Atelier van Lieshout
A Manual

Kölnischer Kunstverein, Cologne
Museum Boijmans Van Beuningen, Rotterdam

NAi Publishers
Acknowledgments

Is Atelier van Lieshout too big for this world? That was the conclusion temporarily forced upon the Kölnischer Kunstverein and the Museum Boijmans Van Beuningen. The objects that Van Lieshout had selected for the exhibitions were so large and bulky that both museums had to remove their windows to get the works in. Moreover the doors and lifts were too small to accommodate the Modular House Mobile, the Information stand and the Modular Building System. Only after radical architectural interventions could the works finally be brought in.

We would particularly like to express our heartfelt thanks to the artist and his assistants for the inventive and unstinting collaboration in compiling and bringing together these exhibitions. The organization of an exhibition of this nature, and bringing out a publication, entails considerable work that passes unnoticed by the public. To put it in a nutshell: it would only be conspicuous by its absence. The invisible mover of mountains in this case is Rian van Rijsbergen.

The Museum Boijmans Van Beuningen would particularly like to thank the technical staff, headed by Wout Braber, and Willem Metselaar who administers the building; Jan van Cappellen for overseeing the catalogue and Karel Schampers for keeping the whole thing within budget. Lotte Haagsma worked as a trainee in the preparation of the exhibition and proved a much valued assistant to Piet de Jonge, the exhibition organizer.

The Kölnischer Kunstverein extends its thanks to Marianne Walter for the co-ordination, as well as Werner Matrisch and Torsten Hoffmann for their help in realizing the Cologne exhibition.

And finally we would like to thank the editorial team of the catalogue: Hein Eberson, design, and Bart Lootsma and Piet de Jonge, texts. Despite coping with long-overdue deadlines, Nicole Gatehouse and Beate Rupprecht provided accurate and well-crafted translations.

We would like to express our gratitude to the Alfried Krupp von Bohlen undHalbach-Stiftung, the Mondriaan Foundation, the Centrum Beeldende Kunst and the Rotterdamse Kunststichting for their generous financial support in the realization of this publication. Our thanks are also due to the Mondriaan Foundation which made a substantial contribution towards the costs of mounting the Cologne exhibition. And the exhibition in Rotterdam is indebted to the Mondriaan Foundation for its generous financial contributions.

Chris Dercon
Director
Museum Boijmans Van Beuningen
Rotterdam

Udo Kittelmann
Director
Kölnischer Kunstverein
Cologne
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with texts by
- Piet de Jonge (PdJ)
- Joep van Lieshout (JvL)
- Bart Lootsma (BL)
- Arno van Roosmalen (AvR)

and quotations from
- Gilles Deleuze and Félix Guattari (GD-FG)
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- W. Edward Mann and Edward Hoffmann (WEM-EH)
- G. A. Ladee (GAL)
- Niccolò Machiavelli (NM)
- Hermann Nitsch (HN)
- Marquis de Sade (MdS)

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- Building construction manual
- Glass-fiber reinforced polyester manual
- Pork meat processing manual

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Foreword

Joep van Lieshout has always surprised his public. After making organic and surrealistic furniture at the Rotterdam Academy of Fine Arts he moved on to angular iron sculptures at Ateliers '63. He jumped from welded-metal constructions to showing pavement stones, beer crates, carpet tiles and plastic dustbin bags. In Van Lieshout's hands industrial standardization generated unexpected combinations: two beer crates are precisely the length of a dustbin bag; three crates the width of four pavement stones. For many the next shock came in 1988 when he started making polyester furniture: tables, shelving units, baths and washbasins, and so forth. They were shocking in their unexpected colorful finish and the strong IKEA element. Time and again, and for some fifteen years now, Van Lieshout has come up with the unexpected.

For the past three years he has presented his work under the name Atelier van Lieshout to underline the fact that it is produced with a group of assistants. International success, most recently crowned by bars and toilets in Rem Koolhaas's Grand Palais in Lille, has forced him to expand his workforce by taking on a large group of assistants. The size of his atelier is determined by the commissions Van Lieshout attracts. Van Lieshout is not alone.

In the last few years their activities have been concentrated on the architectonic field. The Alliance Française Rotterdam commissioned the refurbishment of their building from the Atelier. And Van Lieshout has also designed and produced extensions to the Centraal Museum in Utrecht, a mobile exhibition space in Tilburg, as well as a Mobile Home for the Museum Kröller Müller. The progress from furniture designer via builder to designer of lightweight and prefabricated building components hardly took followers of Van Lieshout's oeuvre by surprise. But he still had one more trump card up his sleeve which took him into hitherto uncharted territory: Van Lieshout as butcher. Van Lieshout as producer of hams and bacon, of bottled meatballs and smoked sausages. Atelier van Lieshout was metamorphosed into 'Joep - the traditional butchers'. In the Galerie Roger Pailhas in Paris alongside the magnificent polyester kitchen installations (ready for use by professional caterers) - he showcased a wooden sty for transporting a live pig and rack on which the pig could be slaughtered, as well as a polyester container to catch the blood. The objects' practicability had already been proven: Van Lieshout asked two Brabant butchers to slaughter a pig, and the gallery walls displayed photographs of the slaughter along with pictures of the animal being boned and the subsequent preparation of the meat. Dark-colored sausages hung from the gallery ceiling like trophies and the bottled delicacies were displayed on wooden shelves.

Astonishing? Not at all. In recent years Van Lieshout has already appeared in various divergent guises, from racing driver to weapon manufacturer. And he put himself forward as a traditional modern sculptor by producing, of all things, a biomorphic sculpture as his bid for the 1992 Prix de Rome: the 'Bioprick'. Thus the role of meat producer is a continuation of the pattern he has been developing.

