk their comfort to help others or make this a better society. Starting another cold war seems to be what George W. Bush wants. This will allow his friends that own companies that get contracts from the government to have more work. It is a pretty transparent scheme.
There is no solution other than that all governments should be smashed... but here we are talking about mega-concentrations of power. How can art be put in relation to these things when we can't even adequately house ourselves?

N55:
Accomplishments in the right direction are disappearing here as well. The whole welfare system and, what is even worse, the basic will to work together in symbiosis instead of competing is destroyed, from the education system to hospitals and basic relations between persons. It's happening because of the neoliberalist movement starting in the eighties in the Western part of the world. Of course, the feeling of losing for the humanists in the Nordic countries is bad too, because here the concept of social responsibility and solidarity has been much more developed than in the USA.
The USA is basically an undeveloped Christian, fundamentalist state. Of course, the level of technology is highly developed. But when you look at the society on other levels, the USA somehow managed to use the surplus it creates to make rich people and powerful companies more and more powerful.

For a long period of time, the surplus in the Nordic countries was used to improve the social conditions for persons. The irony here is that the USA now is the role model for the Nordic countries concerning healthcare and so forth. The concept of profit is dominating everything. We have let the economists and their terrifying Victorian misinterpretations of Darwin rule. As a well educated but stupid American woman once told us: "In the USA persons choose to sleep under a bridge. So anyone is free to do what he wants to do."

It is not nice to live in the Nordic countries now. Everything is going in the wrong direction. But we sincerely believe that it matters to do something about it. If we try doing something different we must have a better chance of changing things than if we don't try. And even though it's hard for us to house ourselves, we just have to use this situation in our work as well. It will make it more and more visible what's going on. Trying to keep creating consciousness about the situation is what it's all about. We won't get rid of states or police, etc. in a long time. Sometimes it is better to have a large concentration of power like a state, than a smaller concentration like a company because representative democracy is better than corporate fascism. The UN is very much necessary at the moment. What we say is that we must find ways of existing with as small concentrations of power as possible. Not that we must get rid of every concentration of power immediately. That would be utopian thinking. But if we always try to minimize power structures, it must change something. If politicians first and foremost were concerned about trying to respect persons' rights, it would change things. We can learn from understanding language that we should always try to exist with as small concentrations of power as possible.

BB:
Last night was the kick off to the Department of Space and Land Reclamation [DSLR - a weekend-long convergence of artists, activists, and others doing actions and art in public reclaiming city spaces towards more democratic, open and radical ends] here in Chicago. My friends Nato Thompson, Emily Forman, and Josh MacPhee organized it.
A group that spoke during the DSLR meetings called the Carbon Defense League was fucking amazing. They are doing some incredible things with hacking technological systems and devices. You should hear them talk about how technology and the devices that are created socialize us and the need for having control and opening the technology up to more radical, less repressed, free and open processes. They have this approach that I have heard echoed in your own concerns - this need to shape the world around you and doing this through understanding how things work and applying that knowledge to basic ends. I think that you would really like meeting them. I am going to try and talk to them today and start some kind of dialogue.
I think police, states, governments and corporations are going to be control-

ling things long after you and I are dead and forgotten. I don't think it is utopian to want to smash these power structures. It is utopian to think that you can do it and do it easily. Capitalist apathy is one of the biggest barriers. Until all the people in this country have their comfort level taken away, nothing is going to happen.

I identify very closely with anarchist thinking. I am currently reading a biography of Mother Jones - one of the greatest activists, agitators and union organizers in American history. She was a steamroller. It is incredible the struggles that people went through just to work a fucking alienating job. Being murdered and beaten just because you wanted to work eight hours a day instead of twelve. The book states that while Mother Jones was in Chicago (during the late 19th century), the city was a pantheon of anarchist thought and action - it was the epicenter of an international movement. I have spent the entire weekend hanging out with unpretentious, anti-ideological, anti-authoritarian artists and general hell raisers - people with generous and maliciously (as defined by a state that wants to control the minds and actions of its people) creative minds. It has been inspiring to say the least. Nato, Emily and Josh have really done something amazing. I can't wait to see how they build upon it.

N55:
Anarchism is an ideology, and ideologies per definition don't necessarily respect the rights of persons. Ideologies can be defended but they are always representing points of view, subjective opinions. Parts of Marxism are very interesting and Marx's criticism of power is very useful. Different religions are also interesting. Parts of eastern ways of thinking are parallel to some of the things we have understood. Anarchism is of course an ideology, which is sometimes close to what we are talking about in N55, but the difference is, that like a religion, it is based on subjective opinions and social conventions, and not necessarily on objective knowledge.
History clearly shows it is a fact that religions and ideologies are not the solution to anything. Whenever you base political actions on conventions and on subjective opinions, you cannot respect the rights of persons because subjective opinions don't necessarily respect objective knowledge. And we know that it is objective knowledge that persons have rights and therefore should be treated as persons.
So no matter how nice anarchists might be there is a fundamental problem in their way of thinking completely parallel to the problem with the way Nazis think. Because religions and ideologies are based on subjective opinions, you can use them to defend any kind of action, even murder of other persons who think in a different way.
Language is what we have in common. And understanding the way things we have in common work, seems intelligent in order to find out how we ought to

act. What we have shown in N55 is that we have to try to find ways of existing with as small concentrations of power as possible. It is obvious that the only reason why ideologies and religions work is because of logical relations, or conditions for description. Logical relations are what make language a language. But as soon as you don't respect logical relations you can say and mean anything. And ideologies and religious assertions normally are a mixture of right assertions and wrong assertions. Unfortunately the wrong assertions can be lethal to opponents. Ideologies and religions have always been tools for persons in power to manipulate the masses. And intellectuals like Marx of course represent power too. The only way to avoid this situation is to understand things for yourself. Every person must understand. This is one of the problems.
We know that we keep repeating ourselves, but we have the feeling that you think you understand what we are saying when we talk about logical relations, but we know you don't really get it yet.

We will soon work on establishing YTEICOS, ROOMS and WORK. The important thing about these projects (including LAND), compared to previous projects, are the fact that they can only be realized in collaboration with other persons. We always worked together with other persons, but in a slightly different way.

BB:
We seem to sometimes have a parallax in communication. It is good to go over this stuff again and again. You think I don't understand logical relations. I think that I have a basic understanding of them. I don't think that I can have the understanding you have because of how long you have worked with them. I also think that there is a problem of your reliance on them - or insistence that they be the guide. There is this strange denial or slip that happens between your commitment to them and also your need to live in and nearly fully participate (not because you want to, but because you are forced to) in a globalizing capitalist economy. I say I identify with anarchist thinking and will call myself an anarchist, but I also have a relation to it that I think is anti-ideological (this is greatly influenced by my conversations with N55). My understanding of anarchism isn't one of concentrated power and one kind of way of thinking. It is more about the relation it takes to all concentrations of power - they are abusive and must be dismantled and/or resisted when organizing yourself. I don't see anarchy as a fixed ideology in the same way that Marxism is. My political beliefs and practices are pulled from so many things. I think my understanding of anarchy is really different than groups like the Black Bloc that show up at a lot of anti-corporate globalization rallies. I was on several of their list serves and took myself off when their inherent ideological positions became apparent - they would oppose oppression, but when someone was speaking and saying something they didn't like they would organize to

"smash" that person's ability to speak freely. This is fascistic. I also find local "anarchist groups" alienating and highly ideological. I think that anarchy is still a useful word and I have to give it a different use and meaning through my own life.

We had this conversation about creating autonomous systems of communication when you were in Chicago. You didn't feel the need to have complete autonomy and I can't understand not having it - this was in relation to your future internet server and YTEICOS project. I live in a society where everything is so highly controlled and regulated and constant assaults on freedom are being written into law. A series of "red squad" laws were recently overturned by the United States Supreme Court. This basically allows police and intelligence groups to infiltrate and do surveillance on any group they feel is a threat to mainstream society. There has been no lack of time (and I think they have been doing it illegally all along) in resuming this practice. I just talked with a friend who went to Quebec City to oppose the Free Trade Area of the Americas Summit. He was falsely arrested and forced to leave Canada. This happened to a lot of people. Police just started making things up to deny people their freedom and ability to participate in democratic dissent. I don't want these motherfuckers (police and corporations) having access to my communications and to my personal life. I want systemic independence and see this as the only way where freedom - and what you are talking about when you talk about logical relations and living in relation to language and respecting the rights of persons - can exist free from control and ideologies.

While I understand what you are trying to do with logical relations, I have to say that the world isn't going to let you have room to live by them yet. Your systemic approach to politics is by its very nature abhorrent of concentrations of power. It seeks to limit them and break down abusive ones. No matter how loud you are about concentrations of power and how they abuse persons, the fact remains that they are there and aren't going away without being countered by oppositional politics and yes, ideology. I understand the parallel you are drawing between Nazism and ideological anarchism and I think you are absolutely right about how concentrations of power act and will always abuse.

I know you have heard this before, but you can't act according to your own understanding of logical relations yet. I think no matter how hard you try and want to, you are still immersed in a world that doesn't respect, understand or have space for them. Taking grant money or institutional funding to produce your work isn't the precondition for your own autonomy. You are a full participant - even if you have a critical relationship to these organizations - in the culture that is the very thing you oppose and this DOES affect the way your ideas impact the world. Doesn't it scare you that all the assholes in the Chicago art world so easily lined up to welcome you and to grab what power

and recognition they could just from being around you? This is a huge problem with the way you work. Don't think that people don't see this and that it doesn't color their understanding of N55, because it does.

Another problem I have with your insistence on logical relations is that it seems not to allow for what is just as important and that is our entire range of emotions. I don't think that you can just live your life according to logical relations. Humans are not just logical and won't ever be. Compassion, anger, love and these things are just as important. They inform my ideas and actions just as much as my ability to rationally identify oppression and abusive power structures. I think that you really need to address human emotions in your discussions of logical relations in a way that fully integrates them and utilizes their strength. I know that you are going to say at this point that emotions cause relativistic thinking and that they obfuscate logical relations and thus don't allow persons to treat persons as persons and so on. I don't think that this has to be the case. I think that you need to address human emotions and really find out where they fit in all of this.

In relation to this, I have had a very hard time understanding why you eat meat. I consider the eating of meat another kind of concentration of power - human oppression of creatures that we control and destroy for our own needs. An understanding of the unity of all oppression needs to be discussed. Eating meat and refusing other non-human animals the right to exist is an abuse that takes human being as a privileged kind of being and thus justifies all sorts of atrocities. The slaughter that is taking place in Great Britain right now because the animals have the "flu" and thus won't produce a high yield of product is just one example of a tremendous amount of suffering that is heinous, immoral and not at all logical. Eliminating concentrations of power (or organizing in as small as concentrations as possible) must also be coupled with identifying oppression in all its forms and resisting it as well.
I truly do struggle with what you say and your work with logical relations and also needing to balance it with fighting concentrations of power that are always abusing me. Logical relations can't be the only tool for me yet and participation in oppositional (what you call ideological) practices still needs to happen.

N55:
We have always tried to create situations where concentrations of power had as little influence as possible. This is a key to understanding important levels of what we do. As an example, N55 SPACEFRAME is an investigation of how to house yourself in a low cost way without the influence of the concentrations of power with interests in the building industry (the government wants houses to be expensive because then people have to work a lot to get them and then persons are easy to control. Architects and producers also have their

interest and so forth).

You can see this attempt to avoid being controlled in all our work and the attempt to share knowledge we gain with other persons. But, we still believe in not being marginalized: to work on the edge of institutions. The idea of a total autonomous situation is utopian for many reasons. One reason is the fact that we are too many people on this planet to live without industrial production of food etc. In order to solve environmental problems, hunger problems etc., we have to be less people. This is very difficult, because concentrations of power gain from overpopulation. Overpopulation increases competition among persons for food, land, space, work and so forth. This is good for concentrations of power.

To master language is to possess power - scientific language and logical, practical use of language. Some persons misuse the power of language. They use it to turn night into day and wrong into right. This is how politicians operate. Instead of trying to respect the rights of persons, they secure their own position. Scientists misuse language to try and get away with things they know are wrong: things like the atomic bomb or letting uncontrollable genetically modified organisms into nature. By understanding logical relations, we can show that persons who misuse language are wrong, without leaning ourselves at ideologies that are by definition misuses of language. In this way it is right assertions against wrong assertions instead of another power game based on subjective opinions.

If you understand the profound difference between this way of thinking and any other way of thinking you must realize that understanding logical relations are of decisive importance if we want to change anything!

N55's practice is what we do and what we think. We cannot reduce N55 to anything specific. We can describe N55 in endless ways, but we can't tell exactly what N55 is. Working with logical relations and understanding the implicit can tell us something about what is right and what is wrong and what persons ought to do on the most fundamental level. As an example, we can learn from logical relations that persons have rights but not exactly what those rights are.

The point is: what you actually do in a situation is endlessly complex. What we say is that we try to respect other persons' rights, but not that we always succeed. However, it might help if we try to respect other persons instead of not trying. Logical relations don't tell you how to live, just what you ought to respect while doing it. And what we do also comes out of fascination. Sometimes it is fun and it creates a surplus for everybody involved. This leads us to the next subject, significance. Quoting from "ART AND REALITY":

"The part of the world we can talk rationally about can be defined as the part we can talk about using logical relations. But we do not have any reason to assume that the world is identical with what we can talk rationally about. Though concrete situations can only be identified in space and time, they cannot be reduced to only existing in space and time. In any concrete situation significance plays a decisive role. If we say: they sat there and they were fine, but nothing was of significance, it does not make sense. Significance is decisive for concrete situations, but significance does not exist in time and space. What is the durability of significance and where does it exist? We do not know what significance is, but we know that significance is something that is decisive to our experience of the world. If we do not assign persons, their behavior, things and concrete situations any significance, then there is no reason to concern oneself with persons, their behavior, things and concrete situations."

What we are pointing out here is that the world is not identical with what we can talk rationally about and that significance cannot be described rationally. How big is love and what color does it have?

If we can't use or refer to rational language at all we are per definition insane, unconscious, or doped. On the other hand we have no reason to presume that our decisions are only based on rational language. But if we know that we should respect a person's rights and at the same time, we kill him because we don't like him, we prefer that persons listen to logical relations. Making the implicit explicit is about creating room for that which is significant for persons in the situations they are in. Concentrations of power do not necessarily respect persons, or what is significant to them. In order to make room for persons and what is significant for them, we have to try to find ways of existing with as small concentrations of power as possible.

BB:

Your house is "legally" defined as a boat and despite all the other points at which you avoid concentrations of power, they still have a hand. They get to define you or make a space for you within their own system if they want. You are using city power... okay, I know I am getting ridiculous, but on a personal level it really pisses me off how far down the level of control goes. It now goes down to the genetic level of our food and our own DNA. The IDEA of total autonomous situations is utopian, but the DESIRE for it is entirely the opposite. I operate with this desire, but not the delusion that this is possible. Six billion people on the planet make it impossible for autonomy - of course. Yes, I do think concentrations of power can help fight concentrations of power. This is why oppositional politics (direct action, interventionist tactics, sometimes violent acts) must be used as well. They are tools for fighting concentrations of power. This is why identifying with anarchist tendencies is useful and not JUST ideological. You have to understand that this is where I am in relation to it. In relation to art, we have heard for many years that "people are work-

ing to change the system from within" rather than totally replace it or really undermine it significantly. This is a major source of my frustration and not something that has directly to do with you or anyone else.

Here are some of my concerns about language and I wonder how you have dealt with them: I have heard you say directly that language or a word isn't the same as the real thing being talked about - you said something very close to this.
My own understanding of language is that it is a metaphysical filter for the gap between our minds and everything that isn't our minds. There are these relations between the thing in our minds (in our language) and those things that aren't really what we call them but are what they are in themselves. Cultural differences are real and they also affect language. Different languages effect how people think and are in the world. This makes things very messy. This makes the possibility of even communicating logical relations all the more difficult - not a critique more a concern I am trying to figure out.

I wonder how much you can claim that the logical relations that you have found and claim are so basic as to be true across all languages and/or human experience when we know that different languages take different relations to the world. There are certain cultures that have no words or concepts of ownership at all. I think that they were Native American, but I can't remember which group of people. Their relation to the environment around them was profoundly different from the Europeans who came and "owned" the land out from under them. I am not trying to raise relativism because I don't think it exists in that I don't believe that any ideology exists as a fundamental condition of existence. I wonder how the Native Americans would find your conclusions and what they would mean. There is a part of me that thinks intellect is totally foreign to the universe and that it is a total mistake that shouldn't have happened or is absurd and beyond meaning. I struggle with this constantly. All of this shit is just trying to give you a sense of how I am processing things.

You say: "If you understand the profound difference between this way of thinking and any other way of thinking you must realize that understanding logical relations are of decisive importance if we want to change anything!" But, you acknowledge above that there are other things that factor in and must be used as well: using concentrations of power to fight concentrations of power. This is where you don't give me any room and sometimes don't see the parallels between us. I understand what you have found with the logical relations, but for some reason they are not resonating with me as strongly. They don't have the weight that other things do for me and this is more for how they are received or potentially received in the world. I still think that people have to make space for them in their heads and the world is nowhere nearer that than it is to ending all governments.

You are smart enough to know that most of the proteins that sustain your body are found in plant material. There are also vitamin supplements that will replace what vegetables can't. You don't have to eat meat at all. I really want you to engage your human biases and acknowledge them for what they are - yet another concentration of power. Related to this, I heard a great report on the radio about dolphins. Dolphins are capable of MSR (Mirror Self-Recognition) making them with humans and chimps (I think some other great apes as well) the only beings on the planet, so far, that have this high cognitive ability. Animals deserve the rights that you extend to humans. To not do this denies your humans rights too. Human-centric thinking is a major problem and is why the earth is being super fucked over right now.

N55:
Concentrations of power do not always respect the rights of persons. They usually cannot be trusted to respect the rights of persons. The kind of resistance we see at the moment in the world against the WTO, for example, is interesting, because it isn't organizations, but persons, who will not accept what is going on. Large powerful organizations like political parties or unions are concentrations of power. They will fight other concentrations of power and if they win territory they will grow and they will become an even larger concentration of power.

It is not likely that things will change decisively before persons become aware that they should first and foremost be concerned with trying to find ways of existing with as small concentrations of power as possible. We are not saying that socialistic parties, for example, can't do good things. But in order to change things decisively, persons must understand things for themselves, not through the force of ideologies.
Logical relations are something you can choose not to listen to, but you can never say something right without respecting them. Even when you try to deny the existence of logical relations you use them to argue to the point where you are wrong. When you are wrong the only way to continue is to use force in order to convince others. So the difference between ideological thinking and understanding logical relations is that ideologies always use power. Knowledge of logical relations probably won't have decisive influence before persons understand. Or before enough persons act according to this knowledge for changes to appear. This is more subversive than any power-strategy.
We cannot say anything if we try to communicate in a rational way without referring to logical relations. Even when we make jokes, they play with logical relations. Even if the assertions are crazy, they seem crazy because we know what is right. In poetry we refer to logical relations. You can't tell me about your feelings without referring to logical relations.
You are explaining where language is placed, as you say between the mind

and the things outside our minds. And that language is a filter. So we now know that language is a filter and where this filter is placed. This is of course complete nonsense. You are trying to explain things in a way in which they cannot be explained. You are confusing the relation between language and reality.

We will try to explain some of the historical background of what we are saying. Maybe it can help making things clearer, maybe not.
Western philosophy is full of discussions about the status of the material world versus the realm of ideas and the human consciousness.
Plato renounced the real world for the world of ideas, which he thought was more real. The Christian Church and other religions could agree with this. The methodical removal of humans from their grounds of existence, to make them focus their attention on more "real" realities is a good tool for religiously founded power.
Descartes formulated the divide between mind and body, Berkeley, Hume and others have posed different related problems, which may be summed up as the problem of the existence of the material world and whether it exists independently of human perception of it. The point here is that this kind of problem is an absurdity in itself, but it's hard to find out why. Kant wrote that it was a scandal for philosophy that it was unable to prove the existence of the material world.

Peter Zinkernagel, with whom we discussed and worked for four years, in the 50s discovered what he later called logical relations, or conditions for description - a set of rules. Like formal logic, which are also conditions for description. His point was that formal logic was not sufficient to state conditions for description and could even lead to great fallacies if not extended.
Formal logic, which was formulated by Aristotle, showed explicitly what every person implicitly knew: that if you say one thing and then deny it, you can't expect to be understood in a rational way. And this has nothing to do with what kind of language is spoken: it is a condition for description. Likewise, there are the rules of syllogisms and so on. They also in general pertain to all languages.

The point of Zinkernagel is that up till recently the laws of formal logic have been regarded as the only absolutely strict rules one has to observe when using language: As long as one does not contradict oneself nor is inconsistent with facts, one can say anything, and one thing may be as right or wrong as the other when talking about politics or ethics. Of course, one has been able to discuss ethics, but not on an objective basis. It has been grounded in religion and a lot of complicated theories of altruism, utilitarianism, etc. But this meant that postulates like "I am the only person who exists in the world, and the rest is a hallucination. Perhaps I am also a hallucination…" and the

accompanying arguments, couldn't be refuted logically (strictly and forever). It remained a discussion. Also postulates like: "Jesus is the son of God, lives in Heaven, and will soon return to earth in a human shape," were regarded as sound and could be posed by people who regarded themselves as authorities and not as lunatics.

By saying that our only problem is to use language right, Niels Bohr said something right. This was when he had a discussion with Einstein about how to deal with scientific description. They discovered things in quantum mechanics that were so strange that it forced them to change their concepts of causality, time and space. Yet they could only describe them using their known words and concepts of time, causality and space. Scientific language is rooted in everyday language and must obey the same conditions for description.
Bohr also said that we are suspended in language in a way so we don't know what is up and what is down. We can't ask about the relation concepts-reality, we can only try to approximate our language to the scientific situations we are trying to describe. He also pointed at another banal and totally overlooked fact, namely that every person who uses language finds him/herself in a concrete situation, this fact in itself influences the situation and how we can talk about it, and these situations can be described in an infinite number of ways.

Peter Zinkernagel used Bohr's discovery to solve the above-mentioned philosophical problem of the existence of the material world. Logical relations are on a level deeper than formal logic. We learn to respect these logical relations as we learn to speak our mother tongue, but are normally not conscious of them.
When a person says "Only I, or only my doubting mind, exists," this person forgets that the thinking is done by a person, and a person has a body, the thoughts are written down by a hand which is a material thing, and it is expressed in language, which is a social phenomenon, brought to each person by other persons whose existence is denied by the language, the hand and the person who makes this assertion.
That is a contradiction of another kind than contradictions in formal logic.

Logical relations: persons-bodies, persons-concrete situations, concrete situations-assertions, persons-the rights of persons, are conditions for description and anybody who wants to use language rationally must observe them. This is horribly banal and trivial but totally overlooked. Maybe because it removes the foundations for a lot of speculative thinking, a lot of fine distinctions and so on, people don't want to acknowledge it. Even worse: they don't want to acknowledge it because it's right.

In short: One logical relation is the relation between language and reality. We

don't know exactly what language or reality is, but we know that they are different factors, none of which we can refer to without the other. We can't distinguish between knowledge of language and knowledge of the world. Instead of trying to characterize the relationship between language and reality, we should try to understand what this relationship means.

Why is all this philosophical stuff so important? We have already talked about the power of language. There is a tendency that we lock ourselves up in language and concepts and identify the world with them. We have this ability to perceive our knowledge as a way of mastering the world. This becomes increasingly a danger because our daily surroundings are increasingly products of our language.

If we don't respect logical relations, language can very easily become a tool for manipulation. But if we are able to talk rationally about things that require a rational dialogue, we can open space for other kinds of language as well. Of course persons are not entirely rational beings (perhaps not at all). We have however the possibility of acknowledging logic, as a decisive factor which everyone must observe - and logic is not a question of power, who is right or wrong, but of what is right and wrong.

There is also a tendency in us to view our consciousness as a kind of container that holds parts of the world. However, it's very hard to know how our consciousness relates to the world and to other persons' consciousness. We know little about this.

We tend to regard language as a mere tool for communication. However it also shapes our perception of the world and influences the ways in which we communicate, as you pointed out.

When we first encountered these things through Zinkernagel, we were really starving to hear someone talk about reality and politics. At that time nobody dared to do that, probably because of Marxism. When things are so bound up with power as they were at that time in that climate, and still is, the most important thing is to keep up with the power talk which during our studies was a certain branch of aesthetic philosophy with a whole inventory of distinctions which you had to learn by heart. And to speak in this banal way about persons and bodies was equal to making a declaration of imbecility. So that was what we did.

And we showed that when we talk about art we must always talk about persons and their meaningful behavior with other persons and things in concrete situations. Because persons are something that have rights and therefore should be treated as persons, the rights of persons must also be decisive for art. This is a discovery that has a potential for making us understand how we can talk about art in an objective way, for the first time. To understand things about art - this could, together with facts, be the basis of an art criticism based on objective knowledge instead of on subjective opinions, habitual concep-

tions and conventions. This would do away with art institutions and concentrations of power related to this human behavior, and make art an obvious part of everyday life, if persons take it seriously and understand what logical relations mean to art.

The significance of logical relations is of course not something one can mediate, it's something one has to experience. That's why it is so difficult to talk about. It already sounds like a credo: "logical relations".

BB:
You know for all the talk of logical relations and consequences there is still a level of belief in all of this that you refuse to acknowledge. There are times when waves of solipsism (that ancient and maniacal way of thinking that just can't be dismissed totally) wash over me... intense doubt as to the existence of anything but myself. Berkeley and Hume reduced humans to nothing but sensations happening in a mind. Kant came along and said this isn't true basically because we don't act as if it were true. I haven't read this material in years, but I vaguely remember with Kant that this was a stumbling block. It frustrated him that a total proof wasn't possible that we aren't just in our heads. I don't act as if I am just in my head, but there is doubt.

I am going out of town in an hour and will work on this during the weekend. I need to give some thought to a lot of the last email. I have a great deal of skepticism about logical relations and what it is you think you have found and need to think through my responses.

BB:
Hello Okay! I finally understand logical relations. I will be sending an enormous email tomorrow.