Today, however, if we take stock of Van Lieshout's work, the surprise turns out to be of a different order. Astonishingly, what appear to be divergent activities actually seem to form a cohesive whole. This book and the retrospective exhibition
reveal that all the objects and constructions are, in fact, exercises in self-reliance, self-provision; artefacts intended to facilitate survival. Objects which show who is the strongest and can stand on their own. Moreover on looking back one discovers a distinctive handwriting in all the objects, from knuckleduster to bathtub, and from sofa for reading Machiavelli on to small oven for smoking meat. It is a strikingly sensitive script, unrefined in appearance, in some eyes rather crude, devoid of surface appeal and elegance, but therefore honest and vital. Objects which couple sensuality (“nice and common" according to the maker) with a manifestation of autonomous power. Posing as the ‘savant sauvage’, Van Lieshout claims that Machiavelli’s ‘The Prince’ is the only book he has ever read right through.

Van Lieshout succeeds in imbuing each of his objects with a specific character while, at the same time, never losing sight of the larger line. Thus the table, shelving units, baths, washbasins, shower basins and kitchen units are produced from the same material formula as the Skulls - single rooms in the shape of a sphere - or a sort of coffin in the shape of a chaise longue: Sensory Deprivation Chambers and their portable variant, the Sensory Deprivation Helmets. The last two items are not based on a numerical system like the furniture, but are prompted by the philosophy of the Austrian psychoanalyst Wilhelm Reich, who sought to make a synthesis of the theories of Marx and Freud. This ‘Sexpol’ movement attempted to unite sexuality and politics. Reich moved to the United States in 1939 and the emphasis he placed on sexuality and sexual energy struck a strong chord with Van Lieshout, the creator of the Bioprick and cosy phallus lamps.

The organic forms he was producing in 1983 - the sofa and the boat with bones - are closely related to the Skulls. While the small ovens in which Van Lieshout has recently been preserving meat are a strikingly natural extension of the Operating Table and Forge that he made years before. Van Lieshout has given detailed instructions on how to slaughter pigs and preserve meat in one of his handy manuals, and he has also written a handbook on how to process polyester and produce light-weight timber structures. Fifteen years of work have produced some three hundred objects and buildings. High time, we felt, to present a retrospective of Atelier van Lieshout's work. An overview that will not only point-up the complexity of his work, but the unexpected relationships as well. An overview intended to provide an insight into an oeuvre. One thing will be crystal clear: Atelier van Lieshout is working on a complete survival kit. When the world founders, Van Lieshout will be able to provide everything we need: easy-to-build emergency dwellings, sanitary units, transport, weapons and food. Atelier van Lieshout is preparing for the survival of the fittest.

Piet de Jonge
Two things characterize Joep van Lieshout's entire oeuvre: a certain indifference to aesthetics and the way it crosses all boundaries. Van Lieshout's indifference is not just indifference for its own sake, because it is precisely that indifference that gives his pieces a bare-faced power. This is the 'active indifference' that George Bataille also saw in Eduard Manet's work. According to Bataille, Manet's paintings rule out all expectations of a higher expression or a deeper meaning. Yet it is not that Manet's paintings just simply lack meaning, but rather that he painted the absence of meaning as an essential characteristic of his time. Moreover Bataille maintains that in laying bare that essential characteristic Manet managed to radically liberate himself from his own time. This also holds true of many of Van Lieshout's works, and certainly of the works in which he employs standard industrial measurements and produces in series. Nevertheless Van Lieshout is not primarily and solely concerned with affirming the definition of modernity. Instead he repeatedly oversteps the boundaries of definitions that he himself has discovered. Whether this involves making artworks which are really pieces of furniture or racing common bourgeois cars like the Opel Ascona; or making giant phallic sculptures, dangerous jewellery, or personally slaughtering animals. He continually points up the fact that behind modernity's clarity and rationality lurks an implicit twilight realm that contains the real mainsprings of our existence. In this sense all of Van Lieshout's work is erotic. Bataille contends that eroticism is neither bodily pleasure pure and simple, nor excessive pleasure, but the pleasure of excess, the pleasure of breaking through the rules. According to Bataille eroticism lies in the ambiguous conflict between the other person and yourself on the one hand, and the rules and taboos that can be rationalized and historically researched on the other. It is inner experience as the opposite pole of academic experience which analyses and judges objectively and from the outside. In this sense Bataille's own work is also more closely related to theology than to academicism. That, however, does not alter the fact that both Bataille and Van Lieshout proffer experiences that can be shared and plumbed by others.
VI NEW PRINCIPALITIES ACQUIRED BY ONE'S OWN ARMS AND PROWESS

"I say, therefore, that in completely new states, where the prince himself is a newcomer, the difficulty he encounters in maintaining his rule is more or less serious insofar as he is more or less able. And since the very fact that from being a private citizen he has become a prince presupposes either ability or good fortune, it would seem that one or the other of these should to some extent lessen many of the difficulties encountered. None the less, the less a man has relied on fortune the stronger he has made his position. It also helps if the prince has no other states and so is forced to live in his new state in person."

XXV HOW FAR HUMAN AFFAIRS ARE GOVERNED BY FORTUNE, AND HOW FORTUNE CAN BE OPPOSED

"I conclude, therefore, that as fortune is changeable whereas men are obstinate in their ways, men prosper so long as fortune and policy are in accord, and when there is a clash they fail. I hold strongly to this: that it is better to be impetuous than circumspect; because fortune is a woman and if she is to be submissive it is necessary to beat and coerce her. Experience shows that she is more often subdued by men who do this than by those who act coldly. Always, being a woman, she favours young men, because they are less circumspect and more ardent, and because they command her with greater audacity."
S-TEAM SATAN
Repetitive film script

1. Escape by car, leap into the luggage space through side door
2. Shot of person cursing that we've slipped through his fingers
3. In position in the door opening, opens fire
4. Shot of myself in all-American outfit with contented smirk
5. Machine-gun rattle
6. SATAN written in bullet holes
7. Hanging out of the front car window, enjoying shooting
8. Small man or car escaping
9. Riddled on the side of the road
10. Waving we leave this sacred spot in search of another small car or man
11. See ad.4

Joep van Lieshout 1984
Autogenous Oxyacetylene Burner Motor: Plutocrat 1986
iron
10x20x28 cm
stolen

The Youth 1986
iron
48x25x45 cm

Motor: all weather type impala 1987
iron and copper
92x80x120 cm

C.B.K. Artothek Rijnmond, Rotterdam
time is
money
Untitled 1987
beer crates and concrete tiles
40x30x120 cm
stolen

Museum Boijmans Van Beuningen, Rotterdam
PROPORTIONS

The search for ideal proportions has always been an important theme in the visual arts and architecture. Generally speaking the ideal measurements were related to the human being - whether they were derived from the proportions of the human body, as with Leonardo da Vinci, or whether they focused on the perception of the individual. Based on these ideal measurements, proportion systems were developed which artists and architects applied to their compositions. Around the beginning of this century a different system of measurement was introduced. The most advanced factories specified standards for mass production on the assembly line. And since assembly line production is characterized by different components being added to the product at specific points, it is vital that the measurements be exact. The importance of standardization became crystal clear during the First World War when production was increased enormously by the development of standardized parts for weapons and ammunition. As early as 1917 Germany began implementing the national Deutsche Industrie Norm, the DIN, which in the following decades was further developed and internationally adopted. Countless numbers of semi-manufactured products were given standard measurements. These measurements have gone on to largely determine the way our environment appears today, from the paper on which we write to the houses in which we live. Hardly surprising, because in order to satisfy the classical, ideal canon of proportion, standard measurements had to be cut down or adjusted, thereby naturally entailing financial loss.

Around 1986 Joep van Lieshout became engrossed in the classical themes of sculpture, such as composition and proportion. He produced a series of sculptures made of heavy blocks of iron and occasionally wood. But he was not satisfied with them as he found them too personal and academic. He sawed most of them up and put them together again in a variety of ways. Others, which seem more like implements or machines, were prompted by an entirely different aim. The breakthrough came, however, when he started to make stacks of beer crates. The standard measurements allowed for countless different ways of stacking. And then things really took off: stacks of beer crates and pavement stones, pavement stones and ‘Heugafel’ tiles and still more beer crates. In a miraculous way all these different things seem to fit within the same measurement scheme. Thus he not only discovered an objective basis for his work but - and more important - this work fulfils his desire to enter into the real culture in which we live, rather than escape from it.
FURNITURE

Van Lieshout’s ‘Collection 1989’ is a furniture programme that is showcased in galleries and museums. The items of furniture - shelving units and tables - are hardly ‘designed’. They are largely based on standard wood measurements and finished in polyester with equally standard colors. These are not one-offs, but articles that are produced in unlimited series and delivered to order. Moreover Van Lieshout has developed his own system of standard measurements, whereby the pieces of furniture fit together and can be interlinked.

Van Lieshout’s furniture looks much like the kind of cheap modern furniture on sale in furniture emporiums, but with one important difference. Where that cheap standard furniture is made from laminated chipboard, frequently got up to look like something else - an expensive wood for example - the crude polyester structure of Van Lieshout’s furniture makes no bones of the fact that it is made of artificial material. No Baudrillard-like simulacra these. They stand for what they are. Moreover they are stronger and prominently labelled as being ‘washable’. Indeed, that honesty, that absence of regret, forms their aesthetic statement. What more could we want than cheap furniture that is also washable? What is wrong with that? What is the use of meaningless artworks that only get in the way? At least these pieces are useful! Paradoxically it is precisely these questions, addressed within the current debate, which justify a showcasing of Van Lieshout’s works in the art world.

‘Collection 1989’ was followed by ‘Collection 1990’ - a complete sanitary programme with sinks, hand-basins, baths and kitchen units. And as a real contractor, Van Lieshout also installs complete, made-to-measure bathrooms to order with a choice of either chrome-plated or tarty gold-plated taps. At first sight these bathrooms appear to be no more than a logical sequel to the furniture, but actually they serve to point-up the fact that behind the mask of pragmatic professionalism and abstraction, Van Lieshout’s work - implicitly or explicitly - brings into play other aspects such as physicality and, by logical extension, eroticism and carnal urges.
LOW TABLES
The tables measure 25, 50 or 75cm long and wide, or any multiple of 75cm. Their height is 40cm.

HIGH TABLES
The tables measure 25, 50 or 75cm long and wide, or any multiple of 75cm. Their height is 75cm.

LOW SHELVING UNIT
The storage cupboards measure 25, 50 or 75cm long and wide, or any multiple of 75cm. Their height is 75cm.

HIGH SHELVING UNIT
The storage cupboards measure 25, 50 or 75cm long and wide, or any multiple of 75cm. Their height is 150cm.

The legs and tops are 5cm thick.
They are polyester and available in primary and secondary colors and brown.
Edition of three pieces.

Joep van Lieshout 1989
In this scheme Joep van Lieshout outlines his vision of the function of the multiple. He sees the artwork in editions, as a “strategic medium in an artistic process”.

**ART = COMMUNICATION**

I have been working on multiples for several years, and have done so for other reasons than artists who occasionally create an artwork in series. The reason for my speaking now is the fact that I see the making of a multiple as a strategic tool in an artistic process. Although my first multiples were made because I could not separate myself from them and I also wished to keep my work complete. But soon the specific characteristics of the multiple itself formed the reason to work in series. Therefore, the necessity of producing a multiple is equal to the urge of making the artwork. And where this urge comes from I know just as little of as the reason for being involved in art at all. So still the question of necessity is central to the work, and from this position, the question affects all the aspects associated to it, such as production, distribution, and exposure of the artwork but also the influences of those aspects on the constitution of the artwork.

**GENERAL DESCRIPTION OF A MULTIPLE**

1. accessible to low budgets
2. often smaller, therefore easy to hang or install
3. a multiple has an optimal distribution and a maximum effect
4. the characteristics of the multiple criticize the uniqueness and authenticity of an artwork, which enables me to use some theories about art, such as the EFFECTIVITY of art.