BB:
Okay, so like I said, I finally understand logical relations - or maybe it is more like I have a beginning understanding. I have been thinking about your email all weekend long. My Western-Man-Judeo-Christian-Greek-Philosophy-Anarchist-American-White-Middle-Class worldview has finally come into focus. Thank you for being so persistent in trying to get me to understand logical relations. I am a little bit embarrassed that is has taken me so long to understand. I have been trying to understand your writings for a long time now and worked hard to grasp what you were saying. Seeing my "world view" for what it is was the hardest thing - it was the step that I was unable to take until the email you sent really clearly articulated where your ideas are coming from. It is interesting that I have had an intuitive understanding of a lot of these things, but have not been able to articulate them concretely until now. I have several questions and comments now that I would appreciate your feedback on: (Some of them are my own attempts at understanding the thinking

process of the past few days) Concentrations of power (schools, churches, socialization, cliques, art clubs...) use concentrations of power (circumscribed knowledge, prejudices, ideologies, isms...) to impart understandings of the world and relations of persons to other persons and therefore obfuscates logical relations.

Concentrations of power (Western Philosophy, mind/body split, metaphysics...) forced me to frame my understanding of my own existence INSIDE of a concentration or power - an ideological framework. Irrationality isn't a position from which to understand the world, but is one of an infinite number of ways of describing one's relation to the world. The logical relation here is that the irrationality of a person is "in a concrete situation" that exists in a potentially infinite number of ways of description but isn't the decisive description or understanding. I know what I mean, but it is hard to say. How is it possible to work just from logical relations alone? They don't allow us to say an enormous amount about things. They seem to be more like broad guidelines - but this is too much of a metaphysical description that I know causes confusion in relation to logical relations: it seems inevitable that this will happen over and over again no matter how careful you are.

I think that it would be incredible to generate some new statements - based on logical relations - specifically about ideology, Judeo-Christian-Western-Philosophical Thought and other "world views".

I am quite serious about applying our discussions and thoughts to this question of eating meat or more broadly the rights of animals to exist (or maybe logical relations would show no such right - I am curious to see where this goes). If you can locate human rights in logical relations, then it will have to follow that at least some animals deserve rights as well. We certainly don't need to eat meat to survive. There are historical examples of pre-historical vegan human cultures as well as herbivorous primates. This is complicated by the fact that the great majority of our human ancestors ate meat. I really want to explore this in terms of the historical concentrations of power that have allowed humans to force animals to be food, slaves and so on. There are also ideas that hunting and destroying animals is a patriarchal construct that contributes to the subjugation of women to second-class citizenship. There are clear studies as well that show that children who abuse animals are almost certain to be violent and abuse other people. There are certainly animals that clearly have intelligence or cognitive capacity that is not so far from ours. They also have social and power structures. We have a sliding scale of rights that we "allow" animals to have. This is tied into how we think of ourselves - human-centered thinking is a concentration of power that needs to be seriously contended with.

N55:
You say that you have had an intuitive understanding of these things but haven't been able to formulate them until now. That reaction corresponds with ours as we first encountered this way of thinking. That is very interesting.

You understand that logical relations are the most radical repudiation of western-man-Judeo-Christian etc, by its own means, within the same tradition, language / logic. This is a much stronger way of criticizing than for example importing worldviews from other cultures. You ask how it is possible to work from logical relations alone. The answer must be that it is impossible to work without them. But of course it is possible to violate them. Logical relations represent an articulation of things we have had an intuitive understanding of as you say. When we worked with them explicitly our experience was that this reinforced some of the things we had said and done before. For example: our relationship to authorities, language, how we tried to work with the whole situation and not only objects, and many things.

Furthermore the articulation that art has to do with persons and their behavior with other persons and things in concrete situations felt like an enormous opening up of possibilities and that we had a way of arguing logically for making steps outside of conventions. We were well founded, so to speak. There was no need of institutional frames in order to convey strange and visible behavior.

Of course there is the guideline in logic that if you want to speak rationally you have to observe the relations of logic, including those that pertain to persons and their rights, and therefore you have to try to exist with as small concentrations of power as possible.

BB:
Where in logical relations does the idea of a person having rights come from? Where does our notion of rights come from and why do persons have them? What specifically does it mean to say, "Treat a person as a person" or where does your idea of a person as being a thing that has rights come from? What is the logical relation that you have worked out here? I know that you say there is an infinite number of ways to describe a person. If this is the case, how can you attach rights to a person without attaching ideological thinking to it?

N55:
"Treating persons as persons and therefore as having rights". This is something many people ask about. A common argument against it is that issues of morality are outside of the area that we can talk objectively about. That questions of how we should treat each other are treated differently in different societies and that for example women have no rights in Saudi Arabia. This doesn't prove that women have no rights. It only proves that they have no legal rights in Saudi Arabia. The argument doesn't convince us that we cannot say that women should be treated as persons and therefore as having rights, also

in Saudi Arabia.

The core point is the should-word. Persons should be treated as persons and therefore as having rights. If we deny this, there are two possibilities: either to say that persons should be treated as persons, but not as having rights. But here you overlook the inextricable relations between the words persons and rights and therefore, if you try to talk of a person as if this person has no rights, it is in fact no longer a person you are talking about, but something else, that has no rights. The other option is to say that the person should not be treated as a person, which makes even less sense. Therefore we cannot talk of persons without talking of the rights of persons.

"Rights" is a word that is loaded with references to political struggles, the French revolution, UN conventions etc. Still it is the closest we can get to a term that strictly tells of the necessity to treat each other in an ethical way. Others words would either be too weak or too specific. It still works in relation to different cultures: There is no reason to assume that Native Americans or Inuit people had no notion of each other as persons with rights or that they had no notion of the difference between "I do" and "I ought to do" (and this doesn't mean that every language has a word corresponding to "ought to") They may have acted differently than we would and done things that in our view would be considered unethical. One has to remember that all actions are anchored in concrete situations with complexities which are difficult to assess. However, just the fact of discussing ethics in relation to other cultural practices implies acceptance of fundamental rights. We can only say that rights are a factor which is present in concrete situations, even if they are not considered in the moment of action.

So to try to put it differently, it is a fundamental characteristic of persons that we have rights. To say this isn't any more ideological than saying that persons have bodies.

About animals and rights: It is a different discussion and we think we should wait a little. It is very important not to mix animal rights and persons´ rights. We understand that you feel strongly about this but you must agree that we have bigger problems?

BB:
Okay, we can put this aside for now and focus on the rights of humans. I just needed to put some of this out there. It is clear that I have really strong feelings about this, but you know from experience that I have never tried to impose them on anyone.
Having the understanding that you do of logical relations, what compelled you all to do the work you have been doing since first formulating "ART AND REALITY"?

N55:
ART AND REALITY creates space for the artist to make art. It has the potential to make you understand what characterizes your situation. You understand the influence of concentrations of power and that we should try to find ways of existing with as small concentrations of power as possible. And it becomes obvious that to create situations where persons become conscious about the significance of persons and things is in itself very subversive. Logical relations can't tell you exactly what to do. They tell you that you should try to respect the rights of persons, but not how to do it. They tell you that it is of the outmost importance to find ways of living with as small concentrations of power as possible, but not how to do that. They tell you that if you can create consciousness about the situation persons are in, it could make them change the situation. But not exactly how they should do it. Ideologies would often tell you exactly how to act and what to feel while doing it. This is not the case with logical relations.

So we have been trying to create significance in all the ways we have the possibility to do it: Using everyday life things that anybody can relate to, demonstrating, intervening factories, intervening public space, using all kinds of media, creating our own distribution systems, our own living and production facilities etc., etc. Our motives are various and often influenced by totally irrational fascinations and feelings and social relations. But we try to use all these talents and interests to create meaningful situations.
One of the beautiful things we understood when we started to explore the almost unexplored land of conscious knowledge of logical relations, was that this knowledge respects diversity. And language is something we have in common, and therefore we must be able to learn something from this. To make the most basic thing we have in common the basis of understanding our life in common, somehow makes sense?

About relations to the art institution: Art institutions do away with art and persons. To work with them is of course a problem. But if we manage to create meaningful situations even in the frame of an institution, we are minimizing the influence of institutions. But the basis of our life and praxis must be outside and self-made. It is possible to have a subversive relation to the institution and to use its surplus at the same time.

BB:
We just found out last night that we (Temporary Services and the Stockyard Institute) are being kicked out of the new building. The Catholic Church owns the building and when they saw how much work we had done renovating it they got greedy - fucking asshole capitalists. I am not doing any more work there now as they want to raise the rent 2500%. This is a big setback, but one that actually frees us to go and possibly buy a place of our own.

No one had a written lease so we can't take the Catholic Church to court. We don't have any option but to pick up and leave. These cocksucking priests are purely evil and can't see the value in what we are doing. They won't get anyone to rent the building because businesses have been leaving the neighborhood. This is disgusting! The Catholic Church is one of the most evil organizations in the history of humans... this is business as usual.

It is good to read your articulations of the decisions you made of how to practice after writing the ART AND REALITY text. I also enjoy what you have to say about art institutions. This makes sense to me.

When I asked how it is possible to work from logical relations alone, I think I was trying to point out a problem rather than directly ask that question. I think that there are going to be many times (at least for me until I understand logical relations better) that I will need to act in ways that respond to things rapidly and which don't directly take logical relations into consideration. Another way to put this is that I am always going to slip back into the Western-man way of thinking even when I don't realize it. This is the way that I have been raised and taught to think. This doesn't mean that I won't work against thinking in this way, just that it will be difficult to always identify it, vis a vis logical relations.

It was a long process for me to finally recognize what logical relations are. No matter how anti-ideology or anti-hierarchical I was, it didn't come close to the step that was needed to see it all as still a part of an even larger ideology. How can we make this process easier for others?

Now this difficult stuff of "rights": This is what you wrote:

"Persons should be treated as persons and therefore as having rights. If we deny this, there are two possibilities: either to say that persons should be treated as persons, but not as having rights. But here you overlook the inextricable relations between the words persons and rights and therefore, if you try to talk of a person as if this person has no rights, it is in fact no longer a person you are talking about, but something else, that has no rights."

Persons should be treated as persons... Okay, I am with you this far. This is a tautological relationship. It is the next part that I don't see as logically connectable to being a person, and therefore as having rights. What is it about people that says that they have rights at all? If you say that there are an infinite number of ways to describe a person, then how does the quality of "having rights" bear any more significance than another quality - or as being a quality of definitive meaning? This is an assumption on your part, not a logical consequence of being human. If it is a logical consequence then you need to show me. To say, "Persons should not be treated as persons" is totally absurd. But the sentence "Persons should be treated as persons, but not as

having rights" is a slippery way of "locating" rights as a part of persons being. This sentence sounds awkward to those of us still hanging on to Western-man sentimentality and notions of humanism. But if you can't locate rights as something concretely attached to persons and only find it in a sentimental appeal it just isn't a strong enough statement or one that seems like it carries the weight of the other things you have showed me. You say that the word "should" is crucial here, but it only says how persons might treat one another. I don't see where this implies the presence of rights at all. Where in the world do rights exist? How do we logically locate them and talk about them? We can logically locate language and the world and persons saying things and other things. Where do we logically find rights outside of a backdoor proof?

"So to try to put it differently, it is a fundamental characteristic of persons that we have rights. To say this isn't any more ideological than saying that persons have bodies."

It is though. To say that I have a body is something that I know without any thought. To say that "Persons should be treated as person, but not as having bodies" is really different than saying "Persons should be treated as persons, but not as having rights". I am just not convinced yet. Give me more.

N55:
Our postulate is:
Persons should be treated as persons and therefore as having rights. You cannot deny this without saying something wrong: There are two possibilities: Here is a person, but this person should not be treated as a person or: here is a person who should be treated as a person but not as having rights. This does not make sense. So why don't you understand this? Would you also deny that 2+2=4?
You are confused by the word "rights". You think about law and so forth. But we are talking about rights on a much more basic level here - the keyword here is "should" or "ought to". "Ought to" always implies certain demands on behavior. Persons should be treated as persons. Persons should not be treated as bubble gum because persons are very different from bubble gum.
"Here is a person who should be treated as a person but not as having rights." We could translate this to something like: Here is a person and persons exist in concrete situations, but we cannot say anything about how this person should be treated, not even that he or she should be treated as a person, even though he/she is a person, because this would imply that he/she had rights and we do not understand anything by the word rights that has to do with the word "should" for "ought to".
Persons and bubble gum are the same and rights do not mean anything.
Please try to imagine yourself in a concrete situation. There are other persons

there, and you are not at all concerned about how to treat them. Does it make sense?

It is our experience that persons have an intuitive feeling about how they should act towards other persons. Not precisely what to do, but what one has to do not to harm other persons.

You are mixing up different levels of language. When we talk about logical relations or conditions for description, we talk about a very primitive level that can tell us very little about exactly what rights are. But the quantity "rights" exists. This is a fact that you cannot deny. And if we don't talk about rights as something persons can have, it does not make any sense to talk about rights.

BB:

A common complaint from Asian countries when the UN or the US insists on upholding standards of international human rights is that the notion of "rights" is a Western one that doesn't take into consideration the more Asian "rights of the community" or the "larger common good". People are tortured, or so the argument goes, to preserve the body of the population (can't remember the Latin word that means this more precisely - corpus populi or something like that). Yes, this sounds offensive to Western ears, but is something that is understood and accepted as an important value in some countries. This highly complicates notions of rights as something found in the world as concretely as bodies or the need to eat food, have shelter, breathe clean air...

Persons should be treated as persons and therefore as having the need to eat. If we deny this we get, persons should be treated as persons, but not as having the need to eat. The need to eat doesn't imply at all what we should eat. It is logical to say that we need to eat. If we don't, we will die and can't exist as persons. It doesn't follow at all that we should eat animals, at the same time it doesn't follow that we should eat plants.

In this we can't say that the "need" to eat is the same as the "right" to eat. Maybe we can. The right to eat comes from the need to eat. If we have the need to eat, and can only retain being persons through eating, then depriving us of food deprives us of being a person.

YES! Here is where the rights are - those things that don't allow us to exist as persons or to continue existing as humans indefinitely. Okay, I am beginning to see where the rights are. Please make this clearer to me.

Animals... A human is an animal. The embryos of most animals look identical at a certain point of development. Our DNA is a lot closer to that of rats than we ever thought until recently. Animals have discrete personalities and intelligent presences in the world. This is the case outside of anthropomorphic sentiments. It is experienced directly and intuitively after spending any significant time with an animal.

I am curious to know how you would have handled the goat you roasted and

ate if first you had to care for it for many years, be its friend and companion and then destroy it yourself for your own pleasures. You tell me you want to be outside of ideology and work from logical relations, but this seems to me like an all too easy participation in the abstraction of the animal into its opposite: meat. Meat is devoid of suffering, personality, pain, individuality, passions, instincts and so on. It has been processed by a mechanism of ideology and denial. Some feminists argue that eating meat is eating a patriarchal structure or is ritually reinforcing a division of labor that has historically suppressed women. Maybe this is the case.

We are drawing lines all the time. You have drawn your line at humans and only recognize their rights. I have put the line into a somewhat murkier place and sometimes the line extends to beings that I feel nothing for. Eating eggs is problematic for me, but also a necessity for a host of social and biological reasons - none of which stand up if I really think about them, but I choose not to deal with this. Why? Probably because of the position of power I am in over chickens. I do choose only to eat eggs from free range, corn fed chickens. Their suffering is reduced. This is something that has slowly changed in the US. There are a lot more free-range eggs available now. I can't help thinking that the actions of a few scattered individuals started this. I think that individual actions always have an impact even if we can't see their results. Your actions are already having an impact by participating in patterns that exceed your perceptual capacities.

N55:

To say that rights are an invention by the western societies is a typical relativistic way of thinking. But it is wrong. We have no reason at all to believe that language on the level we are talking about here is different because of different cultures.

Asians have bodies. They cannot walk through walls. They are persons and they have rights. Just like western persons. The quantity rights exist as well as the quantity person. It does not make any sense to talk about the quantity rights without talking about rights as something persons have and it does not make sense to talk about persons without talking about persons as having rights. Mankind has discovered the quantity persons and the quantity rights, not invented them.

The logical relation between persons and rights is of decisive importance when we talk about persons. Rights are something that characterizes persons, in contradistinction to minor things like somebody's hair colour.

The discussion of how close humans are to animals is a different discussion that doesn't have anything to do with whether persons have rights. The biological borders may be blurred, still, everyone understands what is meant by "person". You don't think of cats and dogs.

BB:
I have an intuitive understanding of my body, concrete situations and other things. I am just not to the point where rights are intuitive in the same way. Maybe it is the word "rights" that is too loaded. If the word were something closer to what it is that I actually think you are talking about, but is much harder to articulate, then I think I do have an intuitive sense of it - but I can't use the word "rights".

STINA TEILMANN AND N55 EXCHANGING

Stina Teilmann is a Ph.D. candidate researching on literary and artistic property rights in France and Great Britain.
The exchange is based on an e-mail conversation that took place between February 2002 and May 2003, partly during N55's residency in Los Angeles, USA.

N55:
Thanks for your visit. Here are some exerpts from About ownership of knowledge and About ownership of land, by N55 as promised. Read also ART AND REALITY.

Patents- ownership of objective knowledge:
Science is about making right assertions. Right assertions represent objective knowledge. Objective knowledge is something which can't be denied meaningfully if we want to talk rationally together. Objective knowledge can be knowledge about facts: at four o'clock they sat down and did this, or this mountain is 3000 meters high. Objective knowledge can also be knowledge about logical relations. To take a patent on, for example, knowledge about the human genome or a new type of medicine is to claim ownership of objective knowledge. This means that some persons claim the ownership of logical relations and knowledge about facts. This ownership means that other persons must pay to use objective knowledge, or that other persons are not allowed at all to use it. If we claim a patent to objective knowledge, we also say that some persons can use logical relations and facts and some can not: Here we have a person, who should be treated as a person and therefore as having rights, but this person is not allowed to use logical relations or knowledge about facts. It does not make sense to claim ownership of objective knowledge. If we try to defend ownership of objective knowledge using language in a rational way it goes wrong. The only way to defend ownership of objective knowledge is to use power and force. No persons have more rights to use logical relations or knowledge about facts than other persons, but concentrations of power use force to maintain the illusion of ownership of objective knowledge.

Ownership of land:
It is a habitual conception that ownership of land is acceptable. Most societies are characterized by the convention of ownership. But if we claim the ownership of land, we also say that we have more rights to parts of the surface of the earth than other persons have. We know that persons should be treated as persons and therefore as having rights. If we say here is a person who has rights, but this person has no right to stay on the surface of the earth, it does not make sense. If one does not accept that persons have the right to stay on the surface of the earth, it makes no sense to talk about rights at all. If we try

to defend ownership of land using language in a rational way it goes wrong. The only way to defend ownership is to use power and force. No persons have more rights to land than other persons, but concentrations of power use force to maintain the illusion of ownership of land.

ST:
I am writing from Churchill College, Cambridge, where I am spending the autumn semester, in order to find material about copyright and images for my thesis. At the moment I am looking into how the Diana, Princess of Wales Memorial Trust is using trademarks to control the image and the signature of the princess on all sorts of things: dolls, postcards, porcelain, flowers, souvenirs etcetera. The trust uses trade marking because Great Britain barely has privacy rights and has no publicity rights, as many states in the U.S. do. For example Washington State, where celebrities have the exclusive rights to their own image until seventy years after their deaths and ordinary people until ten years after. (How do you distinguish by the way?) I am also looking at digitalized pictures. Museums and picture archives are into a new business: copyrighting digital pictures of artworks, which in themselves are too old to be in copyright. There is a tendency that older art and literature, that otherwise would belong to the public domain, in this way is brought under renewed copyright. In literature, "authentic" and "revised" versions of popular authors' works start to appear. The publisher claims renewed copyright, even though the author died seventy years ago or more. And in some of these publications, there is a warning in the colophon to all scholars that citations are only allowed by permission of the holder of the new right: author's Estate, the heirs, the publisher or editor of the new text.

I brought your three text pieces (About Ownership of Land, About Ownership of Knowledge, and Art an Reality) with me to England and I have had the intention of writing you for a long time. I find what you are saying of tremendous importance. Recently, I read that intellectual property typically comprises more than 5% of a Western national economy. And ever more is regarded as intellectual property these days. There was a lawsuit in England where a person brought his friends to court for "stealing" an idea for a discotheque with more floors and several bars and so on (how original...). Another famous trial revolved around a celebrity couple that sued a person for selling pictures of their wedding to the press.[1] The couple claimed the exclusive rights to the profits from pictures taken at the party. I find that people increasingly demand ownership over things that are just trivial and common property, over what cannot be monopolized at all. Copyright laws have become something of a trash bin for the urge to possess and control knowledge and ideas. It has been forgotten that the original purpose of copyright in the 18th century was to encourage the dissemination of art and new knowledge. Furthermore people seem no longer to question the idea of ownership of intangibles. Some

regard intellectual property rights as natural givens. It is not. It is a modern invention. There may be many good reasons to grant copyright and patents: it is often argued that it encourages creativity and inventiveness. But then why not try to establish if this is true? This empirical ambition does not appeal much to legislators however. Instead, because there is such a strong pressure to define and justify copyright, patents and trade marks as property all possible rhetorical means are made use of. And legal debate drowns in analogies. The favorite analogy of intellectual property law, inspired by the philosopher John Locke (1632-1704), is that "the one who has sown, also has the right to harvest."[2] Locke's idea was that:

"[t]hough the earth and all inferior creatures be common to all men, yet every man has a property in his own person; this nobody has any right to but himself. The labour of his body and the work of his hands we may say are properly his. Whatsoever, then, he removes out of the state that nature has provided and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property. It being by him removed from the common state nature placed it in, it hath by this labour something annexed to it that excludes the common right of other men."[3]

This way of reasoning by analogy and farming metaphors has become so integrated in our thinking that it is hardly questioned any more. And it is as if all discussion stops here. I would like to ask if copyright and patents must come under property law and not, for instance, under contract law?

Another concern I have in relation to intellectual property law is that lawyers always say that "legal wording is not what the general reader of English is used to". Does that immunize them against external criticism, and exempt the law of the need of a rationale for copyright in plain English? Ideas and knowledge have a greater potential to be used by many persons at the same time than most physical things. And with the contemporary technology of dissemination, we are close to the Enlightenment's ideal of free access to knowledge. But as you say, the rights of some soon become the restrictions of others. Intellectual property rights need our consideration; do they become a violation of the rights of the majority?

I have the following reflections: since intellectual property rights cannot be justified logically, their aims and effects must always be made explicit. And the effects must not work against the purposes. For example copyright must not be used by jealous heirs to prevent the publishing of manuscripts to which they have inherited the copyright. That is possible today. Nor should the harmonizing of the intellectual property legislation within the European union have as its result that British artists cannot reuse material to which they have sold the copyright. This may be happening now. According to British law,

artists and authors can sell their copyright outright, while a certain clause secures them the right to reuse their own material. If this clause gets harmonized away, a British author risks losing, for example, the right to reuse her or his own novel character. Neither should it be forgotten that although a published work is not in the public domain, it still is in the public sphere. One cannot expect to have the full control over something which is addressed to a large audience. It seems for instance absurd to want to forbid links to homepages which are already publicly accessible. With all this in mind, I ask myself whether it would not be more meaningful to have privileges to land and knowledge, instead of ownership to it.

Enough law for now. Only, law has such an immense influence on our lives – perhaps it is reckless to leave it to lawyers alone?

N55:
It was very interesting to hear about your investigations. The convention that one has the right to buy ownership is quite uncontested. Copyright to knowledge is a cultural disease, which has a lot to do with the economic force we are subjected to. And that in western culture, the profit motive is in high esteem, often in the guise of other considerations, like the one that a researcher-author-inventor should be allowed to harvest the honor and the fruits of his work and investments, as you mention. That monetary wealth is a good to strive for is such a deeply rooted concept that it becomes incredibly difficult to imagine that things could be otherwise. This concept is nurtured by the existence of very deep poverty and the fear that it should hit one self, which is an absolute possibility in a country without social security. Fear is an important driving force in the USA. It becomes increasingly important to avoid similar conditions in Scandinavia (we are getting there). The USA is of course the best example of a culture which has gone berserk with regard to profit. A trip out on the street tells you that this is how reality is defined here. It seems crazy to stand on the pavement between a homeless person and a shop selling expensive antiquated furniture and at the same time assert that it should or could be different. The differences are so graphic as if they had been created by natural forces. It is not surprising that a society like this encourages opportunism and pragmatism and ridicules and marginalizes everybody who tries to maintain that things can be done in a different way. Neither is it surprising that many political activists concentrate on single cases like welfare of prisoners or recycling- because the superior force is so massive.

Ownership is a foundation stone in capitalist thinking and is based on the notion that fundamental resources are not common, but commodities that can be speculated in like other commodities. If society is defined as a competition and a struggle between everybody, the most obvious solution is that people have to acquire what they need through force and competition. If we define it otherwise, we have other options. Common property (in modern time) has

normally been linked with a strong concentration of power, a socialist state, which puts forward another ideology than the capitalist state. That is a huge problem, which is connected to the fact that we live in nation states and large political entities that present themselves through models and ideologies. We have very little experience in organizing smaller concentrations of power, and that is probably why every assertion that we should try to organize smaller concentrations of power, are rejected as unrealistic.

With regards to intellectual property: this is significant not only to art and literature but also in relation to patents. This is particularly scary in a global context because legislation in the rich areas of the earth stand together in denying poorer countries access to cheap medicine, for example. Another example is food production: Farmers in order to be competitive have to use modified seed and pesticides designed by "life science" companies, and this rapidly bars access to other types of seed and other forms of production. A group of scientists in Norway is among those who warn against the unrestrained use of genetically modified organisms; they say that the possible harmful effects are about as well documented as those of Thalidomide or DDT when they entered the markets in the 50s and 60s. They also say that independent research facilities and independent institutions start becoming a sparse "commodity". Because so many researchers are sponsored (bought) or work for companies that want to produce saleable products as soon as possible, it could become big business to be able to offer independent research. Patenting basic things like food and medicine is legitimized by arguments that the companies need to get their investments back, and the patents are used to prevent others from getting access to the same knowledge. By ignoring that there is no logical foundation for ownership, one looks away from our only possibilities to distinguish between right and wrong. Thereafter, the game is free for social conventions and power games. By taking language seriously and respecting that which we cannot disagree about, logic, we have the possibility to find ways of organizing which are not the results of ideological concepts or power interests. Unfortunately, it doesn't seem logic is what those in power are concerned the most with at the moment.

In his book "Slide Mountain, or The Folly of Owning Nature",[4] Theodore Steinberg relates some entertaining examples from trials in the USA; they are all concerning the question of whether and to what extent people can own nature. There are conflicts about soil that remain after a river changed it's course, about "weather modification companies" that was a promising enterprise in the 60s (which now seems to reappear), that by sprinkling silver iodide over clouds could make them snow or rain, (which led to accusations that these companies had caused drought elsewhere) about who owns the air over a plot of land and the water under and so on. The author also describes how pre-capitalist thinking in Europe imagined the right to own land: A peasant in feudalism could not own land, but he could have rights in land; that means, a kind of right to be there and to use it, that was telling more of the

social relations to others who also had rights in the land (the nobility, the monarch). But the point seems to be that where ownership of land previously was a way to describe social relations, and the use of things, in capitalism it signifies a clear right to something, which is no different from the way that private ownership of immovable things was accepted. As soon as land had been accepted as a commodity, it was less difficult to imagine that for example air and water could be so. Now if you say that houses and shoes can be owned just as little as land, water and air, we also say that our whole exchange of commodities is built on the construction that one can have an exclusive right to things that have been exchanged for that which corresponds to the thing's value in money. You don't have to enter a definite social relation in order to get the thing.

Perhaps you know about the chair we made, DYNAMIC CHAIR, it contained an invention: the seat rests on a sphere, making the seat moveable. This principle could be patented, but we refrained from it. This was partly because after looking into the patent system, we found that it could only protect you from copying if you had the means to take out a patent in all countries, and partly because it got us into some considerations about the wrong in keeping other persons away from knowledge that exists in the world. What we wanted to protect ourselves against was that people could copy it and profit on something that was never meant as a commodity. By publishing the chair and its construction principle, we made it possible for others to use the principle, and at the same time ensured that no one else could claim patent rights to the principle that would enable them to market and sell it. During the last years we have made some copies of the chair and this has evolved into an experiment with things, circulation and significance. People who want it pay a price that corresponds to how much time, material and development went into it. And when they take over the chair they promise that they will not resell it or use it for any kind of speculation in art objects. They can't just buy it, and then decide totally over it. A specific relationship to other persons follows. It is suggested that they respect the context the chair was thought into.

LAND functions in some ways similar to this; the formal owners abandon their exclusive ownership to the land so anybody can stay there and use it. Nobody can decide exclusively over the land, but have to enter a relation to other persons if they want to use it.

In relation to what you wrote, we wonder about a couple of things. What is the difference between public domain and public sphere? How should one define the difference between privileges to land and knowledge, and ownership of land and knowledge?

ST:
I think the difference between the public domain and the public sphere is forced. The public domain is a term used in law. It consists of what cannot be protected as literary or artistic property, what has fallen out of copyright and what, for some reason, has not been copyrighted. Perhaps the public domain is really negatively defined: it consists of what is left over when exclusive rights have been claimed. The public sphere is what we all contribute to, what no one can monopolize. I maintain that the division between the public domain and the public sphere is forced because everything, when it is published, is made public, inevitably enters the public sphere. In spite of this, some things are artificially held back from the public domain until the end of a term of, for example, copyright.

A preliminary definition of a right is that to which a person has a just and lawful claim or that which is recognized by law, violation of which being a legal wrong. Rights may derive from natural law (the underlying basis of all law with its idea of perfect justice). A privilege is defined by the Oxford English Dictionary as "a grant to an individual, corporation, community, or place, of special rights to immunities, sometimes to the prejudice of the general right; a franchise, monopoly, patent; specifically the sole right of printing or publishing a book or the like." A privilege is a temporary right, not deriving from natural law; it is founded in society. When the first laws on literary and artistic property were passed in the eighteenth century it was intensely disputed whether copyright was to be recognized as a right or as a privilege. The distinction has great implications to intellectual property law. And it is most interesting in relation to the mentioned pre-capitalist forms of rights to land.

Your description of rights as the entry into a social relation pierces right through what has puzzled me recently about 'ownership': namely, the difference between a "title" and a "right" to something. How is ownership a right? Title is a person's right of ownership of land. Right, I should say, is a right to act in relation to something. Now, I found this fascinating analysis in the English case Donaldon v. Beckett (1774). It was held that:

"Incorporeal property is of two sorts: 1st, It is a right relating to some substance, as a right to take the profits of land, without having the possession of the land or a title to it. 2dly, It is a right to exercise some faculty, or to do some particular thing for profit. The perception of the profits, is a taking of some substance or corporeal property; and hence the incorporeal right is metaphorically called property."[5]

I wonder if one might say that property, in the beginning, was mainly a right to particular acts, for instance to cultivate land, the right being more of a social agreement.[6] Only later did property and ownership develop into its present form: one person's absolute power over something, related social relations totally dictated by this person's title to the thing. This gives us two kinds of ownership (1) title to land, or (2) a right to profit from it, the former constituting our usual way of understanding ownership. I speculate, then, whether a

collective oblivion has spread. We forget that it is possible for ownership to be of the second kind, that ownership may be defined as the exclusive right to certain acts in relation to, for example, land while not implying title to it and supreme power over it.

N55:
Only because one has the opportunity to buy a piece of land, it doesn't imply one has the right.

A recent example from a village in France where a piece of land is now part of LAND: The village, using its possibilities for pre-emption, bought this piece of land. A private person has brought them to court for this, because he claims he should have been to granted the right to buy the land. The interesting thing is that this man wants to buy the land only to abandon it; he wants to let it turn to wilderness as he has done with all the other land he has bought up during his 30 years of presence in the area. The village, on the other hand, wants to use this land for cultural purposes, a sculpture park. This person is an advocate for wilderness and animals, always in conflict with the villagers who fear brushfires because of the lack of maintenance. The area has been occupied by humans for 50,000 years, while human activity has dominated and shaped the landscape, so surely any "natural state" is an idealized construction. He uses his legal possibilities to enforce upon the collectivity of the village a landscape which they do not want and which poses a danger to them.

At the time of writing the case is not settled and in the meantime, the plot is part of LAND and subject to anything the villagers and others, animals included, want to do there.

ST:
That is interesting. This self-styled back-to-nature man seeks ownership not as a means to profit from the land but to obtain absolute power over it. This reminds me of the continuation of the Locke passage from before. Locke modifies his definition of ownership by saying that although "this labour being the unquestionable property of the labourer, no man but he can have a right to what is once joined to" it is only as long as "there is enough and as good left in common for others."(15) There are limits as to how much one man can make his own. Enough should always be left for others. And a further and often ignored restriction by Locke is that what is taken from the common state must not go to waste. Thus, one man can own only "[a]s much as any one can make use of to any advantage of life before it spoils, so much he may by his labour fix a property in; whatever is beyond this is more than his share, and belongs to others. Nothing was made by God for man to spoil or destroy."(17) In Locke's definition only labour justifies a right of ownership and this puts a natural limit to concentrations of power ownership and to ownership as a device for control.

N55:
Yes, but labour in the 16th century and labour now are very different things if we speak of agricultural work.

At the beginning of English settlement in North America, the system of landownership known from feudal Europe was enforced there. Huge estates were parceled out to a few people who also possessed the political power. Other people, if they wanted other possibilities than being servants to the landlords and the merchants in the cities, were forced westwards to get land. In this way, they could also serve as a buffer against the Indians. After the revolution, during which the ties to the English monarchy were severed, political influence remained with landholders and only people who owned property were allowed to vote. This is an example of how ownership is connected to concentrations of power. Today the connections seem more blurred, as production is more complex. However, one can still discern the relation to political influence when one looks at who owns what. The basic needs of persons (food, shelter, clothing, etc.) are the same as ever; in addition, we have got a lot of created needs (transportation, communication, all the different things we eat and drink, entertainment, education, etc.) at which production is directed. When you seek to cover any one of these needs you deal with different concentrations of power. The companies are either state or privately owned. The rights to cultivate, fish, build, establish communication lines and so on depend on various forms of ownership of land, buildings, patents, licenses and more. So the question of ownership cannot be treated separately from other issues to which it is related. Actually, in most instances, ownership is the precondition for the various kinds of production: first one secures the ownership of land, copyright, and so on, and then one starts to produce goods, print books, etc. It is clear that property law and copyright as the right to profit is instrumental to much of the kind of production we are faced with daily.

ST:
Still, I think it's not so much the granting of (temporary) rights to profit from something as the possibility of keeping title – that is absolute power over something – which creates concentrations of power. This is why I try to make out the distinction between privilege and title. Interested in intangible property as I am I want to sort out the implications of the distinction for intellectual property rights. At the time when intellectual property was invented the advocates for property rights (rather than privileges) believed that the holder of a copyright had something analogous to title to his or her work. This would have included a perpetual dominion over it. Yet as argued in the analysis of incorporeal property in Donaldson v. Beckett (the decision actually put an end to perpetual common law copyright in Britain) copyright – the exclusive right to print copies as it were – by definition is the right to take profit but without title. There is no thing to which one can have title. Knowledge is not a thing. Property, in this case, can only be a metaphor and copyright can only be a

privilege. I think that we are gradually forgetting that an exclusive right to print is not necessarily identical with title to something and unrestrained control over it.

N55:
You know one should not be too blue-eyed. These producers and concentrations of power (in various degrees and shapes) couldn't care less whether their ownership is logical or not. What means something to them is that the law secures their interests. What we have to find out is whether it also secures our rights as persons. Therefore, although it is interesting to look into the different details and distinctions in lawmaking, as long as it serves the same ends: securing rights to profit, it doesn't make much of a difference whether it is called rights or privileges (at least you will have to convince me of that). If someone has exclusive rights to profit, but apart from that will not prevent others from accessing the property whether it is knowledge or land, what is the difference? I am allowed to read the book, but not to copy it. I am allowed to step on the land, but not to cultivate it. I am allowed to visit a building, but not to stay there. I am allowed to read the code of a gene but can't prevent it from entering my food. The profit motive is the uncontested assumption that allows private ownership to exist. So we have to ask: is it not a reduction of persons to say that the main motivation for their actions should be the wish to profit? If there were no other wishes connected with work, publishing something, research, than the wish to profit, would we then do it? To say that all that compels people to go on producing stuff is the desire to make money and to make a social and material advancement in relation to others is a simplification that is typical of the way ideologies explain human behavior. The more reality is defined in a certain way, the more we start to behave accordingly out of fear and out of obedience to social conventions and habitual ways of thinking. To describe persons as beings that seek to profit from their surroundings is to reduce persons to something definite. This is not compatible with respecting persons and their rights.
Rather we have to say that profiting is one of the things persons do. The Yaruk tribe who lived in the California area had something equivalent to private ownership of land and are described as being obsessed with money (their money was made of dentalium shells) and used money to settle every dispute. To accumulate a lot of money was regarded as a good thing, where in other societies money was either unheard of, or regarded as inferior. It is an example of how social conventions foster certain kinds of behavior. The Inuit had no money or private ownership of land. The problem is that once a social convention that fosters one kind of behavior grows into a large power concentration, this behavior tends to subdue other kinds of behavior, that become invisible or are marginalized. This is what has happened to what we call western culture.
What we have now are large concentrations of power that are outside of any democratic control. They have the tools that enable them to operate: capital and knowledge of the kind of organization that is needed to increase revenue. The interests of heads of corporations are mingled with "common" people and employees through their shareholdings, and with political power through their economic importance and personal contacts, and thus are allowed to operate quite freely. Corporations typically based on one kind of production are increasingly intervening in many different forms of production. They become the generalists, have general knowledge and can work with many different areas while persons are increasingly reduced to only doing one thing. Specialization ensures delivery of productive forces for concentrations of power and consumers of the different things that they produce. In contrast to other ideologies, the profit ideology needs no followers; the specialists are replaceable. It doesn't need to convince anybody – because the profit ideology addresses the lowest common denominator: basic needs and greed.
Now "life sciences" or biological engineering is probably going to be the largest sector in the U.S. economy. The possibilities to profit from new species, medicines and treatments are enormous. This is widely recognized and is the main reason why there have been almost no obstacles to passing laws on ownership of genetic material. Everybody can see the sound arguments. Why should we stop something that has such a promising future? Patenting life is another example of how legislation not only allows, but actually promotes a behavior that is driven by profit (although there are of course persons who work in this area because they believe that they are helping fight disease and hunger). So far it is resulting in, yes, huge profits and in greater differences between persons apart from the risk of irreversible consequences for life on the planet.
We have a situation where a few people and organizations are legal holders of copyright to genetic information about ourselves and what we eat. Soon, DNA has to pay before it replicates.
As before: ownership, copyright, property laws first and foremost serve to secure the interests of concentrations of power. We have to ask ourselves how we want to contribute to this. What we want to work for and why. What do you want to work for and why? Why are you interested in copyright?

ST:
Why am I interested in copyright? And how do I intend to use my knowledge? I am fascinated - as well as worried - by the fact that the whole complex of intellectual property rights as we know it today, taking the rights for granted, is a historical invention. In 1710 when the Statute of Anne – the World's first copyright law – granted 14-year monopolies on literary works to London booksellers, copyright had nothing like the wide-ranging effects of intellectual property rights of our time. During the centuries that have passed between 1710 and today the duration of protection has gone up to the life-time of the author plus 70 years; the scope of subject matter has been widened drastically to

include photographs, logarithms, databases, and much more; and copyright - no longer merely a temporary exclusive right to print a work – has become a much more far-reaching bundle of rights: publication rights, adaptation rights, distribution rights, moral rights, etc. The development of copyright law was never an inevitable development. The history of copyright has been determined by many different interests. The rights of authors are not more "adequately" protected today than 300 years ago: authors' rights are simply defined in a different way now.

What I want to know more about is how we got from the Statute of Anne to today's World Intellectual Property (WIPO) Copyright Treaty? And can copyright in its present form be justified? Does copyright serve the purposes as stated in the WIPO Treaty: "to be an incentive for literary and artistic creation" and "to balance the rights of authors and the larger public interest"?

Many commentators on intellectual property have noted that the general public is relatively unaware of the developments within the law. Professor of intellectual property law David Vaver has remarked that: "There isn't any ordinary conversation about intellectual property. Those who have no professional reason to be involved with it rarely think about it."[7] And Stephen L. Carter has noted further that: "There are calls for the public to become better educated about IP – but such a public would surely demand a greater coherence and persuasiveness from the system than it presently exhibits."[8]

Copyright law has a great impact upon public life and upon the access to knowledge of individual persons. New inventions, art, writing, and public debate all rely on the usage of material that may be copyright. But people do not know enough about the direction legislators are taking these years. When the EU harmonized the period of protection "upwards" from 50 to 70 years in 1996 how many people realized that this was taking place? And how many know why duration was harmonized "upwards"? Before 1996 only Germany had such a long term - the normal term was 50 years. Legislators apparently found it less offensive to extend the terms of all other countries than to 'rip' Germans of their rights. But I think that this choice had unfortunate consequences in countries where works that had come into the public domain were suddenly recopyrighted. In Britain editions of works by for example James Joyce (d.1941), Virginia Woolf (d.1941), and Thomas Hardy (d.1928) prepared for the time when copyright had expired suddenly became impossible. This is one example of the loss the public might suffer without even knowing it. Students may be deprived of new critical editions, the general reading public may have to suffer a bad translation for another twenty years, etc.

I find it important that the public should know the trends of intellectual property law and know that copyright can be a good thing but that too much of it does have severe costs. I would like to assist in the dissemination of knowledge of these matters that have an impact on so many people's lives.

Notes:

[1] Douglas and Others v. Hello! Ltd, The Times, 16 January 2001. The couple was Michael Douglas and Catherine Zeta-Jones. The magazine Hello! had bought paparazzo photos from the couples' wedding. An injunction was granted and later lifted by the English high court with the result that the magazine was able to publish the photos. Douglas and Zeta-Jones then proceeded to trial to obtain damages and won (April 2003).

[2] In the second of his Two Treatises on Civil Government (1690) Locke develops his famous labour theory of property. The theory creates the ideological foundation of the Berne Convention and is represented in Article 27 (2) of the Universal Declaration of Human Rights.

[3] Locke, John. The Second Treatise of Civil Government and A Letter Concerning Toleration. Edited by J. W. Gough. Blackwell's Political Texts. Eds. C. H. Wilson and R. B. McCallum. Oxford: Basil Blackwell, 1948 (1690)., p. 17.

[4] Steinberg, Theodore. Slide Mountain, or The Folly of Owning Nature. Berkeley: University of California Press, 1995.

[5] Donaldon v. Beckett (1774) 2 Bro PC 129; 4 Burr 2408.

[6] Alan MacFarlane discusses an ancient difference between Roman and feudal law. Roman law recognises things as property and divisible. Feudal lawyers saw things in themselves as impartible whereas property rights could be divided infinitely. Macfarlane, Alan. "The Mystery of Property.' Property Relations: Sharing, Exclusion, Legitimacy. Ed. C. Hann. Cambridge: Cambridge University Press, 1998.

[7] David Vaver, "Patently Absurd,' Oxford Today Michaelmas (2000): 21-22, p. 22.

[8] Stephen L. Carter, "Does it Matter whether Intellectual Property is Property?,' Chicago-Kent Law Review 68, no. 2 (1993): 715-723, p. 717.

TERJE TRAAVIK AND N55 EXCHANGING

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The exchange is based on a conversation that took place at the Norwegian Institute of Gene Ecology (GenØk), Tromsø, Norway, November 20, 2002, and includes a comment by Tewolde Berhan Gebre Egziabher, Director General of Ethiopia's Environmental Protection Authority. Tewolde Berhan Gebre Egziabher was chief negotiator for the developing countries (except for Argentina, Uruguay and Chile) at the Cartagena Protocol and received the Right Livelihood Award in 2000 (the 'Alternative Nobel Prize', awarded by the Swedish Parliament) for his work for biodiversity.

N55:
Science is about making right assertions. Right assertions represent objective knowledge. Objective knowledge is something that can't be denied meaningfully, if we want to talk rationally together. Objective knowledge can be knowledge about facts or knowledge about logical relations. Patenting, for example, the human genome or a new type of medicine, is to claim ownership of objective knowledge and thus of knowledge about facts and logical relations. This ownership means that other persons must pay to use objective knowledge, or that other persons are not allowed to use it at all. By claiming a patent to objective knowledge, we also say that some persons can use logical relations and facts and some can not: Here we have a person, who should be treated as a person and therefore as having rights, but this person is not allowed to use logical relations or knowledge about facts. It does not make sense to claim ownership to objective knowledge. If we try to defend ownership to objective knowledge using language in a rational way it goes wrong. The only way to defend ownership to objective knowledge is to use power and force. No persons have more right to use logical relations or knowledge about facts than other persons, but concentrations of power use force to maintain the illusion of ownership of objective knowledge.
By ignoring that there is no logical foundation for ownership, one looks away from our possibilities to distinguish between right and wrong. Then the game is free for social conventions and power games. By taking language seriously and respecting that which we cannot disagree about, logic, we have the possibility to find ways of organizing, which are not based in ideological concepts or power interests.

The recent developments within biotechnological areas, like the mapping of the human genome, have generated much debate about the patenting of genes and living organisms. Among those engaged in this debate are the researchers at GenØk (Norwegian Institute of Gene Ecology), an independent research foundation located at the campus of the University of Tromsø, Norway. They claim that organisms and genes are discoveries, not inventions, and therefore not patent-able. They also warn against the unrestrained use of genetically modified organisms (GMOs) and conduct research projects aimed at establishing facts about possible harmful effects, which they claim

up till now are about as well-documented as those of Thalidomide, DDT or dioxins were, when they entered the markets in the 50s and 60s. Reliable research on the effects of modified DNA on human health and the environment is made difficult by the fact that independent research facilities and independent institutions are increasingly rare, mainly due to the massive economic interests in the "life sciences" sector. Is this correct?

Terje Traavik:
Yes. As one of the few critical voices among molecular biologists, I have been traveling extensively during the last years to give lectures. This is because I have contemporary experience of the methods and strategies employed in genetic engineering. In these speeches, I often say that one of the greatest risk factors of genetic engineering is that 95% of all professionals in this field work directly or indirectly on the premises of the industry, while only 5% work independently, and this percentage is decreasing. People from, for example Monsanto attend, and they dispute almost everything I say, except this assertion, of which I have no documentation. This automatically tells me that the situation is even worse. This is a general democratic problem, because on the day we have 100 and 0%, reliable advice will be unavailable to the citizens, politicians and society as a whole. Therefore, society itself must ensure that at any time, on all technological fields, there is basic research and knowledge available that matches the industry's activities. Otherwise, we are entering a truly dangerous situation.

The transnational corporations do not regard it as their responsibility to conduct research related to risks and side effects. Nobody would trust their results either, with regards to what has happened in the pharmaceutical field, where research is financed by the producers, and where unwanted results are not published, because it is stated in the contracts that the reports must be approved by the financing institution before they are published. This problem is now appearing in the field of genetic modification. Here we are talking of one of the most important fields in the near future: Independent American financial analysts estimate that by 2025, 70% of industrial economy and 40 % of the total economy, worldwide, will be based on genetic engineering. This development is totally outside of political and democratic control. And it will change the world completely. Those who promote this have no insight in ecology, they don't think in holistic terms, and it is also not their job.

GenØk points at a long list of possible, theoretical risk factors, which are not clarified. Researchers have to ask themselves the same question as we faced many times during the last century, and to which we often gave the wrong answers: If there are scientifically grounded assumptions of hazards, should one go ahead, and start reacting only when the problems arise, or should one follow the Precautionary principle: advance slowly and change those processes that might cause lasting damage. The reason why GenØk exists is that we give the last answer to this question, which can only be answered by integrated, gene ecological approaches. Research ought to be conducted independently and according to the Precautionary principle - defending what you think you know, is not scientific. But what actually happens, which is terrible to observe, is that many of our colleagues spend more time and effort defending what they think they know, than attacking the unknown.

So, besides the potential beneficial effects of genetic engineering with regard to health, environment and resource management, there are a number of hypothetical hazards in connection with GMO applications. A number of known biological and ecological processes may contribute to persistence and spreading of modified genetic material in contexts which may have detrimental consequences. It is therefore important to clarify whether the level of knowledge at any given time is sufficient for reliable risk assessment.

This is the theoretical foundation for GenØk. In addition we undertake a number of practical experiments. One of these is the first really comprehensive feeding experiments in animals with genetically modified plant materials - from Bt-transgenic corn in this case. Similar experiments are now to be carried out in fish. Furthermore, we are running projects investigating environmental effects of genetically engineered vaccines, and the effects and faith of genetically engineered DNA constructs and plant material in a simulated aquatic ecosystem. And last, but not least, we are performing research on the ethical aspects of genetic engineering applications. At the moment our staff of approximately twenty contains molecular biologists, classical ecologists and bio ethicists. Later on this year, we will have our first philosopher.

N55:
Is it difficult to get financing for these experiments?

TT:
Generally speaking, the answer is "Yes". But then again, Norway is a special country, and in this respect, special in a positive meaning. My colleagues in other countries are astonished that GenØk, an institute so obviously in opposition to mainstream research and several established institutions, receives funding on the National Budget. This is unthinkable in most countries. So, although funding for this kind of projects is difficult, we are in a favourable situation here in Norway. We get funding from the Norwegian Research Council and the Norwegian Cancer Society, while the university formally employs some of our staff, and also gives us access to infrastructure, facilities and scientific equipment. Norway has been one of the decisive agents in achieving international agreements regulating trade and transfer of genetically modified organisms and constructs over national borders. The Cartagena protocol[1] of

2000 would not have been made without the contribution of Norway. The projects are undertaken here, backed by a panel of fifteen to sixteen researchers of which some are situated in other countries, some in Norway. Among the most active are colleagues at New Zealand Institute of Gene Ecology.

Gene Ecology is a term invented by us. This year I was invited to give a talk at an international molecular biology meeting where, for the first time, "gene ecology" was the title of one of the sessions. The term, which is holistically conceived, shows that we think of genes as things that utterly affect are affected by their environments. That my genes in no way are limited by being inside my cells. This underlying idea of GenØk has now broken through and become accepted.

N55:
Habitual conceptions play a decisive role in how people conceive of the world. And they become very powerful when held by large groups of people or whole societies. This is one thing to be aware of when working both in the fields of art and of science, because we have to be on the edge of habitual thinking, using known terms and existing language to describe things that have not yet become part of customary views. Sometimes customary views are right, and sometimes they are not. A part of any critical practice is to try to use logic to distinguish. Express right postulates and expose wrong assertions. For example, by exposing uncontested dogma in science.

TT:
The feeding experiments contest one of the main beliefs that is held by biologists, namely that foreign DNA does not survive in the intestinal tract of mammals, but is destroyed during digestion. We have shown that large amounts of DNA survive in the intestines, and we are now studying the effects of this. Normally, the organism has a way of excreting foreign DNA so that it does not influence its functioning. However, the structural and chemical changes accompanying insertion of foreign, modified DNA into established chromosomes may, unpredictably, lead to unpredicted changes in the contents and metabolism of cells and organs. This could cause immunological distortions, allergies or cancer. Furthermore, foreign genes may be taken up by intestinal bacteria and give them new and unwanted characteristics, for instance resistance to antibiotics. In our experiments, rats are being fed corn made transgenic with a Bt-gene (from the bacterium Bacillus Thuringiensis, making the plant produce its own insecticide), and a control group is fed the original unmodified corn.

I used to wonder why the industry was so fiercely opposed to labeling of food that contained modified material. After all, if GMOs are as harmless as they claim, it would be no disadvantage for them to have a little label on the products. But, after a while, I realised the real reason: No labeling means that it would also be impossible to identify a control group of people that have not been eating GM food. Nobody believes people will drop dead after GM meals, or that new acute diseases will evolve. But there are reasons to postulate that GM food/feed consumption, in predisposed individuals, may speed up processes leading to chronic diseases that are already present in the populations. Hence, if everybody eats GM food the causal relationships will be impossible to prove.

In other projects we seek to disclose whether gene promoters may "infect" mammals through their food/feed. In most GM plants the transgene is under the control of the 35S CaMV (cauliflower mosaic virus) promoter. The promoter enables the gene to express itself in the cell. So far no systematic investigations of the 35S CaMV in authentic mammalian cell cultures, or animals, have been performed. "Authentic" in this connection means cell types that the promoter/transgene may encounter after consumption of GM food/feed. We plan a series of transfection experiments with CaMV promoter-driven expression of reporter genes.