It is crucial to strive towards a high effectiveness besides a maximum artistic quality of your work.

You have to determine, in each case, the quality and quantity of your target group so that you can set out your strategy.

If you want to reach a small art elite, you will work differently from when you attempt to reach all those, who could be interested in art. The argument that art becomes a regular consumers item is no usage here, because, as stated before, one should strive for the most universal and timeless quality of the artwork. In other words the quality is an strategic integral part of the work. Moreover, you have to face the following: “Art is a consumption good and good art is a long lasting consumption product, both subject to fashion.”

Before I go further I would like to give an introduction about the two pages from a book by Niccolò Machiavelli, who lived around 1500. Machiavelli was a famous Italian philosopher and political scientist. He looked upon politics as an independent science, with its own methods and approaches, completely free from public morals, virtues and religious ethics.

‘Il Principe’ (‘The Prince’) is his best known publication. It is a handbook for rulers, and it teaches how to obtain, to keep and to gain power and control. The book is widely hated because it teaches how to protect and maintain the position by committing extremely cruel and inhuman acts. At the same time though, the book is largely valued because it gives insight into the unscrupulous and mindless ways in which leaders maintain their power. Due to that, the book is still quite current. In spite of changing times and circumstances, one can associate the mediaeval rulers with the contemporary rulers: multi-nationals, environmentalists, trade unions and perhaps even artists.
This is important: the backbone of the philosophy is that Machiavelli believed in the way we live and not in the way we should live; the reality and not the simulation of reality. In short, Machiavelli was totally indifferent to any kind of idealising.

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Table 1989
polyester
76 x 98 x 192 cm
various private collections

Table 1989
polyester
40 x 25 x 75 cm
XXIII HOW FLATTERERS MUST BE SHUNNED

There is one important subject I do not want to pass over, the mistake which princes can only with difficulty avoid making if they are not extremely prudent or do not choose their ministers well. I am referring to flatterers who swarm in the courts. Men are so happily absorbed in their own affairs and indulge in such self-deception that it is difficult for them not to fall victim to this plague; and if they try to avoid doing so they risk becoming despised. This is because the only way to safeguard yourself against flatterers is by letting people understand that you are not offended by the truth; but if everyone can speak the truth to you then you lose respect. So a shrewd prince should adopt a middle way, choosing wise men for his government and allowing only those the freedom to speak the truth to him, and only concerning matters on which he asks their opinion, and nothing else. But he should also question them thoroughly and listen to what they say; then he should make up his own mind, by himself. His attitude towards his councils and towards each of his advisers should be such that they will recognize the fact that the more freely they speak out the more acceptable they will be. Apart from this, the prince should heed no one; he should put the policy agreed upon into effect straight away, and he should adhere to it rigidly. Anyone who does not do this is ruined by flatterers or is constantly changing his mind because of conflicting advice: as a result he is held in low esteem.

I want to give a modern illustration of this argument. Bishop Luca, in the service of Maximilian the present emperor, said of his majesty that he never consulted anybody and never did things as he wanted to; this happened because he did the opposite of what I said above. The emperor is a secretive man, he does not tell anyone of his plans, and he accepts no advice. But as soon as he puts his plans into effect and they come to be known, they meet with opposition from those around him, and then he is only too easily diverted from his purpose. The result is that whatever he does one day is undone the next, what he wants or plans to do is never clear, and no reliance can be placed on his deliberations.

A prince must, therefore, always seek advice. But he must do so when he wants to, not when others want him to; indeed, he must discourage everyone from tendering advice about anything unless it is asked for. All the same, he should be a constant questioner, and he must listen patiently to the truth regarding what he has inquired about. Moreover, if he finds that anyone for some reason holds the truth back he must show his wrath. Now, many people believe that some prince who gives the impression of being shrewd does so not because he is so by nature but because he has good advice; but this is certainly not so. Here is an infallible rule: a prince who is not himself wise cannot be well advise, unless he happens to put himself in the hands of an individual who looks after all his affairs and is an extremely shrewd man. In this case, he may well be given good advice, but he would not last long because the man who governs for him would soon deprive him of his state. But when seeking advice of more than one person a prince who is not himself wise will never get unanimity in his councils or be able to reconcile their views. Each councillor will consult his own interests; and the prince will not know how to correct or understand them.

Things cannot be otherwise, since men will always do badly by you unless they are forced to be virtuous. So the conclusion is that good advice, whomever it comes from, depends on the shrewdness of the prince who seeks it, and not the shrewdness of the prince on good advice.
Tafels/Tables

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Bergmeubels/Shelving-units

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Computermeubel/Computer-desk

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Prices excluding VAT.
MARKETING

In relation to art, marketing should be concerned with the exposure of the work and not with financial gains. Naturally you just can’t compare art, a non-profit organization, with profit-oriented organizations as they have different aims. But you have to realize that if you are not open to reactions from your target group, the danger exists that the artwork will become too alienated from the market or target group.

EXCHANGE

Exchange is a transaction between two parties who freely decide to interchange goods. There are three kinds of exchange:
1. utilitarian exchange whereby the transaction is only about money and goods.
2. symbolic exchange whereby the object of exchange consists of psychological, social or other non-tangible aspects; for example, a museum exhibition or art reviews.
3. the combination of the first and second, whereby both the tangible and non-tangible objects of exchange are indivisible and dependent on each other.

There are several reasons why art belongs to the last group.

A. Although the price of the artwork is partly set by the market, one can still speak about an artificial price. For example: a young artist should come to a much higher price tag after calculating normal rates for invested material, labour, utilities etceteras.

B. In the case of the internationally successful artist, the status and intellectual confirmation of this type of art is the reason why the price can fly extremely high. The process of value increase is not proportional to the upgrading of the quality of the artwork.

C. In the Netherlands artists can obtain government grants. On one hand this enables artists to produce their work, which is basically good. However, on the other hand, the prices of the Dutch artworks become unrealistic.

There are three distinguishable phases in the development of marketing:
1. the product-oriented philosophy
2. the sales oriented philosophy
3. the marketing concept

1. The product-oriented philosophy was implemented until around 1930. It was primarily directed at the physical products without concern for the consumer. This philosophy is generally followed in times when there is a great demand for mass production. Products are made quickly and inexpensively without loss of time or money for their development.

2. With the sales oriented philosophy which more or less ended by the 1950’s, the goal was to turn over as much profit as possible. The reactions of the target group were not incorporated into product development.

3. The marketing concept was oriented towards the wishes and desires of the consumer. Here the consumer influences activities on all levels: organization, purchasing, production distribution, public relations, sales and product development. Later this marketing concept changed into the Societal Marketing Concept.

This means that the marketers no longer concentrate on the desires of the consumers, but rather on their, and the society’s best interests and well-being. “Should it be sold instead of can it be sold.”

ABOUT THE RESEARCH METHODS

Although several research methods have been developed to measure the effectiveness of profit and non-profit organizations, it is usually not necessary to do marketing research on the visual arts. This is because the organization is rather small and there is usually a good contact between the producer and the consumer. Also, the press, whether asked for or not, will give their opinion about an artist or an exhibition. Furthermore, the artist may compare his work with art related disciplines such as philosophy, architecture and art history.

I believe that the collecting of information is vitally important. Sometimes you even have to provoke opinions about certain aspects of the work. For instance: does the artwork fulfill the goals of the artist and the consumer? Is the production up to standard? Is the price in accordance with the performance?

And then there is the quantitative research method: the frequency or quality of exhibitions, sales, commissions, publications etceteras is a good parameter of efficiency which of course you can compare with the average of other artists, past or present. You can compare them with your own self-determined standards as well. In any case, it’s very important how you incorporate this information into your work, because this will finally determine the quality and activity of the artist.
An interesting point of study is the so-called 'product life cycle' of a product or vision. Doesn't an artwork, like any other product, have an introduction, development, maturity and a declining stage? And, can people influence the product life cycle of an artwork by the following strategies:

- marketing extension and penetration strategy
- marketing segmentation
- product extension
- concentric, horizontal and conglomerate diversification strategy and the forward-backward-horizontal integration strategy.
THE FUNCTION OF THE MULTIPLE

I would like to replace the often used ‘penetration pricing system’ with the so-called ‘skimming price system’. This means that after a multiple has been exhibited in museums and galleries, it will go through a hierarchical system of other exhibition places and finally end up as a dumped product in do-it-self stores and household shops. Every stage in this process has its own conditions, product adaptations and price values. A new life cycle, a new project or a bankruptcy will be the outcome. Will the multiple have the function as catalyst, to rotate the art-world with all its systems, so fast and uncontrollable, that it will explode? Of course there are some fearful aspects and weak points in these marketing theories, especially in relation to the visual arts. For example: there will always be smart guys who will be able to make good selling but empty art. Although I could have been less extreme or given it a friendlier name, I still want to use this ‘mean’ but very useful marketing philosophy in order to give insight into processes often hidden under ‘the pretty picture’ of the uniqueness of the artistic creation. It gives the artist a position to fight with equal weapons and to increase his or her reach. The acceptance of the marketing strategy by the arts is not the same as the annexation of the arts by marketing. At the same time, I realize that I am sticking my nose into risky business, possibly resulting in a doubt about my integrity as an artist.

And is the art object I make still art, when there is such a large detachment between the concept and the art object, or is there something left after the period of frustrating the traditional and subjective aspects of art with the beer-crate sculptures, where random and standardization played a big role? And the attack on uniqueness and non-functionalism of art, with rigid designed series of tables and shelves. And the excavation of authenticity and creativity by producing unlimited series of sinks and custom-made installations and arrangements. So, after these periods, there might be four possibilities:
1. A further research to the definition and constitution of art.
2. To come to another way of thinking, and just make ‘normal’ art, free from all external influences.
3. Find an ordinary job and become happy.
4. A combination of these.

After reconsidering this essay, which I wrote before, I formed the following doubts and statements:
- Is it wishful or possible to execute marketing strategies for my sculptures?
- It’s not difficult to make a high quality artwork when you understand art and the underlying system.
- Do I want to divide my work in two parts: a tangible product, which finds its way in the world... whether in the art world or not. And a non-tangible part... idealistic, priceless, and not tangible!!
- Shall I spread my work or shall I be independent?
- To analyse art seems necessary but also useless. It seems necessary to look what art and integrity mean, and useless because it doesn’t change anything.
- Anyway one can state that the success of an artwork is the result of the reception of the market. This means that the market decides about the quality of an artwork and that all good artworks are well marketed, whether the artist did this on purpose or not.
- Should an artist reject all relations to this world and find his own happiness, not conforming himself to this abject world?
- Are the only things that count in art the sentiments, emotions, personal aesthetics and morale?
Van Lieshout's viewpoint has changed, as is borne out by a newspaper article of 1995: "In the last couple of years I've been working entirely independently of other people and, moreover, I've stopped deploying a marketing strategy. In any case that interests me much less than before. I work on my ideas as I think fit, without considering such things as art mechanisms and contexts like business art." (W. Sütö, 'Volleerd klusjeskunstenaar' (Expert handyman artist), de Volkskrant, 18 August 1995)
In their endorsement of present-day culture, the two Collections ‘1989’ and ‘1990’ go one step further than the stacks of beer crates and tiles that preceded them. Up to a certain point the stacks are still readymades, in the traditional sense of the word, whereby existing products are brought into the confines of the art world in a staging conceived by the artist. Stacks of existing artefacts were first seen in Pop Art and Nouveau Réalisme. Back in 1963 Armand wrote: “For the first time in art history, the artist is not making a comment on reality. He does not interpret. He accepts reality.” Van Lieshout, however, extends that acceptance. Armando remained within the traditional confines of art and artistry with his sculptures of car tyres and paintings with regular patterns of bolts. He and he alone determined the composition and division of the picture plane; he used the form of painting and sculpture to give the everyday a place in culture. The composition of Van Lieshout’s stacks, on the other hand, are determined by computer programs, and he leaves it entirely up to those who buy his furniture to decide whether it is an artwork or a practical object and where to put it. He no longer finds it necessary to celebrate the everyday to point out the exceptional in the ordinary. It is no longer a ‘problem’.