We also investigate a number of theoretical risks connected with GM vaccines. To ask questions concerning the health and environmental safety of vaccines is a tough job, because vaccines are really considered the "Holy grail" of medicine. However, experiments of mine during the 80s and 90s indicated possible harmful side effects of several of the new types of vaccines, which are now being promoted by the WHO as great stuff. In principle they are great stuff, but again, precaution, and adjustments according to scientifically based risk assessment, is required. We have already proved that some of our hypotheses are right, and these results are now in the process of being published. We cannot announce a warning before these results are published; otherwise we will be accused of breaking written and unwritten rules of the scientific community. In any other context, one would be deemed unethical if one did not forward a warning - but in science, if one becomes aware of problems relating to ecosystems or health, one is condemned as unethical if one advances a warning without prior publication in a so-called "peer-reviewed" scientific journal. The transnationals and their scientist followers claim that this is necessary to secure "sound science". However, this does not apply to their own claims of GM safety, most of which are based on assumptions and unqualified extrapolations! The so-called "Pusztai-affair"[2] illustrates what kind of dangerous forces you challenge if you oppose this system.

Two years ago the Nobel Prize winner Joseph Rotblat[3] wrote an editorial article in Science, suggesting a kind of Hippocratic Oath for scientists, just as there is one for doctors. He argued that scientists can no longer claim that they have no responsibility for what their results are used for. The article ought to have caused heated discussions in scientific as well as in political

circles, but it has instead been wrapped in the most deafening silence! This is telling of how deeply this problem is rooted in the scientific world. Many would claim that politics and science are not connected, which is babble. Everything we do can have political consequences, and we make our choices about what to do, and how to do it, from our total environment.

So, in addition to building this ethical arsenal, we spend a lot of time constructing new biological model systems for performing basic gene ecology experiments as well as risk-associated research. The fields we come from, genetics, molecular biology and virology, are very reductionist traditions. It sometimes seems as if the main motivation for many scientists is to get publishable results, so that they can have their grants approved and the students can have their PhDs. They are so remote from reality that they do not seem to mind if their experiments take place only one single location in this world, namely in their tubes and totally unnatural cells.

Consequently, we are aware that the results we can expect from the accessible laboratory approaches may not have any relevance whatsoever to the complex ecosystems that we are a part of. We are therefore attempting to create model systems simple enough to enable reproducible results, and at the same time complex enough to provide solid foundations to say something about, and further examine, reality.

We assemble components in the laboratory in such a way that the model resembles an ecosystem or food chain. At the moment, we develop a simple aquatic ecosystem, starting with bacteria and green algae, phytoplankton, which is feed for zooplankton that in turn feeds all kinds of creatures. Although we deliberately simplify this into three steps and ignore everything else, it is enormously complicated to make the model reproducible.
However, we see no way around such approaches, if we want to make contributions to understanding of fundamental laws and interactions of the real ecosystems. We need accepted model systems, otherwise the view that progress and new technology will solve the problems as they arise, will continue to dominate. It is high time we realize that when the ecology decides the limits, it won't help, no matter how much technology you pour in.

N55:
In the debate about GMOs, ethical arguments are often misused. New treatments and crops are introduced with the argument that this saves lives. The ethical assertion that we have to do what we can to save lives is often applied to small groups of wealthy people, thus pushing certain results. Rights are defined in certain ways that only apply to certain persons. In this climate, it must be difficult to be the ones who say stop and wait, because you will be regarded as counter productive, cruel and backward.

TT:
Yes, and questioning progress and technology, our new religions, is a priori considered uncreative and negative. However, it is surprisingly difficult for "smart" people to conceive that know-how and methods related to risk assessment and technology related problems is a field that can be commercialised in itself. Or - maybe not so surprising if you take into account that we are raised in a culture where questioning "Technology" will automatically be considered uncreative and actually close to blasphemy or a mortal sin! However, it slowly seems to dawn upon, at least some, people that more creative ability may be required to challenge mainstream science, than to stay within the mainstream, where one is only competing on time, not on creativity and originality. As the North Norwegian proverb states: "Only a dead fish goes with the flow!"

N55:
It is important that people who have expertise say these things and that you are able to produce facts.

TT:
Many grassroots organisations and NGOs say the same as we do, and often in a better way. However, at conferences, it is what we say, that is noticed by industry and other professionals that disagree with us, because they can not overlook our competence or label us as mere dilettantes or "Luddites".

In science, contrary to "the laws" in many other fields, it is the critics that have to prove the dangers, not the proponents that have to prove that their planned activities imply no harm.
This happens even though the Precautionary principle (PP) is part of the legislation for most industrialized countries, except the USA, and is now also entering international treaties like the Cartagena protocol. The phrasing may differ between the PP versions, but the common main message is: protective measures must be taken whenever there is reason to suspect serious hazards, even though final scientific proofs do not exist at the moment. Or, in other words, "absence of evidence is not evidence of absence!" To us PP is a practical, ethical, but also a productive scientific road sign: it stimulates critical thinking, questions and new hypotheses.
Genetic engineering proponents argue that to demand and wait for such evidence will represent hurdles to science, economy and progress, etc. This is nonsense. The economic progress in a particular field may slow down for a period, but the enhanced chance of avoiding hazards and risks will give increased credibility and prohibit expenses from wrong decisions and applications. The only ones that have anything to lose by implementation of the PP are the vast conglomerates of transnational GE corporations. No one else.

N55:

But these forces dominate the discussions. Concentrations of power, lobby groups, corporations, etc., have enormous influence. In the US, in the world's most powerful nation, you see a huge lack of democratic influence, which is scary. Genetic engineering is the fastest growing sector in the economy, propelled by, among other things, Intellectual Property Law, which enables patenting of genes. An underlying assumption in this is that human activity is basically profit-driven. Apart from fundamentally not respecting persons, this notion severely challenges the integrity of researchers and the respect traditionally connected with science.

Science is done by persons and has to do with other persons. A person can be described in an infinite number of ways. None of these descriptions can be completely adequate. So we can't define exactly what a person is. But, what we can do is to point out necessary relations between persons and other factors, which we have to respect in order not to contradict ourselves and in order to be able to talk about persons in a meaningful way. For example, it makes no sense to refer to a person without referring to a body. If we say: here we have a person, but he or she does not have a body, it does not make sense. Furthermore, there are necessary relations between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion, it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore, we can only talk about persons in a way that makes sense if we know that persons have rights.

If a scientist is a person, and therefore concerned with the rights of persons, and this scientist for example is changing the genetic properties of food that is crucial to other persons, he or she is taking on a decisive responsibility. So it is clear that a scientist should first and foremost be concerned with the rights of persons. If one removes ethical aims from science, other aims, and arbitrary justifications like private curiosity and economic motives will dominate.
If science is also about respecting persons' rights, and therefore about ethics, it follows that scientists must try to conduct ethical behavior and try to respect the rights of persons. We know that concentrations of power do not always respect the rights of persons. If one denies this fact, one gets: Concentrations of power always respect the rights of persons. This is not in correspondence with our experiences. Therefore, the most important task of scientists must be to seek to respect the rights of persons, and this implies considering in which ways they are contributing to the growth of concentrations of power.
If one can show that ownership of knowledge is illogical and does not respect the fundamental rights of persons, it becomes clear that the aim of the patent system is not to protect the rights of persons, but to protect profit interests and the interests of concentrations of power.

TT:

GenØk has proposed a number of arguments against the patenting of genes and GMOs as stated in the TRIPS treaty (WTO)[4]. Some of our arguments are based on the simple fact that the way industry now seeks patents on genes would be equivalent to Roald Amundsen claiming a patent to the South Pole. Most pending patents concern discoveries, not inventions. Claiming patents to genes that 4 billion years of evolution brought about, is insane. However, opponents are often silenced by the opportunities to make fortunes.

There have been attempts at buying us as well. All kinds of business and industry have approached us with offers, saying that we share an interest in securing future generations, and they only want a small sticker in return, advertising their support of food safety and environmentally friendly research. However, people are psychological beings, and no matter how many guarantees of independence you have written down on paper, emotionally and psychologically, you feel dependent on those who sponsor you. Therefore we have been chaste like catholic virgins and kept completely clean in this regard. And we were right in doing this. Initially, financing looked impossible, so we actually had prepared a brochure aimed at companies asking for sponsorships. For some reason, the brochure was never finished, and in the meantime, I was at a conference where it suddenly became very clear to me: Bang! I have to stop this. Because the greatest capital we have internationally, is our indisputable independence of any kind of external interests.
It has also become very clear that where IP rights are an obstacle to sustainable development in the third world, independent research in the developed world will be able to balance that. This could become a very important resource.

N55:

Arguments against patenting genes and GMOs are of different sorts. One is that IP law accelerates the introduction of new GMOs into the environment and markets, another that IP rights halt the research, because this limits researchers' access to each other's results, which goes against the tradition of sharing knowledge as soon as possible.

TT:

Yes, sharing knowledge was, and is still, the ideal - but practice is quite another case! I think that nobody has more clearly warned against "the unholy marriage between Big business and Science" than Erwin Chargaff, who, in my opinion, deserved the Nobel Prize at least as much as Watson & Crick Ltd. Let that statement be my official celebration of the 50th anniversary of the

DNA helix.[5]

And there are other, very good arguments for transparency and sharing of knowledge, which have to do with what we call "omitted research". If you leave research to business and market forces, a lot of important research will be left behind, if there is no immediate profit or revenues to cash in. Several diseases and needs that could be remedied using genetic engineering are not being touched, and this is serious, first and foremost for the third world. Malaria is a classic example, and there are many others.

My position is that the distinction between inventions and discoveries, which has been there since the start of patenting, can still be applied in meaningful ways. However, patenting a method of detecting genes, or using sequences of genes to create processes or products, represent borderline cases, for which you can't make general rules but must make assessments case by case. Sometimes the inventive elements will be strong enough to justify patents, but this will not affect other applications of the gene, in which case it is okay by me. What is not okay is the way it is used now: the first to sequence a gene being supposedly able to patent the gene and its applications. That is sick.

Very recently the Norwegian authorities chickened out and complied with European Union IP laws. In reality, WTO rules may soon dominate everything else. The EU is yielding to American pressure, and ethics and principles are blown away by the threat of trade restrictions. So far, important differences have existed between the TRIPS rules of WTO and the legislation that the EU tries to develop. Originally, the difference was greater. But still, you cannot patent gene sequences per se in the EU, only applications of gene sequences.

N55:
What is happening is that persons work for the interests of concentrations of power, instead of working for the fundamental interests of persons. This is stupid and irrational, but we allow it to happen because there is a lack of ability to distinguish between what is right and wrong. We know a lot of what we shouldn't do, if we want to be able protect the rights of persons. One thing we obviously ought not to do is concentrate the means to produce food in the hands of a few private corporations. The gap between what one rationally knows ought to be done, and what actually happens, is growing. Still, the reality of this gets blurred in a discussion of different advantages and disadvantages. This is basically a struggle about control over resources and basic necessities. This seems not to be sufficiently clear to many, obviously because most of us are involved in working for concentrations of power on some level. So it is difficult to see how things could be changed at the moment on a broader scale.

TT:
I think a lot about how I can contribute to making trends and processes develop in alternative directions. In the 60s and 70s, I was the first to join demonstrations. Compared to the efforts, the results were minor, because we were naive with regard to where decisions with long-term effects were made, and how to build alternative power houses. I was in doubt whether to become a democratic, but radical, socialist politician, or a scientist. Now I have been politically homeless for a long time, while I have achieved a certain competence, which I can apply to the same visions of a better society and a healthier Mother Earth that I always held. So I consider myself lucky.

How does one transform this into practice? I am convinced that the best way is to influence, and sometimes even change the minds of, fellow citizens as well as decision makers in various ways. For example, I am very proud that the Norwegian Minister of International Development, Hilde Frafjord Johnson, has provided a grant of 3 million Norwegian Kroner for our Genetic Engineering Biosafety Capacity Building Package, which is specially tailored for target groups in underdeveloped countries.
In addition, we will make a series of articles in Aftenposten [major newspaper in Norway], which will be read by people with power. At any given time, I have about ten PhD and master-of-science students who are under my supervision, and who in turn influence others. And we talk about mutual influence, not brainwashing. This is how I have to think of it, and I feel privileged and humble for having been given such opportunities in life.
You can't do much alone in the short term, but the effects of the things we do at GenØk may be great. Many people my age have abolished all kinds of idealism, and although they are highly verbal and skilful, they are often cynical and have in a way given up. I feel lucky because I am able to use my competence to change things in the directions that I have always thought were right.

N55:
Specialization is a very strong factor in society. Still, language is something we have in common. When we talk rationally together, we refer to facts and use logical relations. We know that there is a logical relation between persons and persons' rights. When we use language, we first and foremost ought to try to respect persons' rights. As people specialize within a field of knowledge, they learn to master a part of language. This language can give the power, for example, to change the genetic properties in important food plants or to cure diseases. Language is used in a rational way in order to produce certain results. The problem is that while it is perfectly possible to master language within a field and thereby become capable of affecting our surroundings in a decisive and irreversible way, one can do this without necessarily being conscious that one should first and foremost seek to respect the right of persons,

when one uses language. We allow this behavior because social conventions tell us that it is perfectly normal and that it makes a lot of sense. The different ideologies can satisfy persons' needs for their activities to be meaningful by telling us that what we are doing is for a greater, common good, or that it is good for the economy or for other reasons beyond our control. We obtain instant rewards in the form of personal and economic advantages, professional satisfaction, and so on, but it happens by using the violence that is inherent in not trying to respect the rights of persons.

Instead of being driven by curiosity and the need for knowledge of a certain issue, we are forced to find an area where we can specialize. Lacking other possibilities to find a way of living, one has to fill a function designated by different concentrations of power (states, corporations, etc.). These concentrations of power possess the infrastructural, knowledge or legal resources to exploit knowledge through patents/ licenses, and capital necessary to continue their different kinds of production, and the means to deny other persons or groups of persons access to the same resources. The real generalists in the western world are the corporations, which are able to change from one kind of production to another, keeping ownership of tools and resources of diverse kinds, and operating within any kind of specialized language, in any country in the world. Their human material is exchangeable, as their economic power enables them to offer the satisfaction of not only the fundamental, but also created needs, of the specialists they need in order to keep going. These concentrations of power are the real survivors and are outside of any democratic control.

It seems that you at GenØk are able to step over the trap of specialization, because you keep sight of and work directly with the general effects of your field of specialization.

TT:
In this respect, we are ahead. A new paradigm in biology is on its way. It is now widely recognised that the reductionist approaches have served us well in some respects, but are inadequate in other respects. We see only tiny fragments of reality. We need new model systems. I believe a lot of young and talented people will approach science, not to get a degree, but to contribute to increasing our knowledge, while maintaining respect, of the interactions and the intricate interrelationships in nature, because this is what we know too little about. This will happen in the years to come. More people who combine scientific curiosity with clear ethical, and more eco-centric views, will enter science. And that is bound to be good.

In the end, this is a question of what kind of society and ecosystems we have and want. At GenØk, we often discuss the difference between anthropocen-

tric and eco-centric positions. If you have the former, you get one kind of society. If you have an eco-centric view, which views humans as parts of intricate ecological interrelationships, you get a totally different society, and you get totally different individuals, on all levels ranging from patterns of behavior to ethics. These opposing views will eventually result in two different earths. That is clear.

N55:
Your view of the future is optimistic, but puts a strong demand on education.

TT:
And people who get education or who are in other ways privileged, owe it to the other passengers of this still green little spaceship, irrespective of species, to share their insight and knowledge. It's as simple as that.

N55:
As artists we work on the edge of the productive field and also on the edge of any well-defined area of knowledge. In a way, we are on the edge of most things. This is in many ways a privileged position. With this privilege follows responsibility, which becomes obvious if you get public attention. What we are saying about the ethical responsibility of researchers absolutely applies to artists too. What we are doing in our work is to try to find ways of living with as small concentrations of power as possible. This means that we consider this level in relation to what we do, and is an integral part of how we appear in public situations.

TT:
Often artists and their art find the weak spots in our intellectual armour by sending a message via the heart to the brain while a common politician or a scientist is aiming directly at the brain. You trigger two different sets of receivers. Artists have an advantage there, which of course can be used in a wrong way.

N55:
One could apply what you call "omitted research" to what we do, in a general sense, because we try to investigate and create consciousness about things that one otherwise wouldn't notice: which ways of living we don't try out, what houses we don't live in, what technology is not employed, etc. It is a kind of research into forgotten areas or areas outside of commercial or political interest.

TT:
Yes, and in the end, the extension of your questions will be: Can it really be true that there are no other alternatives than those pointed to by mainstream

science and the conforming society? The answers may open our minds to existing alternatives, or make our brains creatively seek new alternatives. That is dangerous from the establishment's point of view.

N55:
And from ideologies' point of view, because ideologies have the "answers" to how society is supposed to look. That which we don't know, which is at the edge of the established knowledge and that which we know, is not formulated, by definition, and therefore it is in a way weak, and in another way, the strongest thing we have. We know what we know only on the grounds of what we don't know. What we don't know becomes something we have to defend all the time, as a precious domain.

TT:
Then we have exactly the same starting point. To any good scientist, the driving force should be what you don't know. However, it's not like that any longer - and that is tragic for science and for society. Many scientists would rather defend their position than attack the unknown. It is clear that, exactly as for artists, being a researcher is an almost impossible life situation, because most people who are established in professions, want to be able to measure their success and they even expect to be able to say to themselves "take a holiday, now you've done a real good job," as if the job had been defined. As an artist or scientist, however, you can never be content, because you will be concerned with what has not been done or what you don't know, and even if others say: "damn, you're good," you know it isn't true.
But in contrast to most other people, we have chosen this for ourselves, and we enjoy a freedom no other professionals can even dream about. So, it is up to the individual to evaluate the advantages and disadvantages - if you want to be a pet dog to society, or if you want to keep on being a dangerous stray.

N55:
Is a politically concerned researcher generally considered a suspect scientist? Does your political engagement make you less credible in many people's view?

TT:
I often say to people, don't believe in me, because I'm not being objective, I am very engaged in what I am doing. Don't believe me, but listen to me, and make up your own opinion. Or, as a proverb: "Show me a neutral and objective scientist, and I will show you a really incompetent one!" It is a pity that the English language does not sustain the rhyme of "Videnskap" (Science) and "Lidenskap" (Passion) that we have in Norwegian and Danish! If you realize and accept these simple realities, you have the opportunity to compensate for your subjectivity, flaws and biases. But if you really conceive of yourself as

objective and neutral, you are really dangerous, because you have lost that possibility!

N55:
But, though what you are saying is not free of subjective valuations, you still claim objectivity when you refer to the facts and the ethical judgements that you use. For example, one logically has to accept the existence of theoretical risks related to GMOs. And one has to accept facts derived from reproducible experiments. Also, when you speak of ethics, you speak about the decisive importance of persons' rights, and thus you speak of things that we can't disagree about if we are to speak rationally together. If we try to speak of persons as if they had no rights, it makes no sense. Here is a person, who should not be treated as a person, or, here is a person, who should be treated as a person, but not as having rights.

Therefore, underlying the different discussions and conflicts regarding the implementation of GMOs and the ethical responsibility of scientists, there is a level where things are not a question of differing subjective opinions and economic interests, but where things are simply right or wrong. An increased awareness of this level could help, but only if one is prepared to respect logic. Respecting logic seems not to be what corporations are about. However, it is what science is about. Therefore, one ought to stress this when confronting profit interests or other arbitrary interests. Logic is the strongest weapon that persons have towards power and concentrations of power. If there is no objectivity, we are left with subjective opinions and power games.

Tewolde Berhan Gebre Egziabher:
I cannot simply let pass a stimulating discussion. Thank you for your e-mail of 23 October 2003. I will join in the discussion as the third person that I am and comment on the first question posed by N55 and the responses made by Terje as well as on the last comment by N55.

1. Question 1: I now understand what is meant by "language" in this question. But I had to first think. I have always seen language as a bridge to cross and meet others, not as an implement to wound or kill them with, though, of course, I have always known that we can do that as well with language. In Ethiopia, we speak of "words that break one's bones".

Nevertheless, the tools we use in our relationship with Nature are not always decisive and irreversible. Fortunately, irreversibility is rare, I think. Unfortunately, it stays put and thus necessarily adds up. It is this cumulative nature of irreversibility that may, and looks as if it will, eliminate us. When I say "us", I am referring not only to persons, but even more so to other

living things. Just as we humans are helpless without other living things, so are our rights meaningless without their rights. Most societies explicitly or implicitly realize this; and they shape their "development" attempting to internalise its implications. I suppose that it makes sense, even if simply because those that do not have probably been, by simply narcissistically focussing on themselves, destroying so much of Nature that they will have eliminated also themselves. This fact is inescapable to an observer who visits the ruined city of Ephesus. Though this realization hit me in Ephesus, I now always feel it when I visit my ancestral city of Axum, only some 30 km. away from where I was born, and when I visit many other ancient sites.

Is globalization making an Ephesus of the whole world? Is this aggressive culture of delusion into self-destruction implicit in the mastery of macho Man (hopefully not including motherly woman) over Nature dictated in the Book of Genesis and thus motivating Judaism, Christianity and Islam? Or is it only Western European of the last 500 years? I wonder.

That is why corporations, the generalist "concentrations of power" are NOT "the real survivors". I think that they may well be a temporary puff of a dying culture, a sore spot on a bogus democracy of a section of humanity. I believe that survival would require a democracy of living things, not a democracy of a section of a species. I see the present national claims of democracy to be no more than an oligarchy in human terms, and an out and out destructive dictatorship in life terms.

Finally - I hope that N55 is right that "you at GenØk are able to step over the trap of specialization." It seems to me that the trap is woven out of the relationship between what we know and what we do not know. We cannot help but act only according to what we know; and, by definition, we cannot help but fail to know what we are doing to what we do not know. I know that GenØk is one of the best in realizing this dilemma, and we should all try to emulate it. But I am still personally left groping in the dark. May GenØk be the candle that has been lit to show us the way out!

And Terje's response shows at least an attempt to become the needed candle. Whether its light will be bright enough, the future generations will tell. What I can say is that, within the limitations set by the vastness of the unknowable owing to the short span and limited capacity of human life, that is all that can be attempted.

2. The rest of the discussion between you two is excellent. It elicits no additional comments from me.
3. Last comment, by N55: I would love to believe, but I am not convinced, that "Logic is the strongest weapon that persons have towards power." I would like

to think that, at least in the long run, this is true. But, it seems to me that logic, not propelled by power, remains invisible to those in power. That is why I think that we should be motivated by logic, but we should also unite to give it the necessary propulsion. I think that that is the way we can now take. I fear that it might even be the only way that we can ever take if we are to have any impact. We need to work together towards a global propulsion of logic to stem this oligarchic globalisation.

Any suggestions on how this can be done?

Otherwise, we will each feel, as I always feel, that we are stray dogs, not at all effective. Of course, I know that we cannot be pet dogs to present day society if we act true to the dictates of life. But we must act true to its dictates if life is to continue. So long as we are alive, we should have no option but to keep trying.
And I would like you to know that I find it easy to keep trying in the presence of young people like you who both think, and want to act.
Please do not get discouraged by our inaction and laughable attempts at action. With age, it seems to me that the body keeps getting heavier than the mind. That is why we look forward at you all our young people towards the future from which we must pass and in which we hope you will continue more responsibly than we did.

Notes:

[1] The Conference of the Parties to the Convention on Biological Diversity adopted a supplementary agreement to the Convention known as the Cartagena Protocol on Biosafety on 29 January 2000. The Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. It establishes an advance informed agreement (AIA) procedure for ensuring that countries are provided with the information necessary to make informed decisions before agreeing to the import of such organisms into their territory. The Protocol contains reference to a precautionary approach and reaffirms the precaution language in Principle 15 of the Rio Declaration on Environment and Development. The Protocol also establishes a Biosafety Clearing-House to facilitate the exchange of information on living modified organisms and to assist countries in the implementation of the Protocol. " www.biodiv.org, Convention on Biological Diversity.

[2] Arpad Pusztai lost his job at Rowett Institute and was accused of fraud, after publicly warning of consumption of GM food, following his experiments feeding GM potatoes to rats.

[3] Joseph Rotblat (1908-2000) physicist, participated in the development of the nuclear bomb (the Manhattan Project) until 1944. Founder of the Pugwash Conferences on Science and World Affairs. Received the Nobel Peace Prize in 1995.

[4] TRIPS: The World Trade Organisation's (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights.

[5] Erwin Chargaff, biochemist (1905-2002), discovered the base-pairing regularities or "complementarity relationships" of nucleic acids, that along with Rosalind Franklin's (1920-1958) X-ray diffraction pictures of DNA led to the discovery of the double-helix structure of DNA. Francis Crick (1916-) and James Watson (1928-) presented the structure of the DNA molecule in 1953, for which they received the 1962 Nobel Prize in physiology/medicine (together with Maurice Wilkins).

WILL BRADLEY AND N55 EXCHANGING

N55:
When we talk about art in a rational way, we implicitly talk about persons and their meaningful behaviour with other persons and things in concrete situations. One cannot talk about art in a meaningful way without referring to these factors. This apparently trivial knowledge can be of decisive importance.
Art theory is concerned with different views and is characterised by a division of art phenomena into different generations, directions, epochs, etc. These descriptions are very often misleading and oppressive because they are often based on invented categories, subjective opinions, and because they promote certain views in order to serve specialised interests such as the economic interests of gallerists, the wish of art historians to gain influence, etc. Instead of attempting at defining what art is, or what its new direction ought to be, we talk of logical relations and factors that one can choose to take into conscious consideration. If one does this, one can see different implications. When we talk about art, we must always talk about: persons and their meaningful behaviour with other persons and things in concrete situations. The factors mentioned here: persons, things etc. are part of logical relations that constitute necessary conditions for description. Logical relations are the most basic and most overlooked phenomenon we know. Logical relations means that what we can talk rationally about can only exist, be identified or referred to through its relations to other things. Logic is necessary relations between different factors and factors are what exist by the force of those relations. The decisive thing about logical relations is that they can not be reasoned. Nevertheless, they do constitute conditions necessary for any description, because they can not be denied without rejecting the factors that are part of the relations.
For example, one necessary relation is the relation between persons and bodies. It makes no sense to refer to a person without referring to a body. If we for example say: here we have a person, but he or she does not have a body, it does not make sense. Furthermore, there are necessary relations between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights. Therefore we can only talk about persons in a way that makes sense if we know that persons have rights.
Concentrations of power do not always respect the rights of persons. If one denies this fact one gets: concentrations of power always respect the rights of persons. This does not correspond with our experiences. Concentrations of

power characterize our society. Concentrations of power force persons to concentrate on participating in competition and power games, in order to create a social position for themselves. Concurrently with the concentrations of power dominating our conscious mind and being decisive to our situations, the significance of our fellow humans diminishes. And our own significance becomes the significance we have for concentrations of power, the growth of concentrations of power, and the conflicts of concentrations of power.

It is clear that persons should be consciously aware of the rights of persons and therefore must seek to organize the smallest concentrations of power possible. It is obvious that artists too must be conscious of persons, the rights of persons and the influence of concentrations of power and thus must be concerned with politics. It is obvious that also artists must first and foremost be concerned with creating consciousness about what we know, and with attempts to live and behave in correspondence with what we know, and with trying to organize in as small concentrations of power as possible. In this way we have a case where the fundamental ethical norm and thus ethics become decisive for aesthetics. A case where politics becomes decisive to the performance of art. Aesthetics must first and foremost be an examination of, and the science about, possibilities to exist with as small concentrations of power as possible and organize ourselves in a way so that we respect each others' rights. In a way that makes room for persons and that which has significance to them in their daily life.

This opens up a way of thinking about art which does not represent a new trend or a new direction, but discloses some basic relations which are and have always been present whenever one talks of art phenomena.

This is not an attempt to describe precisely what art is, on the contrary, it is an attempt to show that any phenomenon related to art can be described in an infinite number of ways, none of which can be exhaustive, and one can therefore never say precisely what it is. But one does have the possibility to point out certain logical relations and factors which one has to respect if one wants to talk of art in a way that makes sense and without consideration to subjective opinions, power games, and social conventions.

Furthermore, we can show that what characterizes a situation that has to do with art is that there is a consciousness that this situation has to do with art. If we say: "here is a situation that has to do with art, but nobody is conscious that this situation has to do with art," it makes no sense.

So, if there is a consciousness that something has to do with art, we have no way of denying in a meaningful way that it has something to do with art.

This also means that there is absolutely no reason why art should restrict itself to being only certain things or certain kinds of behaviour. The important thing is therefore not what art is, but what art does, and in which ways aesthetic practice relates to ethics, to other kinds of practice and to the world. When we say that art is related to persons and thus to ethics, this means

there is an obligation for artists to consider the ethics of their involvements and their assertions. And that everyone else related to this practice also must consider whether and how they respect the rights of persons.

The things and systems N55 make can be seen as diverse attempts to exist with as small concentrations of power as possible through respecting the diversity of persons and the situations they are in. Sharing knowledge, finding methods of exchange not based on profits and private ownership, avoiding overspecialisation, concentrating on general levels of language and knowledge, are all ways of organising smaller concentrations of power. Instead of proposing single solutions, insisting on multiple ways of working, while connecting up with other persons who are working in different ways to organise smaller concentrations of power.

WB:
Your statement raises a lot of questions. One is about the idea of human rights, which I would argue is not a matter of objective knowledge but of freedoms won through struggle and debate. Even the idea of "persons" as a general category had to be created as secular ideologies took over from religious ones in the west. For example, one of the first people to publicly articulate the concept of the "human race" - the idea that the different races of humanity were in fact one - Colonel Edward Marcus Despard was hung and drawn and quartered in London in 1803 for his part in a planned Republican uprising. Bentham wrote "Right is a child of law; from real laws come real rights, but from imaginary law, from 'laws of nature,' come imaginary rights..." and though I don't believe that formal laws are necessary, the point is that a right that is not understood and mutually respected is not a "natural law" but an idea that must be put into action.

At the so-called Putney debates in England in 1647, the question of human rights was explicitly at stake. Factions representing the peasantry, the army rank and file, and popular "democratic" movements including the Diggers and the Levellers argued that these rights existed. Commissary-General Ireton, for the new republican government, disagreed, and his argument is interesting:

"for my part I account that the great foundation of justice, that we should keep covenant one with another [...] Covenants freely made, freely entered into, must be kept one with another. Take away that, I do not know what ground there is of anything you can call any man's right. I would very fain know what you gentlemen, or any other, do account the right you have to anything in England - anything of estate, land or goods, that you have, what ground, what right you have to it. What right hath any man to anything if you lay not down that principle, that we are to keep covenant? If you will resort only to the Law of Nature by the Law of Nature you have no more right to this land, or anything else, than I have."

But Ireton went on to subtly twist the argument, claiming that the law of the land was a binding "covenant", though it was clearly not "freely made", or "freely entered into":

"[...] we are under a contract, we are under an agreement, and that agreement is what a man has for matter of land that he hath received by a traduction from his ancestors, which according to the law does fall upon him to be his right. That agreement is that he shall enjoy, he shall have the property of, the use of, the disposing of the land, with submission to that general authority which is agreed upon amongst us for the preserving of peace, and for the supporting of this law. This I take to be the foundation of all right for matter of land. [...] And therefore when I hear men speak of laying aside all engagements to consider only that wild or vast notion of what in every man's conception is just or unjust, I am afraid and do tremble at the boundless and endless consequences of it."

One of the Levellers' basic principles was that any government or law was meaningless without the "agreement of the people", and that no man or woman has "any authority, dominion or magisterial power, one over or above another. Neither have they or can they exercise any but merely by institution or donation, that is to say by mutual agreement or consent for the good benefit and comfort each of other".

A transcription of the Putney Debates is online at
http://privatewww.essex.ac.uk/~muss/webstuff/putney.htm
The other side of the debate is beautifully expressed in Gerrard Winstanley's "The True Leveller's Standard Advanced" (1649), online at
http://www.marxists.org/reference/subject/philosophy/works/en/winstan-ley.htm

Ireton's view prevailed and, insofar as it sanctioned land enclosure and the expansion of private property, laid the beginnings of the legal foundations which enabled capitalism to became the dominant economic principle in England.

From another angle altogether, an interesting discussion of Islamic notions of human rights is at
http://www.ahl-ul-bait.org/magazine/English/Thaqalayn12/ch3_1.htm

and Thoreau's classic civil disobedience is at
http://www.cs.indiana.edu/statecraft/civ.dis.html

N55:
That persons have rights is not something that was invented or created, but a logical relation that was discovered. If you say: here is a person, but this

person ought not to be treated as a person, or: here is a person who ought to be treated as a person, but not as having rights, it does not make sense.
But this in no way implies that we don't have to fight to make sure that persons' rights are respected by other persons.

The discussions you mention seem to concern the problem of whether rights are something that exist only by law and social conventions, or whether they are part of our understanding of persons. If one only accepts the first version, rights are dependent on social conventions, can be granted and removed. While if you accept the latter, persons have rights even if these rights are removed by law.
At this second point, your struggles and debates enter the picture.. Because, one could ask, why would people go through these struggles and debates if there weren't anything to fight for?
Often, the rights described in law have been exclusive and linked to only certain groups of people or to certain things, for example the right to property.
As a consequence, one must remember that laws, conventions, and concentrations of power at any given time do not necessarily respect the rights of persons.

WB:
I'd like to connect your idea of intrinsic rights to Locke's "natural law", a development both of English 17th century religious radical thought and of the ideas of people like Pufendorf. Locke's writing also influenced an early 18th century Scottish philosopher, Frances Hutcheson ("The System of Moral Philosophy") whose thinking was perhaps closer to yours - Hutcheson believed that moral reasoning is a natural human faculty, and that human beings derive pleasure from acting virtuously. He also challenged Locke on the idea of universal rights - Hutcheson did not recognise any distinction based on gender, and his lectures were "an attack on all forms of slavery as well as denial of any right to govern solely on superior abilities or riches".
What's interesting is the way that rights move from being "god-given" to being "self-evident" during the 18th century. 17th century radical texts (like Lilburne's "The Freeman's Freedom Vindicated") had no option but to invoke God to back up the rights of man. In order to talk about human rights, the common category of "humanity" had first to be invented - the idea that "all men are created equal", which must precede the concept of human rights, couldn't be constructed within the ancient religious frameworks. Though it forms part of Christian teaching, in practice unbelievers, in Christianity and many other religions, were next to worthless. As late as 1696 a man called Thomas Aikenhead was executed in Scotland for suggesting that the bible wasn't the literal word of God.
So I wonder if our discussion - and disagreement - has its root in this idea of "humanity". That it makes no sense to talk about "human beings" without

rights because the category "humanity" - as against, for example "God's creatures" subject to divine law - is a post-religious, radical construction. For example, if you accept Darwin's theory of evolution by natural selection, humans were preceded by many other species, more or less similar. If rights are de facto granted to humans, then why not to other species? And, if you grant that, at what point do you revoke those rights? The point of monkeys, or of fish, or plants, or bacteria? To define that point is to define the reasoned basis of the rights you grant - for example Hutcheson's idea that moral reasoning is a natural human faculty, and so rights begin with humans. Or the argument that rights begin with any creature that has the capacity to feel pain. In all this you have to remember that I am in no way arguing against the existence or vital importance of these rights. I simply believe that they are easier to describe and defend as the product of human reasoning and action than as some pre-existing external concept similar to divine law.

As an aside, I came across this:
http://www.humanities.mq.edu.au/Ockham/wprop.html
a very early debate about an attempt by Franciscan monks to relinquish all rights over material things, and their refutation by the pope on the grounds that they must, at least, have "dominion" over the food they eat. Here, perhaps, is the kind of irrefutable relationship you are describing, though how far it could be extended I am not sure.

N55:
When you find yourself in a concrete situation, has it any significance how you treat others? If it does, then we have a word for you that describes this: rights.
We'd like to comment on what you said about rights moving from being god-given to being self-evident. This demonstrates that different language is used to describe the same phenomenon, which is a basic characteristic of language and situations.
That "persons have rights" is a discovery of a fundamental relation between the words rights and persons. The words are the most precise description we can find of phenomena that one can not grasp entirely in any description.
Your argumentation is following dominant paths in western history. In this dominant history, it even had to be discovered that women belonged to the category "humanity". But we have no reason to assume that there were no instances around, where women were actually treated as persons, by their fellow humans. This misunderstanding has prevailed mainly where religious and ideological misunderstandings prevailed. It's likely that many persons laughed at these speculations of whether women were persons just as they laughed at speculations whether the world ceased to exist once one closed one' s eyes.
We are not intending to insert the argument that persons have rights into a political-philosophical academic discussion that has roots back to the 16th

century and more. We want to remove the discussion from this reign and instead defend what every person that knows a language implicitly knows: that persons have bodies and that persons have rights. And that one starts babbling once one tries to deny these relations.
It is not a fight on words, but pointing out logical relations that go deeper than language and that can neither be denied nor reasoned.
This is where this kind of thinking distinguishes itself from academic thinking and that is probably why academics are the ones who have the hardest time accepting these things. Probably because they are trained in scepticist disciplines that encode them to disregard any argument that has not the required level of sophistication and references to academic writing. However we argue that it is not sophistication, but understanding of the crudest and most basic relations that are of significance. And one of these is that persons have rights, not as a god-given eternal principle, but as a basic property of language and reality.
In this regard, it doesn't matter how many rights are violated each year. We don't talk of specified rights, but a more indeterminate "right". The word "rights" is being exploited by western powers to impose their values on others, and have ever since they stumbled upon the word. Or rights to certain things such as property.
This is not what we are talking about. We are not even talking about the various struggles for securing rights legally, however important they may be.
However, it is interesting to see how, during history, oppressed people have used similar arguments. Whether they called their rights god-given or self-evident, it describes a relation which one cannot deny. If something is self-evident, it can neither be rejected nor given another reason for.
Religious people call the things they have no other explanation for, god-given. God is a word some people use to describe what is outside language. Other people prefer not calling that anything at all. Which brings us to your bringing up Darwin. Darwin found ways of explaining the fact of an astonishing variety of species which one had previously attributed to divine and instantaneous creation.
We have no way of saying what goes on in the head of a larva. We don't know if larvae have discussions of rights between them. We have reasons to assume they don't. We can impose our ideas of rights on other species, like saying animals have rights. Perhaps someone will discover an undeniable relation between animals and animals' rights or some other word describing the same relation. However, we want to concentrate the discussion on persons' rights since this is a very urgent thing. And probably, persons being a dominant species, respecting their rights will have positive influence on other species too.
So although we don't know larvae brains we do know human language and human brains. There are certain things we can say and certain things we can't say. If you say, Mr. Peterson is a person, but he has no rights, he may still be

Mr. Peterson, but it is very hard to imagine him as a person in the way that we understand "persons". It changes the notion of him and changes my possibilities of action towards him, and reduces him to something I can treat randomly. And again, here we are not talking of a political situation where the government deprives him and others of legal rights.

This is about a basic relation existing between persons: the word "should" or "ought to" is almost always present. How one ought and ought not to act towards others is a decisive element in any situation. Our point is that one cannot find guidance in ideological or religiously prescribed models for action. One has to do the most difficult thing, try to understand how some properties of language and the world constitute conditions for description, things one can't deny rationally, and which one therefore has to accept. In short, start thinking for oneself.

WB:
You make a good, clear point when you say "When you find yourself in a concrete situation, has it any significance how you treat others?" and link this to the concept of rights. But I'm aware that already, by talking about the "concept" of rights, I've moved away from the relationship you are describing. Because, although I can't deny that the way I treat others has significance for me, this does not automatically imply the existence of their - or my - rights. The way I treat a glass of water, or a stone, may have significance for me, but does not mean that those things have rights. Of course, if this is the last glass of water on the desert island where we all live, or a stone that I'm about to throw through your bedroom window, then it certainly implies an important social relationship. But, even then, a social relationship is not the same as a right. Whether I "should", or perhaps "ought not", drink the water or throw the stone, is my decision. Morals or ethics are only involved as far I have any concept of such things.

I would also argue that language is, at least as we are using it here, inextricably tangled up with the social relations and ideologies involved in its development and use, and that the relationship between the words "rights" and "persons" may be historical and strong, but it is not "fundamental". There was a time when these concepts and words did not exist. There's good evidence that the very earliest human societies cared for the sick, honoured the dead, shared their resources and generally behaved as though they valued one another's lives, but that is simply a social relationship in action - the European colonisation of Africa was another, and no valid universal conclusion can be drawn from either.

As you correctly point out, the concept of "rights" has also been used by those in power to defend ideological constructions such as the "right to property", and if I am to argue for the concept of "rights" as moral or ethical imperatives

that are then defended or achieved through struggle and debate, this is certainly something that needs to be addressed. The standard, and I think flawed, argument here is that, to begin with, the "right to property" cannot exist without the prior recognition of certain other rights - the right to life, the right to equality before the law etc. Another, and maybe stronger, argument requires that rights, as a concept, be restricted to individuals - to "persons". This is perhaps closer to your position, and means that rights can only be defined in terms of the "freedom from" something. The freedom from oppression, or discrimination, or unjust imprisonment, or censorship for example. This exposes the contradiction inherent in the "right to property", which cannot be formulated as a universal principle without either limitation or conflict.

Paradoxically, a similar argument can be built on the premise that there is no such thing as a "right", that nobody has any "right" to anything. This establishes a fundamental equality. If you have no right to take my life, that is perhaps the same thing as my right not to be killed by you, and so on.

I would argue that an "indeterminate idea of a right" is more open to exploitation - more easily used by those with power against those without - than the idea of rights as moral or ethical imperatives defended or achieved through struggle and debate. I do agree that the starting point for such debate is simply a concrete situation in which social relationships exist, but the statement that "Mr. Peterson is a person, but he has no rights" is only problematic if you believe that there is something that all persons have in common that invalidates it.

One extra idea that needs to be added to this situation in order that human rights follow from it as an undeniable consequence is that of the worth of a human life. That one male life is worth the same as one female life. That a Palestinian life is worth the same as an Israeli life. That an Iraqi life is worth the same as an American life. That the lives of the rich are worth the same as the lives of the poor. That a Glasgow life is worth the same as a London life. That a Namibian life is worth the same as a Danish life.

This is what I mean when I say that the category of "humanity" had to be created in Western thinking. This idea may appear "self-evident", but it has to be argued for and defended at every turn, now as much as at any point in the past.

Going back - and I know you have already distanced yourself from these arguments - to the events of the so-called English Revolution that I brought up earlier, it is interesting that the more radical factions - the Levellers in particular - opposed the execution of the King. They did not believe they had the right to take his life, and realised that, by sparing him, they would have advanced their principles. But they lost the argument.

We have many things in common and, as I have said, I am trying to make a case for, not against, the idea of universal human rights. However, I still question whether, if there are "logical relations that go deeper than language", these relations can be talked about or made the basis of a philosophical position. And I am not sure that talking about "things one can't deny rationally, and which one therefore has to accept" leaves enough space to "start thinking for oneself". But, as a way of articulating a belief, I can't argue with it, and, as I am generally in agreement with the belief itself, I wouldn't want to.

One last point - perhaps it should have been my first and only point - is this: if there is an undeniable truth in the statement that "persons have rights", if persons do, in fact, have rights a priori, but those rights are not respected or even recognised, then do you feel any responsibility to try and change that situation? And if you do, then you need to describe those rights, and argue and campaign for them. Perhaps, in other words, our positions are pragmatically very similar.

2000 YEARS OF FALLACIES
Peter Zinkernagel interviewed by N55

Peter Zinkernagel, Danish philosopher, 1921-2003. Books: Doctoral thesis "Omverdensproblemet" 1957 (English version "Conditions for description" 1962), "Virkelighed" 1989, "Tilvante forestillingers magt" ("The power of customary views") in 2001.
All the work of Peter Zinkernagel concerns fundamental problems in philosophy. In his doctoral thesis he formulated certain rules for using language, conditions for description, repudiating the classical philosophical problem of the existence of the material world ("how can we know for certain that there is a world which exists independently of human perception?") After the 60s, Zinkernagel was primarily preoccupied with physics while also formulating the political and ethical consequences of his work on logic.
Based on a conversation recorded in May 1993.

N55:
What is it that you have discovered?

Peter Zinkernagel:
What I have in fact discovered is that thinking is far more difficult than anyone has ever imagined. Most of our discussions happen on a level where we repeat and repeat habitual conceptions to each other. But there exists a level so fundamental that it normally does not appear in our conscious mind, where things are not about more or less well founded subjective opinions - here things are simply right or wrong. So far, one has believed that the formal logic of Aristotle, which is the part of this fundamental level that was first formulated, was the only place where one could speak of right and wrong in this way. In formal logic, the presumption is that one is able to deduce right conclusions from certain basic evaluations, premises, and that these conclusions are true as long as they do not contradict themselves.
Thus far, one has believed that formal logic was unconditionally valid, - one can not contradict oneself - but in addition, it was taken for granted that it was the only thing that was unconditionally valid, and the only that was strictly necessary. Philosophy, by concentrating efforts on issues of language, overlooked that there is a necessary relation between person and body, and by questioning the material reality, it overlooked the fact that persons have bodies that exist in the same reality, more precisely in concrete situations. And that every assertion is necessarily about reality. Had it been presumed that the assertions made within formal logic are conditioned by necessary relations between different factors, for example that an assertion only exists through the force of a certain relation between an assertion and asserting it and denying it, and that if one tries both asserting and denying the same assertion, then there is no assertion - if one had seen these relations, one would also have had to assume that other necessary relations existed - since one would have no reason to assume the opposite. But one did not see them; one obviously believed that what logic is, had now been discovered. Logic was formal logic.
My definition of logic is that logic is necessary relations between different fac-

tors, and factors are that which exist by the force of those relations. Formal logic is only one example, and by all probability, many exist which we do not know of. The decisive thing about logical relations is that they cannot be reasoned. Nevertheless, they constitute necessary conditions for any description, since they also cannot be denied. The only way to discover these logical relations is by concentrating on that which is constantly taken for granted. But from a traditional philosophical point of view, this is unsubstantiated assertions and tautologies. Still one must presume that any horse trader in Greece knew that he shouldn't claim that a horse was good and at the same time that it wasn't if he wanted to convince a customer, and Aristotle only made this knowledge explicit in a formal system. There are necessary relations between assertions and what they are assertions about, between assertions and persons, persons and bodies, bodies and concrete situations. These relations limit and condition our possibilities of description, and if we forget them, we do no longer know what we are talking about. If we remove the relation to the body, we don' t know what we are talking about when we are talking about persons, and still a body is not the same as a person. And this we can by no means deduce from formal logic.

Logic is something more fundamental than language. Logic is, for example, the circumstance that the ashtray on the table prevents me from sliding my hand over the place where the ashtray is. Material things are first and foremost characterised by the fact that they limit our actions in certain ways. We are used to concentrating on the sensual properties of things - many of our conceptions are connected to the ways in which we sense the world. For all who are not blind, visual impressions play a dominant role. Here, our concepts correspond to formal logic; we cannot imagine that something happens and does not happen, is there and is not. The elementary logical conditions I am directing attention at are often in opposition to the way we experience the world, because we don't experience the world as composed of relations between different factors which only exist because of these relations, but rather as composed of houses and people, suns and stars. Children learn what I call logical-practical usage of language by using words in certain ways relating to the things they experience through their senses, but at the same time they are not made conscious of the reasons that these words can be used, and the relations that condition their own existence. Nobody is concerned with them. And therefore they are very difficult to grasp. Logical-practical usage of language, which is what is most often used in daily life, in a strange way encloses us in language, often to such a degree that we forget that there are other ways of describing things, for example, by religious or poetic use of language. When children learn to use language, they also learn how to keep from experiencing the world in a non-verbal way, with a sort of comprehensiveness. But as soon as one gets in touch with logical relations, the frames of what we normally refer to as thinking, then it becomes clear that

if one tries to deny them, we get pure babble. Then, what we normally understand by language disappears. If one starts talking of persons without bodies, one can say anything, and therefore there is nothing that is worth saying. Furthermore, if one can no longer talk of assertions as something that is made by persons, then what could we possibly understand by assertions? And can you refer to a person which is not in a concrete situation? Descartes' well-known division of persons into a "thinking thing" and an "extended thing" is really hopeless, but he makes one wonderful remark: "Although people often complain that they are not as rich or skilful as others, they still feel that they are in possession of a healthy ability to reason - the Lord obviously succeeded in distributing that ability evenly". It is a rare thing to hear people complain that they do not have common sense. The decisive, elementary things are completely common for all, the prime minister and the worker, and all other differences that may exist between persons are completely irrelevant in relation to this basic level - it is so basic that everybody, even if they are not conscious about it, uses it when they talk.

One could also say that I have discovered a very fundamental natural law. It is quite serious that not even physicists have discovered what a natural law is - but if one doesn't accept my definition of logic, it becomes impossible to even say what a natural law is! According to this definition, a natural law is a necessary quantitative relation between different factors, in contrast to the customary definition of logic, where a natural law is an empirical regularity, and thus something that could be different tomorrow. This customary logic offers a very insufficient understanding of what it is we deal with in physics. Presumably, no physicist doubts that the sun rises tomorrow, but they are unable to prove their conviction. If one only accepts formal logic, one gets a serious contradiction between what one theoretically has to accept - that the sun perhaps will not rise tomorrow- and what one of course believes in practicality - that it will rise. That it will rise, one is unable to explain, because one, per definition, has abolished all other necessary relations than those of formal logic. One overlooks the condition for description that our very existence is determined by physical conditions. We were walking on earth also before Newton discovered the law of gravity.

Even after the theory of relativity, physicists experience space and time as containers where the physical bodies exist and where the physical processes are played out. But the decisive things in recent physics imply that space/time act as proper physical quantities in line with mass, energy etc.
Now, afterwards, one can see, if I am right, that if one makes only one necessary assumption, one can directly deduce the special theory of relativity, and it becomes almost obvious what quantum mechanics is. Physically, velocity exists only because of a relation to mass density. [Mass density is the mass in a point: The mass of a body divided by its extension assumes a cer-

tain limiting value - the mass density.] But in classical mechanics, the assumption is that we operate with constant mass densities, mass densities that remain unaffected by the velocity of the body. According to the theory of relativity, the velocity of a body cannot exceed the speed of light, which is introduced as a constant, and if the body is still being affected, instead of increased velocity, its mass density will increase.

Classical mechanics operate with constant mass densities, which presuppose absolutely rigid bodies, meaning bodies whose different points cannot be moved independently of each other. Now the point is that there are no absolutely rigid bodies, only bodies with varying degrees of elasticity. This is decisive for the theory of relativity, because in the space/time-description here, mass densities increase with velocity and bodies are therefore shortened in the direction of movement. This deformation is only unambiguous if one looks away from the deformation that is caused by the elasticity of the bodies. In order to avoid this ambiguity in the theory, one must therefore treat almost rigid bodies as if they were absolutely stiff bodies.

This [assumption, that mass densities do not depend on velocity] leads to an inconsistency, since this means that there exists no relation between the mass on the one hand and space/time on the other. And if we say that we by a natural law, understand a necessary quantitative relation between different factors - and by physical quantities we understand quantities that are part of such relations - then space and time and mass are not physical quantities because they are not part of quantitative relations with each other. When constant mass densities lead to the conclusion that there exist no such relation between mass and dynamic quantities on the one hand and space/time/matter on the other, meaning they are independent from velocity, then the simplest way of changing this is to assume that they are depending on velocity. It thereby also becomes clear that space and time are physical quantities and not human forms of perception such as Kant believed them to be.

Now if one begins with the necessary assumption that mass densities are dependent on velocity, meaning that one accepts that there is a relation between mass and dynamic quantities on the one hand and space/time/matter on the other, it becomes clear that space and time are proper physical quantities that form part of necessary quantitative relations with mass and energy. But this is only valid when almost rigid bodies are treated as if they were absolutely rigid bodies. Therefore, classical-relativistic space-time has a limited area of validity, which also shows in the description of the quantum-mechanic systems. The space-time used here is characterised by that we are talking of probability densities, not mass densities, and by that the relation between dynamic and space-time quantities is broken: we can know the position of an electron, but then not its impulse, or its impulse, but then not its position.

Another example is that we can not refer to points and distances independently of each other, because we by points understand something which is characterised by their distance to other points, and distances we understand as distances between points. Points and distances are totally different quantities, but still we cannot refer to either without referring to the other. As soon as one becomes conscious of these relations, one's understanding of physics becomes far better. At the same time, physics is far more difficult than we believe - the reason why it is experienced as fairly simple is again habitual thinking, and all the possibilities we look away from. It is far from simple. The decisive thing is that we get, if I am right, a better physics. And that presumably becomes of practical importance. I can point at experiments that would come up with other results than one normally counts on. There are excellent criteria for deciding that one theory is better than the other, and that satisfies my assertions.