In accepting the reality of our present-day culture, artistry loses much of its traditional aura and thus requires redefining. In Van Lieshout’s view the artist is no longer an artistic genius or intrinsic authority, but an entrepreneur, a builder, a spider in a web of supply and demand offering various different ‘lines’, in the same way as fashion designers have different lines. He employs assistants and he would rather be referred to as the ‘Atelier van Lieshout’ than be identified purely by his own name. Whether or not the products he makes are artworks is a question of marketing, and one which only the buyer can give a definitive answer to.
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<td>100</td>
<td>40</td>
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<td>DFL 5000</td>
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Kitchen unit 1990
polyester
90x100x50 cm
various private collections

Kitchen unit 1990
polyester
90x100x50 cm
private collection, Machelen a/d Leyen

Desk 1990
polyester
75x225x225 cm

Shelving units 1991
polyester
75x50x200 cm each
private collection, Colmar
Steven led Wendy, his latest conquest, along the tall corridor. As their footsteps resounded hollowly he pressed her warm body firmly against his own well-trained torso. The firm nipple of her fulsome left breast pressed against the white cotton of his shirt. She looked penetratingly at him with her amber-colored eyes. A large man with broad shoulders, Steven's upper-arms were so muscular that the sleeves of his billowy shirt were stretched tight as he held Wendy closely. She had already partly unbuttoned his shirt in the study and some of the dark hair on his chest could be seen poking through. The hair had felt stiff but soft when she explored his broad chest with her fingers, searching for his nipples. Steven had let out a low moan of pleasure as she massaged the large fleshy surfaces. She was surprised how quickly the soft flesh changed into a thick, hard knob. Opening her mouth Wendy ran the tip of her tongue round her full lips. Steven closed his eyes, abandoning himself completely to his experienced seductress. Her lips closed round the hard flesh as she licked the top of the knob with her tongue. Suddenly Wendy bit into his right nipple, although it was hard and unexpected Steven enjoyed the gentle pain.

As they walked along the corridor of the dark house Steven grasped the mysterious woman even more tightly to him. He felt her firm buttocks move underneath her short skirt. He wondered when she had managed to take off her pants. He slid one of his long, fleshy fingers along the division between the two well-rounded half-moons, while his other fingers eased the soft woollen material up. Wendy closed her eyes. Once again that intense smile appeared on her face, at the same time Innocent and mischievous. She groaned and half turned her body round so that she was completely facing him. Her breasts against his midriff. He felt Wendy's lower body rubbing warmly against the now extreme tightness of his jeans. Steven's finger slipped in between her thighs. He felt the warm damp hair between her legs. Their bodies thus intertwined they entered the bedroom. The corners of the room were lit up by the flickering of thick candles in old candelabra. In the romantic light Wendy saw the huge wooden bed. She was surprised by the coarse construction in such refined surroundings: rough beams held together by enormous bolts. The bed seemed to have been specially made for the sexual pleasures of this enormous man. She'd by now realized that Steven liked heavy petting. When she went for him hard, he enjoyed himself visibly and tangibly. He quickly pulled back the bedspread and the sheet. Then turning towards her he revealed something that made gasp. As she took in the risk she ran if she gave herself to that enormous apparatus, Steven lay down on the bed. To her amazement, he bound the strangulation chord, which was hidden in a hollow in the mattress, around himself.
A PLACE FOR ROTTERDAM ART

Temporary annexe to the museum
The floor consists of sheets of underlay fitted over the existing grid above the light-well in the inner courtyard of the museum. The walls and roof consist of prefabricated sandwich panels and are bolted to one another and to the museum building.

Price from NLG 40,000

Permanent annexe to the museum
All the grids in the inner courtyard are sealed using concrete or translucent panels. The existing concrete surrounds to the grids would make excellent foundations. The walls are in brick and the roof contains light domes. The annexe itself measures 7 x 7 meters or 7 x 14 meters and an additional storage or exhibition space measuring 25 x 5 meters is created underneath the grids.

Price from NLG 60,000

New Building
This consists of a (Van Lieshout) Museum Utility Unit and a standard shed. The Utility Unit is very easy to install and move and contains all the necessary facilities, such as an office, counter, toilets, cloakroom, heating and alarm. It measures 3.5 x 12 meters. The standard shed is available in many sizes and dimensions and can usually be dismantled.

Price from NLG 120,000

Joep van Lieshout 1993
Five years ago when my apartment (built 1938) was being refurbished I asked Joep van Lieshout to design the bathroom. I suggested enlarging the existing bathroom by incorporating the toilet and a section of the corridor. I wanted the old bath to be replaced by a shower, and instead of having a door between the bedroom and bathroom I wanted a recessed area for storing towels and bathroom accessories. Apart from that Van Lieshout had a free hand.

He was immediately enthusiastic, but preferred not to make another bathroom entirely of polyester as he had done for Fons Welters (his gallery owner). Instead he was toying with the idea of using laminate, tesserae or glass for the walls. A few days later he rang me at home late one evening. He’d found the answer: tiles! The ivory tiles that were being used in the refurbishment, but right up to the ceiling.

In between times he’d made an asymmetrical piece of furniture with, on one side, the shower...
tap and, on the other, a floating washbasin, free-standing from the wall. He still hadn't decided on the overall color of the bathroom, which was to be carried out in polyester, although he was leaning towards savannah brown. He'd just finished making an orange bar for the museum, and so I was a bit worried about ending up with a wild combination of colors for my bathroom: something green with mauve; but I wasn't very keen on the idea of that brown either. I was absolutely aware of the risks in giving him carte blanche.