One of the necessary relations exists between persons and rights. If one says that persons, or certain persons, ought not to have rights, one signs away the use of the word ought. It has been assumed, again in formal logic, that it is impossible to deduct an *ought to*-sentence from a *that*-sentence - that it is impossible to conclude from the statement that something *is*, to the claim that it *ought to* be different. I mean quite literally that all we know about politics is that politics ought to respect the rights of persons. Unless one agrees upon the normative foundation of the political efforts, such as that politics ought to respect the rights of persons, political discussions become meaningless. If people disagree about what to emphasize, it becomes impossible to talk of preferring one alternative to another. Norms that are regarded as given is the precondition of any political discussion. Any discussion of values presupposes common norms, and by norms we must understand something that we cannot disagree about without having to redefine what norms are. Conditions of power have for tens of thousands of years been closely connected with the idea of growth as an absolute good. It was absolutely good to have more of what was good. Now we are in a radically different situation, but the European Union (EU) and prevailing economical thinking still are based upon these hopelessly outdated values. We can by no means afford to think in that way any longer. The debate around the EU in Denmark has to a far too high extent been characterised by details, advantages and disadvantages concerning a closer cooperation. Nobody is capable of foreseeing the advantages of a political and economical union. The pro-EU campaigners claim that they are in favor of increased cooperation, and thereby they tone down the fact that what we are really talking about is an increased power concentration. As long as one keeps talking of the details, then of course people get confused. And what should be discussed is one thing and only one thing: Should we concentrate power further? This aspect is subdued and is blurred together with a lot of other things which are clear to no one. Power is characterised by always being in opposition to other powers. And according to all our experiences: it renders us powerless.

If we accept that the only thing we know about politics is that it should respect

the rights of persons and that we should try to organise the smallest concentrations of power possible, no one can predict the possibilities that might unfold, since we thereby would change the foundations of our evaluations, again leading to a change in what is conceived as politically possible. The same instance as it becomes clear to the population that power must be limited, the options for organization and collaboration will also automatically change.

It can be argued that this is remote and unrealistic idealism - there are no other arguments - but what are today regarded as political realities are things that are based on other ideals, such as that power is the real reality, we are all subjugated to mechanisms of power, this is the way we are; and thereby one overlooks the fact that a change in the basic valuations is the important thing. All I am doing is directing attention at something that everybody is capable of understanding: the difference between respecting power, and the opposite. You don't have to be a professor to be able to see that. If everybody realizes this, nobody knows what will happen, because we have no precedents. We would know what the task was about - to reduce concentrations of power as much as possible - and no one would know how. Thus far all we have known has been based on other concepts, for example, that we knew what was politically possible - that is what is understood by political realities - and it is precisely those that are so complex and impossible to grasp. Hopefully, by making these totally banal circumstances explicit, we can increase consciousness about necessary norms for politics and become able to concentrate on the real task - to realize these norms. It is decisive. If we abolish reality and personal morals, we abolish ourselves.

Our daily lives are quite literally decided by international corporations. Via the commercials and via consumerism, our lives are decided by the struggle between different forms of power, in spite of the seeming freedom we live with. Theoretically, it is possible to step outside of society, but it poses very serious demands on the individual. The choices of the individual in a certain sense do not exist, he or she nearly has to take part in the attempt to acquire as many consumer goods as possible, that is the way things work. This is a very subtle form of power, you don't even have to openly kill someone; you can just let the corporations do the fighting.

WHO IS LAND FOR?
N55 interviewed by Brett Bloom

Brett Bloom lives in Chicago and works with Temporary Services (www.temporaryservices.org)
The interview was conducted in 2002 and includes a comment by Dan S. Wang and Sarah Van Orman, who included a piece of land in LAND the same year.

Brett Bloom:
I want to take time to discuss the real world barriers that exist in realizing projects like LAND. LAND is a project that could potentially spread until all land is freed up and the project is no longer necessary - that seems to be a logical, conceptual conclusion. I don't think this will happen because of the massive power structures that stand in the way.
Who is LAND for? If LAND is contained within larger nation states that are anti-immigration, paranoid about foreign nationals launching clandestine attacks, limit the amount of time a foreign national can spend in the country or are just not open societies, then how can LAND be available to everyone? Isn't LAND incredibly vulnerable to the whims of nation states that decide whether or not to tolerate LAND and access to LAND?

N55:
LAND is a way of effecting some real changes in a realistic way. To change legislation or government is not realistic at the moment. However, if legislation and governments were receptive to logic, they would have to accept the following argument against ownership of land:
It is a habitual conception that ownership of land is acceptable. Most societies are characterized by the convention of ownership. But if we claim the ownership of land, we also say that we have more right to parts of the surface of the earth than other persons have. We know that persons should be treated as persons and therefore as having rights. If we say here is a person who has rights, but this person has no right to stay on the surface of the earth, it does not make sense. If one does not accept that persons have the right to stay on the surface of the earth, it makes no sense to talk about rights at all. If we try to defend ownership of land using language in a rational way it goes wrong. The only way to defend ownership is to use power and force. No persons have more right to land than other persons, but concentrations of power use force to maintain the illusion of ownership of land.
Here the focus is on what logic and language can teach us, and not on what has been learned from different ideologies and political systems. This makes it possible to reject ownership on an objective basis, meaning on a basis that cannot be denied meaningfully.
When we talk about LAND as well as about ownership in general, some habitual thinking is challenged. And that has an effect. Attention is directed at something that is often overlooked. LAND represents a marked difference

from habitual thinking about property: ownership normally entitles people to expel others from land, use of things, etc. By reducing things to being property, one is creating the illusion of an absence of relations between the thing and other persons, and between persons in relation to the thing. Through LAND, these relations are made visible. Slowly, other forms of behavior are taking place.

Of course one of the ways LAND functions is by making the existing constraints visible. For example: transgressing national borders without permission. These constraints exist not only on the practical level of immigration and so on, but also in our thinking. The absence of the conventional rules of ownership in LAND creates a general confusion. We no longer know exactly what we are expected to do and what the limits are, and so we have to start thinking for ourselves.

BB:
What is the difference between LAND and land-rights movements that forcefully claim land for landless persons? Isn't LAND coming from a position of privilege and wealth when we have to rely on the generosity of landowners and people with the power of private property?

N55:
To pretend to step out of our western, privileged position would be hypocritical. LAND is one attempt among many practices in the world that question and undermine structures of power and ownership. Although most people in Europe and the US are not in desperate need of land for food, we are in desperate need of diversity and respect of the fundamental rights of persons and in desperate need to minimize power concentration. The latter needs we probably share with most land-right movements that seize land, like those in Brazil, for example the Landless Workers Movement MST.

LAND is one link in a general attempt to live with as small concentrations of power as possible. A relatively wealthy and privileged position provides a surplus that isn't the worst starting point to try and change things. You don't have to be desperately poor to be legitimate in your wish for changes. The important thing is that one sees how basic needs and concentrations of power are connected. And that one tries to change that, wherever one lives.

It has been surprising to find out that many people in Europe and the US of small income actually own land. Earlier, this distribution of land to many small holders might have been a way of securing basic needs for people, replacing former systems where a few wealthy persons owned large estates. However the large estates still remain today, and the decisive chunks of land, for example in cities, are not accessible to others than very wealthy and powerful people. Capitalism has created new monopolies.
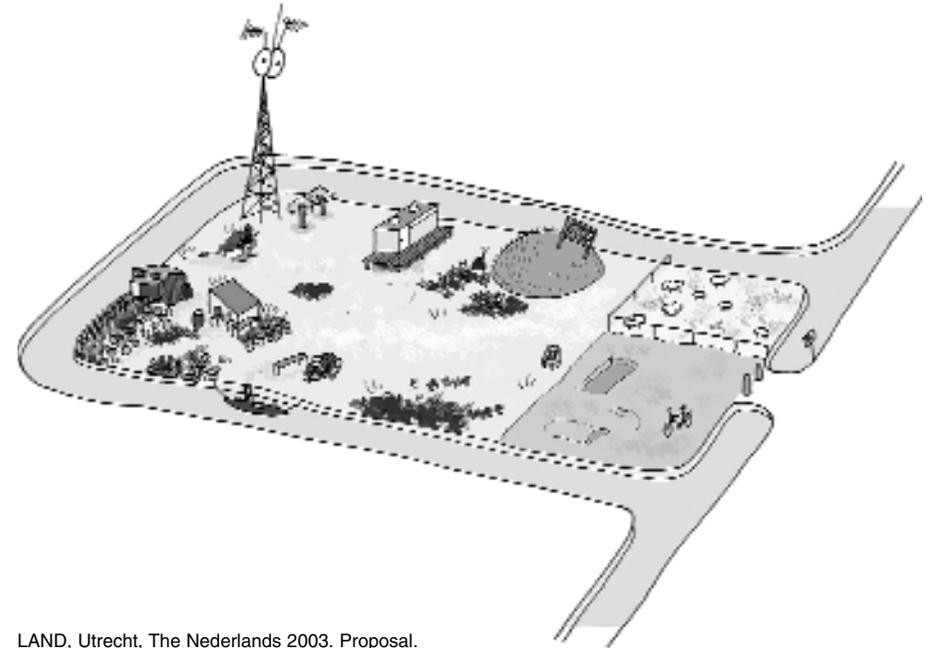
LAND, Utrecht, The Nederlands 2003. Proposal.

Those who participate in expanding LAND, use their ownership to guarantee others access. This is not just private charity. It is a step in a longer process and an experiment that involves taking some risks. The formal owners for example risk trouble with their local authorities.

BB: What are the channels of distribution of the information about participating in LAND? Who has access to this information and who is participating? Is this just being presented in art contexts, journals, and the art world or is there a conscious effort to spread information well beyond these constraints?

N55:
We try to take care that the information is done in ways that don't contradict the contents of LAND. We do not seek out certain media, they approach us. We distribute LAND information through manuals in public places, through the website, exhibitions, and lectures, and the manuals are available for passers-by on the LAND sites. It has also been distributed in newspapers. Through word of mouth, and other ways, an increasing number of people know about LAND. It has existed for little more than two years.

N55's role so far has been to take care of the manual and website and distribute the information that is submitted to us. If other people find other ways of distributing the knowledge of LAND, this is fine. We'd very much like it to grow out of our control.

BB:
You refuse to create concentrations of power or ideological positions with your work. I think that this confuses people. I think people expect you to be solution providers (because of the way they are taught to perceive work that seems to be like yours) - that you will give them answers to all the world's ills in the form of a new totalizing ideology. They look for a purity of intention and for purity in how you live your lives. People also have a strong reaction because they think that you are trying to tell them how to live or to impose your ideas on them. Could you talk some more about these and other habitual conceptions that people have and how to work towards breaking them down so people can really see logical relations and understand their importance?

N55:
It seems you describe two opposite types of reaction against us, or people who propose changes of some kind. One is that we don't provide enough solutions, and another is that we impose our solutions on others.
Confusing people for a second is not necessarily a bad thing. This makes them leave the safe grounds of habitual conceptions, ideologies, etc., for a moment. Maybe they even start to think for themselves. We don't try to impose any ideology on other persons. Or religion. We don't try to impose any ideologies, whether political or religious, on other persons. Ideologies or religions are not about respecting persons, persons' rights or logical relations in general. Ideologies and religions are about using power, even if they contradict what we know is right, to force ideas on persons. Ideologies and religions can only exist because of power.
What we are talking about is what any person in the world shares already: namely, the ability to use language, and respect logical relations and facts, and hereby conditions for description. Everyone who can speak a language shares this ability, although it is not always used. In our work we try to take consequences of the things we know and the things we learn, in our daily lives. And then we try to communicate these experiences to other persons. If we cannot do this, we are not allowed to communicate at all. Of course our practice is critical, and the consequence for other persons that really understand what we are doing, might be that they would like to change things in their lives. But this is called communication. It's not about imposing anything. If persons change their lives because they get consciously aware of logical relations, it's fine with us. But you cannot force other persons to understand. So we are quite confident that we don't impose anything on other persons.
Maybe we should try to talk more thoroughly about what logical relations means. Most discussions are dominated by different ideologies and subjective opinions. We repeat habitual conceptions to each other. The question of who is right often gets distorted into a question of who has the power. But, there is a level at which things are not a matter of power games or subjective opinions. At this level things are simply right or wrong. This level is what can be described as logical relations, or conditions for descriptions. It is what we use all the time when we speak, or when we act in relation to our surroundings. In trying to formulate right sentences or even sentences that deliberately distort reality any person demonstrates an excellent knowledge of language and reality. Having this knowledge is the same as knowing logical relations, without which, language breaks down. With this knowledge, it is possible to say correct sentences about what one has been eating today or about politics. And it is possible to say whether an assertion is based on facts and logic or on subjective opinions only. For example it is possible to find out whether the sentence: "rights are something which is given to persons at certain times and in certain political systems, and which do not exist in others", is correct, simply by looking at what we mean by the word "rights". If it isn't something persons have, then what is it? Can we talk of persons without assuming that persons have rights, and still maintain our understanding of what a person is? And further, if we by "rights" do not understand a right to be on the surface of the earth, it makes no sense to talk of rights at all.
There are of course many issues within this area that can be discussed and where to some degree cultural differences play a role. The thing we are concerned with here is a basic level of language, where language stops working if we don't respect certain factors like "persons" and "rights", and certain relations such as those between words and that which the words are about. Other logical relations are relations between persons and concrete situations, between persons and bodies, and in geometry, between points and distances. Logic is necessary relations between different factors, and factors are what exist by the force of those relations. Formal logic is another example of logical relations. And there are probably many which we do not know.
Experience tells us that concentrations of power do not always respect the rights of persons. And sometimes a large concentration of power is necessary to protect some persons' rights. The only thing we can conclude from this is that persons ought to try to organize the smallest concentrations of power possible. Still, this is decisive to our work. And although they are on another level than that of logical consistency, our different things and activities are important ways of proposing concrete changes. The manuals convey information on how they were made and then it's up to other people if they want to make use of the systems, get inspired, ignore them, laugh at them, copy them or improve them. N55 experience could be seen as an open source. You can learn from it or not learn from it. LAND seems to be an instance where many people can connect. The contradictions of land ownership are quite obvious to many. And LAND provides an opportunity to make experiments with ownership without having to subscribe to an ideology.

About position: N 41° 47' 58", E 87° 36' 23"

by Dan S. Wang and Sarah Van Orman, Hyde Park, Chicago, July 2002.

The analysis summed up in the term "logical relations" presents one way of proofing courses of action against falling into bureaucratic modes of exercising power. That is to say, "logical relations" offers a way of thinking about living and the exercises of power necessitated by living that is free from the tendency to concentrate power. We find N55's concept of logical relations compelling and significant, and wish to contribute to the further development of this thought.

Because we already mostly agree with the theory, we believe the best way to contribute is to help with the practical experimentation. We are in a position to expand LAND, and want to catalyze it by adding a more experimental element to what's already happening with the project. By "experimental" we mean an intensively observed element. The goal is to discern the contradictions and problems of LAND as the project is conducted in this particular situation. Similarly, we also hope to identify the strengths of this project, the promising elements, the unforeseen successes. In other words, we participate in this project with the hope of taking the project to its limits at the points where it is bounded, and beyond, at the points where it is not. We hold title to a (comparatively) small parcel of land adjacent to our condominium property. It is a narrow strip about 3.5 meters wide and 20 meters long. The first two years of ownership netted for Sarah (who has taken charge of the reclamation) many hours of clearing scrub and stumps, cleaning out trash, glass, and broken concrete. We now have enough space for a garden and for parking our car. The problem is that other people have occasionally parked their car there, too, without our knowledge or agreement. Given not only our possessive impulses, but also the real record of violent and unregulated anti-social activity in our immediate half-block vicinity (a shooting, a mob action, a burglary, a home intrusion, an assault, all in the last two years), we have been very protective against any unknown users of this space. These situations have resulted in several personal confrontations, one of which for reasons of escalation involved the police.

Our interest in expanding LAND stems from this situation of mutual encroachment by strangers, we who acquired title to the parcel, and they who see opportunity to use it without taking care of it (for example, littering and dumping on the site has been a constant problem). Thus, perhaps contrary to past expansions motivated by a wish to make available privately held space, and possibly undermine the root culture that enables private property as a whole, this particular expansion of LAND rests on a hyper-local fact of excluding and controlling users. We therefore initiate this expansion of LAND in order to heighten the contradiction between our values and ideals, and the real and perceived demands of an actual situation. The goal is to study this contradiction and move to resolve it productively, so that a lesson may be learned and applied in similar situations elsewhere.

Position: N 41° 47' 58", E 87° 36' 23"

Dan S. Wang, December 2002.

It took a few days for us to notice the emptiness. And later, the scattered nuts and bolts.
LAND is available for use. A beautiful 1 m high cairn supplied by N55 marks LAND. But not here, not anymore.
Our fault. We don't like tying things down unless we absolutely have to. First our watering wand and then later our cooler were stolen from our porch this past summer; they weren't exactly hidden, and we knew quite well (from experience) the possibility that they would be taken. So, out with the 20 year-old cooler inherited from my parents, and in with a better performing, $14.95 cooler from Target. Call it a benefit of global overproduction. We can afford to indulge in recreational petty theft, from the victim's side of things. Hm, if we leave this... how long before it's nicked? The molded plastic chairs are still there. It's entirely possible that somebody liked the cairn so much that they just had to have it. But somehow we find it more appealing that the physical symbol binding this parcel of earth to the other parcels comprising LAND met with a fate in keeping with the way space is frequently used around where we live - as a zone for legally ambiguous scavenging: it's there, take it, and use it to get something else.
LAND remains, but unmarked, uncoded, and mostly undifferentiated from the space surrounding it. No cairn on LAND, only a compost bin.

THE RITUAL OF LIVING
N55 interviewed by Craig Martin

Craig Martin is a writer and lecturer based in London.
First published in the magazine UNTITLED # 26, London 2001

Amongst the catalogue of avant-garde controversy which is all too often called upon by those reactionary echelons of the press as a means to lambaste advanced cultural practices, one that still tends to go somewhat unreported is the ritual killing of fish as the culmination of Newton Harrison´s 1971 Hayward Gallery installation Portable Fish Farm. Just as this act simply demonstrated the function of the human food chain within the ecological micro-system, so the work of N55 is concerned with decoding the social conventions of our habitualized everyday lives. At its most perfunctory level this work could possibly be likened to those practices that "simply collapse the aesthetic into design strategies", as Benjamin Buchloh recently suggested of Jorge Pardo´s exuberances. However, N55´s "products" apply the radical design strategies of figures such as R. Buckminster Fuller as a means of refuting the coded pattern of our sentinelled lives.

The earlier work of N55 developed new methods for a variety of ingrained social conventions: growing food without access to land or soil with the HOME and MODULAR HYDROPONIC UNITS; reconfiguring our washing regime in the HYGIENE SYSTEM; and collectivizing the act of cooking in the KITCHEN. Recent output has undergone an extension into developing new systems of collectivity, cooperation and self-governance in the form of ROOMS, LAND, WORK and YTEICOS. All of which assert the role of open-access and the denial of ownership.

Opting out of the consumerist ideology of current arts practice, the group produces and circulates, for free, a set of manuals that provide complete technical specifications and instructions for the construction of their work. Not only does this show-up those recent online aims to broaden the field of art "ownership" for what they really are, an ever expanding game of one-upmanship for the dwellers of post-industrial buildings, it also sets in place a parallel economy of communality and shared goals.

Below, N55 respond in their trademark analytical language to a number of questions I posed to them.

Craig Martin:
One of my original points of interest about the overall schema of your work concerned the way in which you didn't seem conditioned by the zones of activity which art production may be categorized by, rather it would seem that you utilize multiple economies of action to generate results. Was this a con-

scious effort in order to make things actually happen?

N55:
In the text ART AND REALITY we formulated a fundamental way of talking about art as free of ideological implications, social conventions and habitual conceptions as possible.
By saying that when we talk about art we must talk about persons and their meaningful behaviour with other persons and things in concrete situations, we are also saying that we don't know what kinds of activity art may imply. The effect of this was, among other things, to open up a space that was, in principle, unlimited, apart from the inextricable relation between persons and their rights. That means you cannot claim any more "freedom" for art than you can for politics or medicine when it comes to respecting the rights of persons (Leni Riefenstahl is our favourite example of an artist claiming no such ethical responsibility but it goes for a lot of contemporary artists as well). Because it is clear that concentrations of power do not always respect the rights of persons, it is also clear that artists, as well as other persons, have to be aware of the role different concentrations of power take and attempt to minimize their influence.
The actual production of things is one way to approach a more generalist view and way of living, as well as a way of approaching artistic practice. At the time we started much art was suffering from over-specialization, irony, theory-overload etc. We wanted to make situations that people had the possibility of relating to, either through their bodily functions, language or other things. This was realized by making use of any kind of technique or expertise and led to us learning many things we otherwise would not have done had we stuck to more traditional artistic methods. One part of this would be non-specialization. If you look at a person situated in this array of things, you get a picture of someone wanting to take care of all levels of daily life and being able to do so. This also has to do with our emphasis on low-cost production, which reduces dependency on high incomes, which is another facet of the repressive apparatus imposed by concentrations of power.
We try to focus on what we have in common instead of what divides us as persons.

CM:
Apropos the above, does the condition of "art" allow a certain level of flexibility / dilettantism in terms of function? That is, does it mean that the objects / systems have a "get-out clause" built into their discourse, that ultimately it would not matter if they failed to perform their designated function?

N55:
All our things work.

CM:
Are the products such as the kitchen, toilet, shower and hygiene system, for example, intended to actually improve upon the existing methods we have, or is it perhaps a case that suggesting new modes of daily ritual is a starting point upon which to change all means of social intercourse? I believe this is particularly interesting in terms of a bottom-up attitude toward change (a seeping through), rather than the top-down ideological imposition of "first of all we think the world must be changed." I'm thinking here about how Soviet architects tried to remodel the Oedipal structure by redesigning the family living unit.

N55:
Suggesting changes in behavior is most important. Of course, habitual actions in daily life affect the way we think, and our actions are decided by our physical surroundings. They also demonstrate our position in society and its economic capacity, norms of behavior, social conventions and arrangements. Our most frequent living formations: the single person (young/old), the couple, and the family all have their architecture. There is a lot of implicit ideological control in our societies regarding this.
Simply saying that things can be different is not the same as saying how they should be different. This is a totally different approach to change than the ideological one.

CM:
Could you maybe suggest some other examples of groups/individuals/societies who seek a similar attitude towards art/culture and its relationship to things and persons in concrete situations? I was thinking along the lines of those such as Helen & Newton Harrison's Portable Fish Farm, their Portable Orchard, and Avital Geva's Greenhouse project, all of which seem to suggest that we must consider the role of culture within the wider sphere of social/ecological urgency. Perhaps one could suggest Superflex's Biogas project as well?

N55:
Comparisons are not important, but to look at the significance of each concrete situation.

CM:
This is possibly my own misreading, but is there a move in the recent work away from the notion of the objects instituting a change in material circumstances, toward distributing the "conceptual possibilities" for self-produced change? Where LAND and ROOMS and PUBLIC THINGS (to a lesser extent) allow the user to set up their own system?

N55:
It is an extension. Since we started working together we have tried to keep open multiple ways of working.

CM:
I wonder, in relation to the last question, whether this charts your own move into the N55 SPACEFRAME in the Copenhagen harbor, so that this formation of a small power concentration can become part of a network of other small power concentrations. This is where I see a radical difference between this and other supposed "communistic" projects of "shutting-out" (Atelier van Lieshout's AVL-ville for example?). You appear to aspire to these "multiple-concentrations".

N55:
MOVEMENT is a political movement aimed at organizing in as small concentrations of power as possible. One can not become a member but one can expand *MOVEMENT* by initiating attempts at living with smaller concentrations of power.
This is similar to the Autonomous Astronauts, where you cannot become a member but you can make your own branch of the organization.

CM:
Could you possibly tell me a little more about the new systems WORK and YTEICOS?

N55:
YTEICOS - a society that is different from other societies in that it is inclusive, not exclusive. It is started on the internet as a simple structure where anybody can "move in", establish their own spaces and shared functions. Some of these spaces and functions might stretch out and become actual physical spaces. The homepage is currently being constructed and it is located at its own server. Being part of YTEICOS is of course free. WORK - is simply about sharing work, which means if you are an engineer or a cook you can offer your work for free to someone who needs or wants it. It is basically an exchange of work.

CM:
Is there an ultimate goal or aim in the work? Or as I would suggest, does it have to remain flexible in order to change according to lived solutions?

N55:
The only ultimate goal is to find ways to live with as small concentrations of power as possible, and that is more of an infinite goal.

CM:
Where does the intensity of lived desire come into the equation, the means to enjoy through excess and irrationality? For example could certain figures such as Antonin Artaud or George Bataille use your toilet system?

N55:
They would have been welcome, had they been alive.

CM:
How much would it cost me to hire/purchase certain items of equipment from you - the SUSPENDED PLATFORM for example? Would it cost me - as an individual - the same as an institution wishing to purchase it? Is all form of symbolic value ejected from the work? Are they still prone to fetishization?

N55:
We have issued the manuals as a way to make it possible for other persons to make similar systems. In the case of the DYNAMIC CHAIR, which contains a technical invention, it would have been possible to take out a patent. Instead we issued the manual and publicized the chair, so that no one can patent it, because it is now common knowledge. If someone wants to make one for themselves, that is fine. If they want to make them in order to make profit that is not fine. We don't sell the chair to private collectors or as an artwork that can be used for speculation, but we make them for persons who want to use them. They pay the price of materials, the time invested, and have to guarantee that they will not resell it or use it for any kind of speculation. This is an experiment to see how possible it is to circulate things while maintaining the meaning intended in them. So far it is going well. As for our other work, we don't want to sell them but we make permanent installations that are going to be publicly accessible. If a museum wants the SUSPENDED PLATFORM, we will demand a compensation for the time, materials and development invested, as well as compensation for us not being able to circulate the work any more. We did this in Japan for example, where one city has PUBLIC THINGS as a permanent installation. If you want the SUSPENDED PLATFORM, we're afraid that you have to make it yourself. This also has to do with the fact that we don't want to make products. This would turn our whole practice into something else. And regarding the above talk about ideologically imposed change, it would be more like showing *how* things should be different.

COULD ONE IMAGINE ART WHICH HAD NOTHING TO DO WITH PHILO-SOPHY? On the N55 artistic manifesto on art and reality
By Søren Kjørup

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"Therefore we now know that:

when one talks about art one must always talk about: Persons and their meaningful behaviour with other persons and things in concrete situations"

In this way the N55 group formulates the conclusion of their artistic manifesto "ART AND REALITY" from 1996 (in the "official" English translation that I follow throughout this essay). And this brief and concentrated statement articulates significant answers to quite a few traditional questions in aesthetics.

Obviously, art is not made to make us silent. Art is not the field of the unspeakable. Art is something we can talk about - and maybe even something we have to talk about. And art is not just art for arts sake. The concept of "art" cannot be conceived without concepts like "persons", "meaningful behaviour", "interaction with other people", and "interaction with things" - and it all has to take place within "concrete situations".
Consequently, art is not for eternity. And art is not only for contemplation. Art consists in concrete initiatives in concrete situations. Works of art are made to be used for something.

If one knows the works of art that the N55 group creates, one will know that the group has managed to turn these principles into reality. Its works of art all have concrete possibilities for use. The most spectacular example must be the N55 SPACEFRAME, floating in the harbour of Copenhagen and for the last three years the home of three members of the group. Some of the works - e.g. LAND, ROOMS, and WORK - may be said to have more programmatic than practical implications (and are rather based on the "Notes" of the manifesto than on the brief main text, as I shall show further down). But let us not forget works that must be seen as quite concrete gestures of benevolence like BEACH: A few loads of sand in a corner of the Copenhagen harbour that becomes the setting of seaside life for the members of the small neighbourhood, of their guests, and of casual passers-by, grown-ups, children, and dogs alike.

Social and philosophical aesthetics

The idea of making works of art with a possibility of being used in social settings and that articulate social ideals, does not put N55 in a category of its own these years. Neither is N55 alone in formulating texts in the genre of manifestoes that expresses this conception of art. You may find a rather striking parallel in the writings by the French theoretician (and curator) Nicolas Bourriaud about what he calls "*relational art*", which he characterizes in the following way: "a kind of art that takes as its theoretical horizon the sphere of human interactions and its social contexts, rather than the affirmation of a symbolic space that is autonomous and *private*", thus (also through the use of italics) making "relational" and "private" opposites (Bourriaud, *Esthétique relationelle* [Paris: Les Presses du Réel, 2001], p. 14).

The N55 manifesto, however, probably has the most clearly formulated philosophical character amongst recent writings of this kind. And the reason for this is probably that is has been formulated to a certain extent in collaboration with the Danish philosopher Peter Zinkernagel (1921-2003) and on the background of his way of reasoning and his epistemological and ontological position. The manifesto (and especially the "Notes") is also inspired by Zinkernagel's ethics, but this part of his philosophy is less developed and only a few suggestions are published, integrated in the later part of his - very sparse - published work.

In a footnote on page 520 of the second, expanded edition (1966) of John Passmore's *A Hundred Years of Philosophy*, Peter Zinkernagel is mentioned as someone who has formulated "a comparable argument" to the one P.F. Strawson makes in *Individuals* (1959) about the unbreakable relationship between material things, mental states and persons. Being a Dane, one cannot help thinking whether it might have been the other way around if Zinkernagel had published his dissertation of 1957 in English, and not in Danish; the version Passmore knows of *Omverdensproblemet* ("The Problem of the Existence of the External World") is the translation (of a slightly revised text) with a title belonging after the linguistic turn: *Conditions for Description*, which was only published in 1962. And one way of formulating Zinkernagel's position is to say that it is impossible to express doubts about the existence of the external world without presupposing this very existence.

Zinkernagel makes the point that the rules of formal logic (e.g. the principle of non-contradiction) are not the only fundamental rules we are obliged to obey if we want to make meaningful (as opposed to inconsistent) descriptions. If I say about one and the same situation that there is an ashtray on the table and that there is not an ashtray on the table, I contradict myself and have not given a meaningful description. But the same is true if I say that there is an ashtray on the table, but that it does not constitute a hindrance for the movements of my hand over the tabletop. Or if I say that the ashtray is seen, but not seen by anybody. Or if I say that I see the ashtray, but that I am nowhere,

i.e. that I have no body.

The three - according to Zinkernagel (and I agree with him) - inconsistent statements that I have sketched here, exemplify his three fundamental "rules of language" or "conditions for description", as spelled out on page 51 in *Conditions for Description*:

"1. We must not use names of ordinary things and expressions for possibilities of action independently of each other. 2. We must not use psychological expressions independently of the personal pronouns. 3. We must not use the personal pronouns independently of designations of bodies and, in consequence, of names of ordinary things."

It should not be difficult to see the non-vicious circle that Zinkernagel builds up here - or "zircle" as the Danish science writer Tor Nørretranders has phrased it (in his book on Niels Bohr, *Det udelelige* ("The indivisible", 1985), a scientist whose epistemological thinking has had a deep influence on Zinkernagel): Talking about things presupposes talking about actions we can or cannot perform. Talking about actions, intentions and other "psychological" phenomena presupposes talking about human beings. And talking about human beings, presupposes talking about bodies, and bodies are things. Things presuppose actions that presuppose persons that presuppose things. Or in yet another prosody: Could one imagine things that do not put limits to our possibilities of action? Could one imagine actions and mental states that are not actions and mental states of human beings? Could one imagine human beings that do not have bodies and in that sense are also things?

And this last "melody" is exactly the one used by N55 in "ART AND REALITY". The philosophical problem is, however, whether art may be drawn into this closely knit network of concepts, thereby getting the same kind of undeniably interconnected content as "persons", "actions", "things", etc.

Art and other artifacts

The manifesto begins with a set of rhetorical questions:

"Could one imagine art which had nothing to do with persons?
Could one imagine art which had nothing to do with other persons?
Could one imagine art which had nothing to do with concrete situations?
Could one imagine the existence of concrete situations without the existence of things?
Could one imagine concrete situations with persons in which the behaviour of persons had no significance?"

As the next sentence makes clear, the only possible answer to these questions is supposed to be negative: "There is no meaning in talking about art without imagining persons, their behaviour, things and concrete situations."

And this seems to be convincing: Works of art must be something created by persons, probably for other persons, in concrete situations defined i.a. through things and the ways people act. What one should not forget, however, is that the very same kind of reasoning could be made for any other kind of artifacts:
"Could one imagine knives and forks that had nothing to do with persons?" I am sure that this reminder will not disturb the N55 people in any way. The very point of their reasoning is exactly that art is an everyday thing. On the other hand the N55 people seem to think that art has some kind of special ethical value, or at least that their way of conceiving of art makes it possible to discuss works of art in a way that is not the one we know from everyday discussions of knives and forks. This seems at least to be the point in the afterthought to the conclusion with which I started this essay:

"This knowledge enables us to talk about art in a way that makes sense, and without allowing habitual conceptions, social conventions and concentrations of power to be of decisive importance to our experiences."

Why should the acknowledgement of art as part of everyday life relieve us from the temptations of "habitual conceptions, social conventions and concentrations of power"? These concepts are not mentioned earlier in the brief main text of the manifesto, and actually come as quite a surprise to the reader. They have, however, been introduced in the "Notes", so I shall now turn to them.

The Notes

The so-called "Notes" of the manifesto turn out to be much more comprehensive than the actual text. In the original "manual", the text comprises two pages, the notes seven. The notes are a kind of definitions and explications not only of the most important concepts of the main text ("persons", "concrete situations", "things", and "significance"), but also of "logic", "norms", and "concentrations of power". And except for the brief note on "things", the notes all end in a passage in bold type that draws some conclusions concerning art from the considerations on each main concept.
Whereas the main text only uses some kind of logical "zircle" in its reasoning, the notes combine logic and empirical facts. We meet logic e.g. when it is stated that it is part of the concept of a person that a person not only has a body, but that persons also have certain rights (even though this in itself does not determine which rights a person might have). But we meet facts (or a combination of logic and fact) e.g. when it comes to the above-mentioned "concentrations of power":
"Concentrations of power do not always respect the rights of persons. When

one denies this fact one gets: concentrations of power always respect the rights of persons. This does not correspond with our experiences."

And of course nobody would want to deny that!
Contrary to the concept of "concentrations of power", the concepts of "habitual conceptions" and "social conventions" do not have their own notes. "Habitual conceptions" enter the text as part of the explication of what logic is, as a kind of contrast to logical thinking:

"Most of our thinking and our discussions are conducted on a level where we repeat and repeat our habitual conceptions to each other. [...]
Logic is something more basic than language. Logical relations are what makes language a language and what assigns meaning to words. Therefore, it is impossible to learn a language, without learning to respect logical relations. But when we grow up and learn to master language, logical relations are not present on a conscious level. If we are conscious of logical relations, it is possible for us to decide whether something is right or wrong and not allow ourselves to be ruled by for example habitual conceptions and subjective opinions."

And "social conventions" are only mentioned in the note on norms. Here norms are defined - somewhat surprisingly - as "the expression of objective knowledge", and the view that some kind of objective norms exists is contrasted to the view "that everything depends on subjective opinions, and that one therefore can do or say anything, as long as one observes social conventions."
The upshot of these considerations for the N55 concept of art is a double one. On the one hand, N55 wants to make room for its own creativity by turning its back to the contemporary aesthetic establishment or institution of art:

"Examples of concentrations of power which have interests in art include: Mass media (represented by journalists, critics, etc.), capital (represented by collectors, gallery owners, etc.), governments (represented by politicians, civil servants, etc.), and science (represented by historians, theorists, etc.). One cannot permit these concentrations of power to have decisive influence and at the same time respect persons, the rights of persons or art."

On the other hand, these considerations open the door for what I above called the programmatic works, a group of works that had not really started when the manifesto was conceived. (LAND, started in 2000 , was the first and is still the most comprehensive). The germ of these works - the "idealistic" basic thought - may perhaps be seen in this passage from the note on "concentrations of power":

"Concurrently with the concentrations of power dominating our conscious mind and being decisive to our situations, the significance of our fellow humans diminishes. And our own significance becomes the significance we have for concentrations of power, the growth of concentrations of power and the conflicts of concentrations of power."

Considerations like these would normally call for political action. Most artists with more or less similar opinions obviously refrain from direct political work, but use their artistic creativity to express what they think and feel about society. The N55 people, however, have chosen a third way by letting a series of works represent (even though small) steps towards the realization of their ideas of a different kind of society.

Philosophy as art, art as philosophy

"ART AND REALITY" is not only an artistic manifesto, but also a philosophical text and must stand up to philosophical criticism. Does it hold good, is it philosophically convincing?
As far as I can see, the main idea of a Zinkernagelian "zircle" that does not only join the concepts of things, actions, mental states, persons, bodies, and things once again, but also works of art (as artefacts), having significance for persons in concrete situations, is indeed very convincing. That some of the other considerations contain a few examples of awkward reasoning and of jumping to conclusions does not affect the main thrust of the text.
But then again one should not forget that the N55 people are not philosophers; they are artists, even though philosophically (and socially and politically) engaged artists. And it is tempting to also look upon the manifesto as a work of art in itself. The very special structure and the insisting rhythm of the main text seem to invite us to do just that - just as the acoustic version that one can find on the internet.
But having said that, it may be just as tempting to also regard the by now fairly long row of artistic works by N55 as just as many contributions to philosophy - if not as philosophical tracts, then at least as a kind of philosophical manifestations. Seen like that, they all turn out to be arguments for one of the main statements in the notes of the manifesto, and one of the most both significant and beautiful ones:

"If one does not assign persons, their behaviour, things and concrete situations significance, then there is no reason to be concerned with art. Art has significance for our daily existence, because persons, their behaviour, things and concrete situations have significance for our daily existence."

THE KISSING POINT
By Craig Martin

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Originality is the basis of creativity. Ownership the embodiment of socio-economic stability. Invention the mark of progress. The trinity of these modes of thought underpins nearly all contemporary cultural work; authenticity seems proven by them. If these premises are accepted, to reject their seal of authority is to castrate the very notion of creativity. What are we left with in the aftermath of this rejection? Not, I would claim, with a maledictory loss, but a blessed gain: at this juncture we encounter N55's corpus.

What follows is an investigation into the implications of "disinvention" in N55's practice, through their reuse of the octet truss. I posit "disinvention" as a challenge to the dominance of invention and novelty. With works such as "SNAIL SHELL SYSTEM" and "DYNAMIC CHAIR" the group have developed new systems of production and knowledge, but crucially do not declare intellectual ownership over them, so negating our ingrained admiration of invention. Essentially, their reuse of the octet truss as the underlying structural frame in certain projects is employed out of pragmatic necessity, and as a challenge to the concept of innovation; the trinity. Moreover, its "recycling" functions as a critique of authenticity, originality and intellectual ownership. Similarly, the circulation of their work is not generated through traditional forms of reception (the compression of this trinity), but is motivated by collectivist goals, notably the suppression of copyright. A new lexicon of usage erupts. My overall supposition is simple: that the whole N55 project, by way of the octet truss, is concerned with ends rather than origins.
Since the mid-1990s N55 have utilised the octet truss space lattice as a governing device in a number of different projects. It is the armature or base (in the Marxist sense) that provides the foundation for construction. As has been well documented, the dominant figure associated with this spatial form is R. Buckminster Fuller. Its most famous application is his geodesic dome. Aside from the aesthetic, the octet truss is one of the strongest structures known to man. This came out of Fuller's research into the packing together of spheres. If one takes three spheres and rests them on a table, drawing a vector line from the centre point of each sphere a vector triangle is seen. Add a fourth sphere, sitting in the centre of the three spheres, and one again draws vector lines between the centres, a three-dimensional vector triangle occurs. This is the basic form which generates the octet truss. The point at which the spheres touch was described by Fuller as "the kissing point of spheres". The name of the octet truss comes from the combination of octahedrons and tetrahedrons. In the structural relationship between these two shapes an inherently strong

spatial matrix is produced. Although initially unaware of it, Fuller was following in the footsteps of Alexander Graham Bell, who had already "invented" the octet truss in 1902-3. Bell developed this process of omni-triangulation through his work on strengthening kites to allow them to carry people. For Fuller and Bell the octet truss existed both as geometrical model and engineering solution, as building block and construction system. When asked whether he had known of Bell's whilst working on his own octet truss Fuller stated: "I did not. I was astonished to learn about it later. It is the way nature behaves, so we both discovered nature. It isn't something you invent. You discover."[1] He speaks of nature because the octet truss is a reflection of the way certain gaseous atoms pack together: a fundamental structure to nature. Discovery then, as opposed to invention.

N55 stake no claim to invention nor originality in their use of the octet truss. They positively discard the notion of technologically driven novelty. This and the suggested alternate modes of production and economy has rendered the application of the octet truss, and Fuller's work as a whole, negligible.[2] A photograph (circa 1907) of Bell with one of his spatial configurations bears a salient resemblance to the "FLOATING PLATFORM" and many other N55 structures. He appears like a man out of his time. Theirs is not simple homage but a damned necessity. The efficiency of this structure is utilised for precisely this fact.
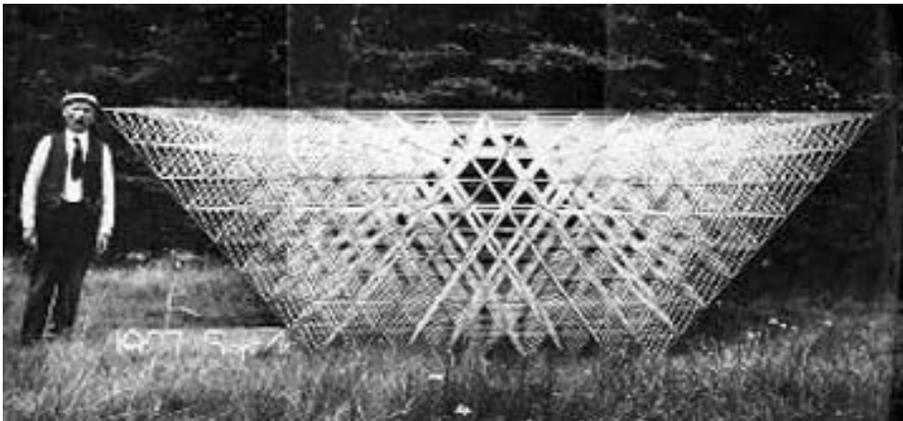
Alexander Graham Bell, in his search for lightweight structures for flight, discovered the octahedron-tetrahedron complex (the octet truss) in 1903, and used it for constructions such as kites, a windbreak and an observation tower.

Obsolescence is at the root of this. Innovation is perceived as a crucial predicate of how our culture measures worth, tested by a lack of "recognising" above all else. Perceived difference being the engine of importance and development. Within contemporary art and especially design the appearance

of difference counts. But appearance is all that it amounts too. Since the heyday of American industrial design built-in obsolescence has been responsible for a multitude of novelty forms, driven by stylistic quirks over fundamental improvements. Obsolescence is key to the contemporary economic equation of waste as growth, literal stockpiling. Obsolescence teases us by superficially shifting the cultural landscape. To jettison the need for novelty, as N55 do by using the octet truss, is to work with a structure that remains unsurpassed in engineering terms. They rebut obsolescence.

Concern about true change may account for the wholesale rejection of many of Fuller's ideas. Philosophically he called for a complete refutation of established modes of thought. Flowing out of his early days as a naval officer he perceived the world as a fluid, oceanic entity, not as a land-based, static mass. In his 1944 essay "Fluid Geography" Fuller noted that, "Inertia, unchallenged, promotes careless philosophy. Every day the seafarer is exposed to three times the necessitous experience, for even when off watch he is still in a dynamic environment."[3] It is telling that the "N55 SPACEFRAME", in which the group reside, is moored on the "FLOATING PLATFORM" in Copenhagen harbour, with their most recent project being a boat design. Undulation as experimentation.

Hillel Schwartz in his analysis of the culture of the copy that we live in, talks of the rupture with originality that copying elicits. Crucially for our understanding of N55's salvaging or "copying" of the octet truss in their work, Schwartz differentiates between two forms of copying.[4] Firstly, copying as appropriation and secondly, copying as reenactment. He then injects arrows to spatialize the functional aspect of copying: copying>as>appropriation and copying<>as<>reenactment. For Schwartz the use of a skeletal analogy feeds the argument: "Copying<>as<>reenactment follows close upon anatomy; copying>as>appropriation surveys the empyrean."[5] So we have copying as replaying, using the structure of the original, and copying as an act of theft, staking claim to the origin. The first honest, the arrows determining a feedback link to the original. The latter godlike in its assertion of a false truth, the arrows pointing one way, disguising the historical reliance. N55 are sincere. Their practice elaborates on the octet truss of Fuller and Bell, the arrows shifting back and forth, charting the conceptual linkage. Like plagiarism, the empyreal version suggests a repetition of the original in order to posit the origin: to aver originality. I would go further than Schwartz and refer to N55's use of the octet truss as a form of copying<>as<>enactment (removing the prefix 're' unveils the latent usage). Using and adapting this design to instigate its true functional potential in the face of the imposed obsolescence on Fuller and Bell's octet truss. Enacting the octet truss as a sign of basic efficiency. It tends toward functional ends or applications and not a conquering of the origin.

The discovery of origin is a central thesis in modern thought. It legitimates action through historical necessity and inevitability. But what if we think about ends instead? The octet truss as building block in N55's work is utilised as end rather than origin. As outlined above the structure of the octet truss is used because of its inherent efficiency, but this is also where discussion of Functionalism in their practice can move beyond the stricture of art historical agglutination. Discovery of ends as opposed to origin is where the octet truss actually becomes productive in the true sense of the word. By enacting the octet truss, using the geometrical formula and adapting it, without conferring some right to its origin, N55 are engaged with the discovery of ends. They put it to work. Michel Tournier's book Friday, is a reworking of Defoe's Robinson Crusoe. Gilles Deleuze has charted the divergence between Defoe's and Tournier's work as the difference between search for origin and search for end, respectively:

"Tournier's Robinson is opposed to Defoe's in virtue of three strictly related characteristics: *he is related to ends and goals rather than to origins*; he is sexual; and these ends represent a fantastic deviation from our world, under the influence of a transformed sexuality, rather than an economic reproduction of our world, under the impact of a continuous effort."[6]

Like Tournier before them, N55 through their affinity to Bell and Fuller, search out ends and functions, instead of focusing on origins. "A text's unity lies not in its origin but in its destination."[7]

We can consider N55's critique of our preliminary threesome in a further way. The octet truss is celebrated, alongside its strength, for its modular and tessellated nature. Modularity is often associated with radicalism; one may think of the plug-in architecture of Archigram; or the "new domestic landscape" of Italian design in the 1960s. It seems to imply extension as movement, or a freedom of development through spatial play, rather than the fixity of normative construction. Indefinite addition as infinite choice. Of course, there is no choice apart from addition or removal. Such growth I would claim is actually predicated on extension as economic fulfilment. Modular design in this sense is the logical extension of capitalist economics - augmented consumption masquerading as improved choice. Within the N55 body the modularity of the octet truss is harnessed in a different way, taking the radicalism of it further than Bell and Fuller initially could have. On the one hand N55 rethink modularity; not only through space, but through time. This is the kissing point - where Bell, Bucky Fuller and N55 meet. On the other they conceive of modularity not simply as addition but as a creative modularity that depends on extension and development by the user. The real potential for modular building is at the point of reception, and not production. Rather than simply playing with the unitary pattern, the participants in N55's work are encouraged to amplify the possible functions of the various projects. This is done in two principal ways; firstly through the distribution of print and online instruction manuals; and secondly, by a lack of patent on the projects themselves. Post-Structuralist in its remit, the manuals and the anti-copyright ideology propagate an open field. Open in the very status the user is given. As Barthes put it in "The Death of the Author":

"Thus is revealed the total existence of writing: a text is made of multiple writings, drawn from many cultures and entering into mutual relations of dialogue, parody, contestation, but there is one place where this multiplicity is focused and that place is the reader, not, as was hitherto said, the author."[8]

Although now an infamous text, Barthes' essay charts the necessity of the reader, or user in this case, for developing meaning and application.[9]
N55's projects operate by opening out the field of use, giving the audience the opportunity to construct and develop the group's initial schemes, without having to purchase the rights to it. Again, they seek compound endings, not definition of the origin. These multiple avenues of operation can only work through the loss of copyright, "sharing not buying". The audience is assisted in the development of the schemes by a comprehensive manual for each project, providing details on materials, technical specification, construction, maintenance and component lists. Through the shared, gratis, information of the manuals originality cannot be sought:

"A cast foundation is not necessary but the construction must be fixed. This can be done in various ways. Polyethylene plastic tanks are built into the lowest level in the construction. The tanks are each filled with approx. 90 litres of water, together adding about 3 tons to the total weight of the construction."[10]

Sharing information is central to the way N55 operate. Just as they develop the octet truss of Fuller and Bell, so the participants in their practice can extend it as they so desire. The work cannot be purchased nor the barricade of intellectual property raised. Discarding the rights to ownership, as N55 do, creates another form of economic exchange, one that is premised on involvement. The N55 project "SHOP" establishes this form of exchange built on shared contribution. Participants can set up their own "shop" where forms of borrowing, giving, receiving take place. Monetary exchange does not figure. Subsuming the strict economic viability of the work means that obsolescence and originality becomes negated. With projects like "DYNAMIC CHAIR", which carries innovative technical advancements, patents have consciously not been put in place. To do this would be to limit the possible manifestations. It would literally close or fix the chair in one position, ergonomically, economically, theoretically. It would suppose the need for our initial triumvirate of authenticity.

The complex relations implicit in the work of N55 are, I would assert, mediated by the negation of originality, invention, and ownership presented by the position of the octet truss as a nuclei in their practice. As a whole the work could be described as "toothed": having an ability to cleave through contemporary capitalistic discourse, as outlined at the start. They are projecting a nascent hiatus in the trinity. Simultaneously there is another type of conceptual glue that holds their practice together, other than originality, invention, ownership: that of disencumbered exchange. Freedom to copy; freedom to extend; freedom to change.
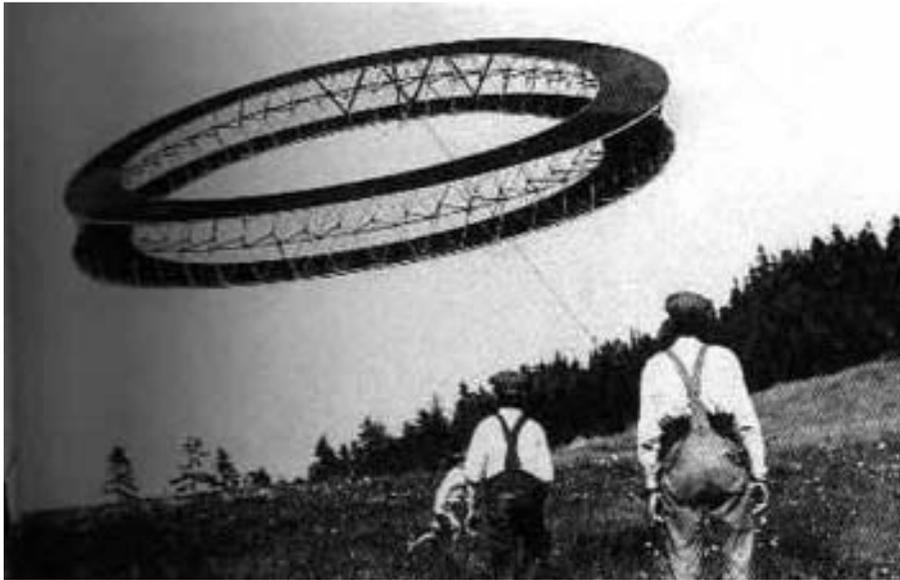
Alexander Graham Bell, kite.

Notes:

[1] Buckminster Fuller telephone interview with Dorothy Harley Eber, June 29, 1978, in the Prologue to Dorothy Harber Eber, Genius at Work: Images of Alexander Graham Bell, Viking Press, 1982. Quote taken from www.grunch.net/synergetics/docs/bellnote.html (31/3/03)

[2] Fuller literally conceived a different formula for thinking the world. He believed that we should think spherically as opposed to the square thought that still dominates to this day.

[3] Richard Buckminster Fuller, 'Fluid Geography', in The Buckminster Fuller Reader, (Ed. James Meller), London: Pelican Books, 1972, p. 135

[4] To say salvaging or 'copying' (note inverted commas) is to claim that N55 are adapting and shifting already existing forms of knowledge. They contribute to the pool of free information.