The search for floor tiles proved fruitless. Everything was ugly and expensive, in fact nothing fitted with the ivory wall tiles. Joep said that a polyester floor would be extremely cheap and quick to cast, easy to maintain and warm to walk on with bare feet. It was particularly the latter that was the deciding factor. Joep suggested we should keep everything the same color: ivory for both the tiles and the polyester. That really appealed to me: modest and functional. And even in a color I liked. “Yes,” said Joep “and gold taps would go perfectly with it.”
Office unit 1991
wood and formica
3 sections
Desk 75x50x225 cm
Cabinet 75x50x250 cm
Shelving unit 75x50x150 cm

Exhibition 1992
Galerie Roger Pailhas, Marseille
“Since it’s my very hope that together we shall attain the very summits of carnal lust, I feel it incumbent upon me to give you all due warning of the astounding symptoms that characterize my orgasm: it’s preceded and accompanied by a hideous howling, and the jets of sperm spurt right up to the ceiling, sometimes as many as fifteen or twenty times. The frequent repetitions of these pleasures never quenches the flow; my tenth ejaculation is just as violent and profuse as the first, and the following day I never feel the slightest lassitude as a result of my exertions of the previous evening. As regards the organ from which all this emanates: here it is,” said Minski exposing a torpedo of eighteen inches long and six inches in circumference, surmounted by a blood-red mushroom the size of the crown of a hat. “Yes, here’s this paragon; it’s always in this state in which you see it now, even when I sleep, even as I walk.”
NIKI LAUDA was born in Vienna on 22nd February, 1949.

<table>
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<tr>
<th>year</th>
<th>car</th>
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<th>comment</th>
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<tr>
<td>1971</td>
<td>March</td>
<td>NQ</td>
<td>Niki Lauda rented a March racing-car.</td>
</tr>
<tr>
<td>1972</td>
<td>March</td>
<td>NQ</td>
<td>Again he rented a racing-car but he wasn’t taken seriously by March.</td>
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<td>1973</td>
<td>BRM</td>
<td>17th</td>
<td>He bluffed about possible sponsors and made a contract with BRM for three years.</td>
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<td>1974</td>
<td>Ferrari</td>
<td>4th</td>
<td>Niki didn’t like the atmosphere at BRM, cut the contract and went to Ferrari.</td>
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<tr>
<td>1975</td>
<td>Ferrari</td>
<td>1st</td>
<td>Ferrari developed a new chassis. Niki had five grand prix wins and became world champion.</td>
</tr>
<tr>
<td>1976</td>
<td>Ferrari</td>
<td>2nd</td>
<td>Niki Lauda married and had a severe crash at the Nürburgring. He inhaled a dangerous amount of toxic fumes and suffered severe burns. When he heard the last rites given to him by a priest he jumped up and drove the next race with marvellous results.</td>
</tr>
<tr>
<td>1977</td>
<td>Ferrari</td>
<td>1st</td>
<td>Despite becoming the 1977 world champion he developed a bad rapport with Ferrari.</td>
</tr>
<tr>
<td>1978</td>
<td>Brabham</td>
<td>14th</td>
<td>Lauda stated that he was tired driving around in circles and founded Lauda Air with two air planes of the type Fokker 27. This unexpected retirement aroused many rumours but he did not care.</td>
</tr>
<tr>
<td>1982</td>
<td>McLaren</td>
<td>5th</td>
<td>After a stop of two years he returned with McLaren and proved his qualities as a top driver.</td>
</tr>
<tr>
<td>1983</td>
<td>McLaren</td>
<td>10th</td>
<td>He had some problems with his car and pit stops.</td>
</tr>
<tr>
<td>1984</td>
<td>McLaren</td>
<td>1st</td>
<td>Niki had a marvellous season with his very fast team mate Alain Prost and became for the third time world champion.</td>
</tr>
<tr>
<td>1985</td>
<td>McLaren</td>
<td>10th</td>
<td>Niki Lauda retired at the end of the season after a year of disappointments. Lauda Air exchanged his two Fokkers for two BAC 1-11/500, bought two Boeings 737-300 and flew charters to Greece, Spain, Egypt and other destinations.</td>
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Lauda Air bought two Boeings 767-300 ER and opened airlines to the Far East and Australia. He received a world-wide airline concession. In May one of the Boeings 767-300 ER crashed because of a construction-error. All 213 passengers and 10 crewmembers died. In May the first Boeing 737-400 was delivered.

1992
Lauda Air aquired a Boeing 767-300 ER and started a co-operation with Lufthansa.
Lufthansa obtained an 26.5% ownership in Lauda Air. A second Boeing 737-400 was delivered.
Weekly destinations of Lauda Air are Miami (4x), Los Angeles (3x), Hong Kong (1x), Bangkok (3x), London (6x) and Sydney/Melbourne (1x). The company owns 8 airplanes which are christianed Johann Strauss, Franz Schubert, James Dean, Enzo Ferrari, Bob Marley, John Lennon, Elvis Presley and Janis Joplin.

Niki Lauda is now one of the three executive directors and flies regularly as a pilot.

Joep van Lieshout 1993
Office unit 1993
mixed media
240x230x440 cm
Galerie Fons Welters, Amsterdam
in collaboration with Klaar van der Lippe

Office unit 1993
wood
240x200x400 cm
Jack Tilton Gallery, New York
destroyed
Lamp 1993
mixed media
65x30x15 cm
destroyed

Office unit 1993
wood
240x200x400 cm
Jack Tilton Gallery, New York
destroyed

5 Office units in the basement of the Jack Tilton Gallery 1993
wood
250x1000x1800 cm
Jack Tilton Gallery, New York
in collaboration with Klaar van der Lippe
1. **DE GEVELMAL**

- **SUGARFIND SANDWICH MATERIAL**
- **VENSTERGAT**
- **DEURSPIT**
- **AFDEKTEN MET STRECOPIES MULTIPLEX (6MM)**

2. **HET Gieten**

- **GEVEL**
- **GENT EMMER**
- **ZELFDECORATIE EQUILIBRANT GEVELAFWERKING GIELEN**

3. **HET GEVELPANEEL**

- **ZELFDECORATIE EQUILIBRANT GEVELPANEEL**
- **VENSTERGAT**
- **DEURGAT**
- **SCHADUW**
4. **DE KOZIJN MAL EN HET GIETEN**