[5] Hillel Schwartz, The Culture of the Copy, New York, NY: Zone Books, 1996, p. 229

[6] Gilles Deleuze, The Logic of Sense, London: Athlone Press, 1990, p. 303 [my emphasis]

[7] Roland Barthes, 'The Death of the Author', in Image, Music, Text, (Trans. Stephen Heath) London: Fontana Press, 1977, p. 148

[8] Ibid. Similarly Umberto Eco has famously discussed the operation of the open work and the role of the reader, most pertinently in 'The Poetics of the Open Work' from 1959. Also see Umberto Eco, 'Between Author and Text' in Stefan Collini (Ed.) with Richard Rorty, Jonathan Culler and Christine Brooke-Rose, Interpretation and Overinterpretation, Cambridge: Cambridge University Press, 1992, pp. 67-88.

[9] Taking this further, there are many parallels with contemporary media theory, especially the shared development ethos of systems such as Open Source, or file sharing. It could also be said to operate along the lines of hypertext - Barthes' contemporary open text.

[10] N55, Manual for N55 Spaceframe, Number 24, Copenhagen, July 1999, un-paginated.

SPACE BODY LIFE - BASICS AND MUTATIONS OF N55
By Lars Bang Larsen

Lars Bang Larsen is a theorist and curator who is based in Copenhagen. Lars and N55 have worked together on several occasions.
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The artists' group answering to the moniker "The Exhibition Space" had to take a name in connection with their participation in a 1996 group show. Starting out from the Copenhagen art academy and varying in numbers, they decided to work under the non-name of N55, inspired by their then address at Nørre Farimagsgade 55 and the latitude of Copenhagen. Had their venue been in some other street, or a few degrees higher or lower, they might have been called F69 or N48. Since the mid-nineties, N55 have numbered four people who live, work and exhibit together.

Their production runs in two different tracks that are mutually dependent, hence the layout of the following text. The one leg of their production is their philosophical statement "ART AND REALITY", in which they argue for necessary relations between language, experience and the surrounding world. Some tend to see this as the formulation of a hierarchy and an ideological origin from which N55's projects spring. In my view, the one doesn't form or prefigure the other: Practice isn't subject to theory in N55. The discursive and the spatial/object-based are simultaneous and differentiating flows in N55. On the one hand you have a text, a unifying statement of logic and ratio, on the other hand you have the group's versions of everyday things and function. In this way the abstract meets the concrete, the stable meets the improvised, the identical meets the contingent. In fact, it could be argued that the two sides of N55's practice are equally experimental, the discursive aspect merely being more formally static than the other. Reading and agency supplement each other: the rationality and the orgy co-exist. It is here that the humor and lunatic force of N55 appears, rendered credible through the way they act in concrete situations and create access, excess or provocation.

It could be argued that in their quest for forming ways to counteract the capitalization of the social, N55 are merely replacing an old set of habits for a new one. There is a conservatism to this movement that their position incarnates; there must be, it is inherent to the attempt of creating a stable position inside the current capitalist-bureaucratic hegemony that thrives on the dismantling and reinvention of social space and its institutions. But as N55's movement towards the new and self-conceived is being maintained as a position, room is being made for the formulation of new differences. That is, if the idea of settling down in an N55 SPACEFRAME doesn't appeal to you, it is at least inspirational that a group of people chooses to build vehicles for exploration of this

world (or the next), and to watch them take off.

This essay was first published five years ago as "Manual for N55" in Siksi The Nordic Art Review 2/1998. N55 asked me to revise it in order to take account of developments of their practice. A smaller part of it, about the SPACE-FRAME, was published in Frieze 49/2000. Since I wrote these articles, N55 and I have had the possibility to continue our discussions through work and travel. This is a chance for me to present thoughts I have had on their work during the last couple of years. Apart from the weeding out of adjectives, what has changed in this version of the N55 essay? N55's production has continued and a lot of new stuff has arrived.

The SPACEFRAME was only in the making in 1998, and they were just beginning to think of the LAND project. Today we have even got N55 logs with built-in music systems that play log music! In general, N55's work has gone from a focus on the utilitarian to an appropriation of space. They haven't abandoned any of their former positions, and new ones keep mushrooming next to them.

It is significant that N55 aren't the sum total of the pieces or projects they have churned out, they are four people engaged in a concrete practice. Like the Bureau of the Surrealists, for instance, where the visitor could not only encounter surrealist objects but the Surrealists themselves, N55 are very much present.

As card-carrying artists without licence to bend steel plates or designing SPACEFRAMES, N55 take a lot of professional liberties. This is perhaps inspired by designer / scientist / engineer / poet / architect Buckminster Fuller's frontier-spirit that I also quoted in the Siksi essay: "To make the world work in the shortest possible time / Through spontaneous co-operation / Without ecological offense / Or the disadvantage of anyone". But what if it isn't about this wondrous 'functionality' at all? After all, how could somebody who reinvents the house, the toilet and the chair be a pragmatist? In the first version of the text I was going on a lot about "functional design". Both terms might be inappropriate altogether, because they denote the way things run smoothly.[1] Now I tend to think that N55, on the scale that they operate and as the generalists they are, in the bigger perspective are about messing things up and short-circuiting efficacy and convenience. N55 aren't identifiable with functions or services in the traditional, or contemporary sense.

A)
Danish art history abounds with the psychology of the collaborative. It has been perceived as good to do stuff together in groups and co-ops, and to slug it out between rivaling fractions or break away and start a new group with a freer outlook than the previous one. Obviously, that has its resonance in the way society and production have been organized. However - or because of that - it wasn't until the arrival of radicalized collective forms in the 1960s that artistic collaboration found discourse.

Integrated understandings of collectivity were manifest in the interdisciplinary work of early feminist manifestations, Palle Nielsen's playground activism, Kanonklubben, and the Experimental Art School. These initiatives were all, in one way or another and to varying degrees, showdowns with aspects of modernist dogma. Of course, they didn't call it "interdisciplinary" back then, but preferred to comprehend their activities as activism or anti-establishment efforts, predicated on purer artistic or political ideologies.

In N55's case, the death of the author by collectivity has given rise to a multiplied authorial subjectivity that dismisses the art market's mysterious ways. The group doesn't sell to private collectors or galleries, but let their work be used by public art institutions according to the open source principle that also governs their individual projects. I recently wandered around a group show and came across N55's work.

Exceptionally, the title sign didn't say "Courtesy of Gallery NN", but "Courtesy of the artists". That is a good mark.

As Fuller once concluded, there are plenty of resources on Spaceship Earth. That is, if we don't squander them on weapons or waste them on fripperies, made and marketed by his

B)
On the discursive side, N55 have developed their text ART AND REALITY influenced by philosopher Peter Zinkernagel's work on logical relations.

With Zinkernagel, and his work's affinities to Niels Bohr and the later Wittgenstein, N55 propose a third alternative to the traditions of materialism and idealism.

Within the parameters of logical relations, the opposition between language, logic and concepts, on the one hand, and experience and reality, on the other, is rejected.

According to Zinkernagel, knowing a language entails that one can propose correct postulates. Since every technical, scientific, or philosophical apparatus of concepts presupposes an array of everyday language definitions, any technical, scientific, or philosophical language must uphold these rules. Otherwise, he says, we end up with meaningless assumptions. As N55 and Zinkernagel write:

"We assume that there are no other conditions for deciding whether something is right or wrong except that one does not contradict oneself nor is inconsistent with facts. Beyond this there exist only more or less thoroughly grounded, subjective opinions. However, there is a level so basic that it normally does not appear in our conscious mind, where everything does not revolve around subjective opinions.

At this level things are simply right or wrong.

Logical relations are the most basic and the most overlooked phenomena we know. Logical relations mean that nothing of which we can talk rationally can exist, can be identified or referred to, except through its relations to other things. Logic is necessary relations between different factors, and factors are what exist by

imaginary corporate nemesis, Obnoxico. As the virtual Obnoxico's actual counterpart, N55's ambition is to regenerate the social. Their magnification of artistic behavior meets a Fullerian emphasis on non-specialization and generalized knowledge. Social space demands a great diversity of knowledge, but N55's back catalogue of art pieces with ethical and aesthetic consequences is of their own design and manufacture, in some cases with the help of experts to solve technical problems. Their production ranges from furniture to items related to dwelling and transport, such as the N55 SPACE-FRAME or the multifunctional SNAIL SHELL SYSTEM, and the service modules PUBLIC THINGS. More recent projects in real and cyberspace are LAND, ROOMS and SHOP, and the organizationally slanted projects YTEICOS, MOVEMENT and WORK. All projects are re-formulations of everyday life's elementary functions and spaces. They are produced to be lived with, not just for being contemplated.

This unabashed and somewhat grotesque ambition creates a growing and increasingly finely meshed net of objects, spaces and networks. Just think that in a corner of Copenhagen, every thing and function is being systematically re-invented by four artists, a new organic synthesis of everything from lipsticks to locomotives! There is surely more surplus in a project like that than in the defensive ideologies of the 100% society.[2]

The style of N55's small parliament of social design imparts a popular force of those relations. The decisive thing about logical relations is that they cannot be reasoned.

Nevertheless, they do constitute conditions necessary for any description, because they cannot be denied without rejecting the factors that are part of the relations. One logical relation is the relation between persons and bodies. It makes no sense referring to a person without referring to a body. When we for example say, here we have a person, but he or she does not have a body, it does not make sense. Furthermore, there are necessary relations between persons and the rights of persons. Persons should be treated as persons and therefore as having rights. If we deny this assertion it goes wrong: here is a person, but this person should not be treated as a person, or: here is a person, who should be treated as a person, but not as having rights.

Therefore we can only talk about persons in a way that makes sense if we know that persons have rights."[4]

N55 situate their proposal for proving logically that people have rights in a productive present. Since their art is communal, N55 are their own most powerful example. Insofar as the distinction between thought and action is broken down, the DYNAMIC CHAIR, for example, says and does just as much in N55's aggregate assertion as the logical relations says and does. They are merely different set-ups within the generalized domain of everyday life.

"It becomes of decisive importance standard to the objects. Even in their hands-on approach to art making, one can even detect a look of glitzy appropriation strategies in that floating SPACEFRAME, like Jeff Koons' basketball in a water tank. Both are sexy. But whereas one represents a kind of zero degree of consumerism, the other one enacts a social equilibrium.

Their work is a sort of minimalism with a social conscience, or a minimalism that has reopened its recourse to economy and (re)production. Dan Graham once said about the strip lights of Dan Flavin: "The components of a particular exhibition, upon its termination, are replaced in another situation - perhaps put to a non-art use as a part of a different whole in a different time." However, N55's work doesn't commute between art and life, occupying now the one, then the other position, but describes a phasing out of the separation between works of art and products. However, a dimension of artistic autonomy is maintained in order to outstrip the state and society's received ideas and introduce responsibility into the sphere of artistic autonomy.[3]

N55's art has something of the fantastic about it. It conjures up images of science fiction films: intergalactic voyagers stranded on some inhospitable asteroid who, through science and ingenuity, attain a quality of life unheard of at home. And sure enough, in order to begin anew there is for every element in N55's production an appurtenant manual with information and technical data. A score for the reproduction of the ele- to find ways to live and behave which correspond to our knowledge of persons, the rights of persons, etc. It is obvious that artists too must be conscious of persons, the rights of persons, and the influence of concentrations of power and thus must be concerned with politics. It is obvious (...) that also artists must first and foremost be concerned with the conscious making of what we know and of attempts to live and behave in correspondence with what we know and try to organize in as small concentrations of power as possible. In this way we have a case where the fundamental ethical norm and thus ethics become decisive for aesthetics (...) In a way that makes room for persons and that which has significance to them in their daily life."

Partial truth-values, at least at this "fundamental level", are countered by N55's and Zinkernagel's unyielding philosophical argument. At a point when, institutionally speaking, post-structuralism has played out its critical potential, N55 occupy a constructivist position. Their power critique works in tandem with a desire to build, produce, imagine. These positive components are required in order to maintain art's independence and drive - especially, perhaps, with regard to the way art and business these years are seen to perform a shotgun wedding. Naked criticality isn't enough. It ends up as mere parasitism.

Richard Sennett has characterized the new forms of capitalist organization succinctly: today, he writes,

ment in question, the manual demonstrates that anybody who so desires can build and install, for example, the CLEAN AIR MACHINE. The manuals' reeling-off of data encourages resource-transfers among consumption, time, work and material; the production cost of the HOME HYDROPONIC UNIT, for example, corresponds to what it would be to splash out on a Bang & Olufsen television set or to buy a new fridge. N55's pieces and projects are destined to be reproduced and taken further by other users and inventors, not to be exchanged or traded. The manuals indicate that the process is participatory - that it can be carried out at home, without the aid of the artists. In effect, the manuals outline a constructive rationality upon which you can engage in social fantasy. The manuals are also a strategy of unmasking the thing inside the art object and to show that it has a relatively stable, qualitatively distinct use value. Capitalism's differential systems of consumer alternatives are countered with an aggregate system in which the object answers back at human activity. An open source strategy to find out if there is life outside of commercial and privatized circuits.

N55 don't patent or in other ways monopolize their output. When elements are appropriated, they are recombined and permutated, twisted in the direction of the new, unexpected or awkward. The accumulated technologies of N55 extend a re-visioning of the way we usually go about things, a critique of the present rather than a faith in the future.

power is concentrated but decentralized.[5] That is, after nation states have been phased out by global capitalism, power has become elusive and placeless. You can't ambush it to give it a good kicking. But it is for sure that somewhere - probably right behind you - it is there, growing stronger, smoother and more flexible by the day.

The desire to form a countervailing terrain to global capital is manifest in the LAND project, started in 2000. More than land as (non-)site or material, the principle of ownership of land is here used against itself, to set land free. Seeing that ownership of land is one of the most pernicious forms of accumulation and the basis of fundamental forms of exclusion, people are encouraged to donate land they own to add up to a LAND, a global non-nation, which can be accessed and used by everybody. LAND is also - finally! - the deliquescence of patriotism. Fredric Jameson wonders about the properties of ownership:

"[...] Violence was no doubt always implicit in the very conception of ownership as such when applied to the land; it is a peculiarly ambivalent mystery that mortal beings, generations of dying organisms, should have imagined they could somehow 'own' parts of the earth in the first place."[6]

Among the various dis-owned strips of land that add up to the tortoiseshell of LAND are American desert, Danish villa garden, a Norwegian island and an Illinois strip of land

"Solutions", "Social fantasy" - Is this a utopian project, then? Strictly speaking, no. An utopian ambition describes a distance to be covered and overcome in the gap between the existing reality and the progressive aim of the new topia, the social order that is striven towards. N55, however, incarnate an inhabited concrete practice, not a nowhere. Their ideas are there for the taking, to be used and recreated by users, as they themselves use and recreate what the world and the imagination have to offer. The temporal movement that utopian ideologies usually exclude by fixating its promise in stagnation is acknowledged and incorporated; in this way N55 work with the grain of the utopian promise's impossible temporality, and keep it on the move. They don't create anything at the price of its own development. Things keep mutating between the hands of the group, and new ideas are absorbed and regurgitated that take their practice elsewhere.

N55 can only be said to be utopian in the original literary sense, as the first culturally legitimated and conventionally accepted form of social criticism. Satirical writers could live in safety by using the utopian as a narrative device. This contributed to a fundamental change in the way stories were told, by introducing the seemingly naïve narrator who finds everything under the firmament surprising, wonderful or amazing. Faced with the way N55's gadgets respond to the activities that surround them, the viewer/participant feels like a utopian narrator on a fascinating journey that leads to subversive dis-

between curb and pavement. Their co-ordinates have their own mathematical poetry:

"Sæby, Denmark, 57 degrees north/ 10 degrees east
Chicago, USA, 41 degrees north/87 degrees east
San Diego, USA, 33 degrees north/ 117 degrees east"

The question is, of course, what will happen when land in this way is set free from the regulations that accompany ownership, and on which most aspects of the public space / private space divide is predicated. The LAND project is a re-imagining of the notions of access and use of land; in extension of that it is also an anarchistic re-introduction of the notion of global citizenship. Of course, the patches of LAND won't be lawless white spots on the map as they will sort under the existing jurisdictions of the countries in which they are situated. LAND is a challenge to disabling ideas of how we need ownership to maintain order and regulation; in that perspective it is a psychogeographical piece as much as anything. It is up to its users to make time and space meet, without the overbearing mental framework of deeds and proprietors.
In the terms of Henri Lefebvre, the French ex-Situationist and philosopher of space, the LAND project is the appropriation of space before any ideology or superstructure can overlay that space. Interestingly, Lefebvre's definition of appropriation also addresses the question of ownership:

coveries and a satire on current hegemonies.

A critique of urbanism and architecture is incorporated, Situationist-style, in N55. Living is emphasized as an act and the house as a piece of service-equipment, not a monument. The N55 SPACEFRAME - of which N55 inhabit a floating version in the Copenhagen harbor - insists as oddly parasitic to urban space, a different kind of role maker. Its unfamiliar appearance is in keeping with its radical adaptability, independent of local styles. Like other examples of alternative, "universal" notions of housing - from the products of Buckminster Fuller to those of Matti Suuronen - the N55 SPACEFRAME looks like it would be as comfortable in the suburbs as in a rain forest (though it doesn't exactly beg for a garden gnome or an elephant door mat to be placed by the entrance). Configured with harmonious formal self-sufficiency as a truncated tetrahedron, it has no cast foundations, no right angles or window frames. The door is a sort of docking hatch, and the whole construction is flatly symmetrical - as if the entire structure could be knocked on its side and still function. The primitive, crystalline geometry is independent of scale (the N55 SPACEFRAME could vary in scale and still convey the same sensibility) and hints at the flexible logic of its construction suggesting the possible multiplication of this type of geometric architecture.

This is not unimaginable. A version of the N55 SPACEFRAME could be mounted "by anybody", N55 promises, using small, light weight compo-

"Property in the sense of possession is at best a necessary precondition, and most often merely an epiphenomenon, of 'appropriative' activity, the highest expression of which is the work of art. An appropriated space resembles a work of art, which is not to say that it is in any sense an imitation work of art. Often such a space is a structure - a monument or building - but this is not always the case: a site, a square or a street may also be legitimately described as an appropriated space."[7]

The gates between art and life have opened and an appropriated space "resembles a work of art". Similarly, Lefebvre's notion of spatial production through appropriation is based on sharing space with whomever is in that space, regardless of gender, race or class. In accordance with its Marxist component, Lefebvre's thinking is closely linked with the possibilities for agency in a historical present. The pincer-movement politics of N55's two-tiered artistic practice can be seen as the relief of (Foucauldian) queer theory and ID-politics, by virtue of their discourse's fundamental critique of power. N55 prefer to speak about persons' rights in terms of general conditions. Out goes the focus on identity and discussions predicated on the body. The correlates of particular identities are suspended in N55's power critique that instead offers a general analysis of subjectivity.[8]

When no heed is paid to the spatial relations that inhere in social facts, and when social space is represented as disjointed segments, knowl-

nents that can be easily manufactured and reassembled without damage. For the cost of an average car, the N55 SPACEFRAME can be assembled by hand without the use of cranes or other heavy tools. It has no need for exterior maintenance, and it has the potential for zero energy consumption - heating being provided by proper insulation and sunlight, and by cooking and the physical activity of its occupants.

Pragmatics, as well as Georges Perec's idea that triangular space is "as spectacular as it is gratuitous", underpin the basic shape of the N55 SPACEFRAME. The triangle recurs in N55's bed, table and chair, and other objects, like some highly polished, intelligent LEGO system. Its design is based on the principle of the octet truss, an extendable, modifiable structure that obtains the greatest strength with a minimum of materials (In this case thin, bent steel struts). The octet truss is a recurring constructive element in DYNAMIC CHAIR, SUSPENDED PLATFORM and MODULAR BOAT. The sculptural formulations of the octet truss assume serene, abstract qualities in the repetition of elements: in the play of light on the convex accents of each outside plate on the N55 SPACEFRAME, and in the irregularities brought about by slight variations in the coloring of the floor plates and the interior wall covering. If you don't quite know what to make of the N55 SPACEFRAME from the outside, the inside doesn't offer much spatial familiarity either. The weightlessness you feel in the pyramid-like interior is due to the confounding of

edge misses its target. Lefebvre's brand of Marxism described a move away from the object and into space, a movement that N55 could be said to share on the formal level. However, as stated earlier, they maintain the work with art things concurrently with their spatial projects. The concerns of SHOP and WORK comprise both aspects, in their attempt at developing non-monetary forms of object and service exchange, as a redistribution of the resources of social space. Lefebvre writes that the logical form belongs to those abstract forms which don't depend on description,

"[...] and which are inseparable from a content. Among these, in addition to the logical form, must be numbered identity, reciprocity, recurrence, repetition (iteration), and difference."[9]

This goes a long way to explain the form, function and structure of the implementation of N55's projects at the level of social practice, exchange and social space. Their project is an operation of sameness and difference that makes it flicker between being an institutional parasite and host organism, and propels it forward by the convictions of a content-based logic to new permutations in the meeting with new people and places.

N55's artistic strategies ultimately displace discussions of originality and creative copyright. Art and the knowledge pertaining to its forms are represented as common knowledge, social freeware. It is of no essential

our spatial expectations - that it should be rectangular, and that the ground plane will be repeated as a ceiling a couple of feet above our heads, supported by fixed, even walls that don't allow your decisions to become an active part of the architecture.

Unlike the world's different prestige museums, millennium domes or other monuments, the N55 SPACE-FRAME also works as a cloud of conjecture - as art and reality. On your way to dropping in on N55 in their shimmering and steely sea abode, you will pass the Christiania district with its Pusher Street and architectonic half breeds (at the time of writing once again under government threat to be cleared out if they don't clean up their act), the School of Architecture with adjacent building sites for upmarket flats and for the new opera (a tax deductible 'gift' to the city from a shipping tycoon). On the other side of a naval base, among a variety of houseboats, the N55 SPACEFRAME appears in the dock like a crystal that is the tip of a new civilization rising from the ocean, or like the drifting emergency shuttle of some submarine vehicle wrecked during exploration of the deep seas. After having hung out in the bobbing N55 SPACEFRAME like a sea Bedouin, treated to wine or a few beers, you will feel rather elevated when you make your way back onto dry land. And slightly bobbing yourself.

interest who has done this or signed that: rather than existing in an art-historical time bubble, N55 aim to be operational with their artistic concepts in real time. In fact, one of their manuals spell it out: "There is no reason to request art to continue to find new forms." That, as it were, would merely be another habit.

Georges Perec gets the final word, on the subject of the habitual and its dislodgement. What needs to be done?

"To question the habitual. But that's just it, we're habituated to it. We don't question it, it doesn't question us, it doesn't seem to pose a problem, we live it without thinking, as if it carried within it neither questions nor answers, as if it weren't the bearer of any information. This is no longer even conditioning, it's anaesthesia. We sleep through our lives in a dreamless sleep. But where is our life? Where is our body? Where is our space?"[10]

Notes:

[1] In the journalistic use of the term design, but also in mainstream design practices, there is a willingness to relate the development of new products to the existing system of production. The design aspect of N55 is affiliated with a traditional European avant-garde view that considers the artist/designer to be in control of the product, and that favors experimentation which will lead to objects that don't exist as yet (as for example Moholy-Nagy, during his time as a design teacher in Chicago, propounded the belief that designing was a way of life, rather than vocational training). Specifically, the group's position on design exceeds the notion of a modernization of form and material and represents an integrated stance with regard to how disciplines (ethics, science, art) meet everyday life. N55's objects (and ambient projects) come with a statement, not just a style. (See for example Victor Margolin: The Struggle for Utopia: Rodchenko, Lissitzky, Moholy-Nagy 1917-1946. P. 217 and 228. The University of Chicago Press, 1997).

[2] In Palle Nielsen's essay from 1971, Anklage - og Forsvar (Accusation - and Defence) is an evaluation of the social failure of the satellite towns. He states the case that since urban planners have been recruited amongst the elite, they have constituted themselves as guardians of those without liberty of choice. Nielsen takes on the voice of a B-class citizen relegated to the concrete suburbs of 70s Copenhagen to foresee what we could call the 100 % society - the illusion of freedom through the availability and ownership of consumer goods: 'We have bought all the goods that we should. You saw for yourselves that 90 % of us have television, 65 % of us own a car and 50 % a summer house. In a few years time we will probably all have 100 % of everything - and we will still be sitting here looking out the window.' In the 100 % society, space is determined by private ownership and our relationship to objects; it is full of things and their highly determined relations and can therefore only with difficulty be appropriated, in Henri Lefebvre's sense. In: Meninger om mennesker og miljø, s. 41. Statens Byggeforskningsinstitut, København 1971, p. 114.

[3] More precisely, autonomy as understood in the sense that John Roberts here discusses it: "...the autonomy of the aesthetic has been widely misunderstood by the left. Autonomy implies not self-sufficiency and self-reflexiveness but 'the mark of art to be more than cultural symptom'.", Art has no History! The making and unmaking of modern art, ed. John Roberts, p. 29. Verso, London 1994.

[4] ART AND REALITY.

[5] The Corrosion of Character. Norton, New York 1998, p. 47.

[6] The Antinomies of Postmodernity, in: The Cultural Turn. Selected Writings on the Postmodern, 1983-1998, Verso, London, 1999, p. 66.

[7] The Production of Space, Blackwell, Oxford 1991, p. 165.

[8] N55's power critique operates with a notion of totality, then, somewhat against the grain of dominating trends. Frederic Jameson states that there is currently a 'taboo on totality' in relation to the 'social determinants that enable or shut down thought', and asks 'why it is that 'concepts of totality' have seemed necessary and unavoidable at certain historical moments, and on the contrary noxious and unthinkable at other.' Marxism and Postmodernism (first published 1989), ibid. p. 39.

[9] Lefebvre, p. 149. This is probably what Marxists would call the sign-system's materiality; that there is a material necessity to signification. As TJ Clark writes, 'Everything about the forces and relations of symbolic production under capitalism encourages the fantasy that meanings are the product of a self-enclosed circuit or system, opening nowhere onto the realm of necessity. Pure presence wars eternally with pure absence, the latter winning hands down.' (Farewell to an Idea, Yale University Press, London 1999, p. 260).

[10] L'Infra-ordinaire, in: Species of Space and Other Pieces, p. 206. Penguin, New York 1998.