5. **HET KOZIJN**

6. **DE MONTAGE V/D KOZIJNEN**

7. **KLAAR VOOR GEBRUIK**

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Modular Building System 1984
mixed media
250x300x700 cm
Galerie Bob van Orsouw, Zürich

Modular Building System 1994
mixed media
250x300x600 cm
FIAC Galerie Roger Palilhas, Paris
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KOOLHAAS

It is not surprising that Joep van Lieshout and Rem Koolhaas’s Office for Metropolitan Architecture enjoy such an intense collaboration. For various OMA buildings, Van Lieshout has designed bars, toilets and, occasionally, more specific components such as the synthetic roofs of the enigmatic ‘Dutch House’. This is not simply because Van Lieshout is cheap - although sometimes that will certainly be an important factor - but because he and Koolhaas share an aversion to the preconceived view that architecture, design and the visual arts, by being painstakingly designed and styled, should necessarily express something more lofty or beautiful. The design is not their primary concern, but the use that their products will be put to and the life they take on, the way in which they provide an adequate answer to everyday culture. In his essay ‘Die erschreckende Schönheit des zwanzigsten Jahrhunderts’ (The terrifying beauty of the twentieth century) Rem Koolhaas wrote: “If there exists a method in our work, it is the method of a systematic idealization, a spontaneous overestimation of the existing, a theoretical bombardment which, by retroactive and ideological advances, seizes even the mediocre.” A statement which could equally well be applied to Joep van Lieshout’s work.

In the Spanish architectural magazine ‘El Croquis’, Rem Koolhaas responded to Alejandro Zaera’s comment that he sacrificed the precision of the detail to the global concept of his buildings: “Critics say the detail of the projects is simply bad, and I say there is no detail. That is the quality of the building. No money, no detail, just pure concept.” And in an interview with ‘de Architect’ he stated: “I have the feeling that at this moment perfection is of no avail to the world. That’s why we try to avoid it, even in our best detailing. There’s still an obscene relationship between the complete disintegrating chaos of the world and that curious urge architects have to achieve a perfectly finished end result. (…) It’s not that we pay little attention to the detail. Of course not. But we don’t want it to degenerate into a fetish.” The deliberate incorporation of Joep van Lieshout’s work, as in the Grand Palais in Lille, suddenly brings the validity of this approach into sharp focus. The garish colors of the toilets, bathed in clinical strip-lighting, give the architecture all at once a brash self-awareness which shows that the detailing is no accident.
SURVIVAL 1: JEWELLERY

Weapons have never been purely fighting implements. They have also always been pieces of jewellery. And conversely jewellery has always been an indication of the wearer’s power, acting as trophies and badges of honour. The medals and ribbons worn by soldiers are an expression of their heroic deeds carried out at the front. Their helmets are decorated with the heraldry of their country, just as sponsors’ logos decorate the helmets of car and motorcycle racing drivers today.

The more beautiful the weapon the greater the owner’s pleasure in using it. The opening scenes of James Bond films show the protagonist elegantly posing with his pistol: licensed to kill. The weapons wielded by heroes in films and television series are not just any weapon: Dirty Harry’s Magnum revolver is larger than is strictly necessary for his job; Sonny Crockett’s pistol in ‘Miami Vice’ gleams every time he takes it out of its shoulder-holster. The weapons used by Rambo and Schwartzenegger are virile extensions of their rippling muscular bodies, while the cartridge belts accentuate the bulk of their torsos. Their enormous riot guns and machine guns turn them into walking erections and you know from the word go that the seed will have to come out. But the best of all has got to be a Kalashnikov: a gun like an agricultural implement that any smith could mend, the weapon of rebellious farmers and factory workers. What could be more beautiful than the sight of guerrillas with their crossed cartridge belts under their sombreros and a Kalashnikov at the ready? The A-Team, who knock up their weapons themselves, are more
ASSEMBLY OF GUN
ATELIER VAN LEISHOUT

3 PACKAGES CONTAINING:
1) BARREL, TRIGGER
2) MAIN HOUSING
3) FIRING PIN, SPRINGS, HAMMER

TAKE THE MAIN HOUSING
REMOVE THE 2 BOLTS SCREWED ON THE HAMMER GUIDE. THESE WERE A DECOY AND HAVE NO FURTHER USE FOR THE GUN.

NOW TAKE THE FIRING PIN PLUS THE FIRING PIN SPRING (FAIRLY STRAIGHT PIECE OF WIRE)


NEXT SCREW ON THE HAMMER ADJUSTING IT TO A VERTICAL POSITION.

INSERT THE TRIGGER FROM THE OTHER SIDE.

IF ALL IS ASSEMBLED WITHOUT MUCH FORCE THE PARTS SHOULD ALL MOVE RELATIVELY SMOOTHLY AND RECOIL IF NOT IT MIGHT BE NECESSARY TO MAKE SOME MINOR ADJUSTMENTS.

LASTLY SCREW THE BARREL INTO THE FRONT OF THE HOUSING AND ADJUST IT TO A VERTICAL POSITION.
XIV HOW A PRINCE SHOULD ORGANIZE
HIS MILITIA

A prince, therefore, must have no other object or
thought, nor acquire skill in anything, except war,
its organization, and its discipline. The art of war
is all that is expected of a ruler; and it is so use-
ful that besides enabling hereditary princes to
maintain their rule it frequently enables ordinary
citizens to become rulers. On the other hand, we
find that princes who have thought more of their
pleasures than of arms have lost their states. The
first way to lose your state is to neglect the art of
war; the first way to win a state is to be skilled in
the art of war.

Francesco Sforza, because he was armed, from
being an ordinary citizen rose to be duke of
Milan; his sons, because they fled the hardships
involved, sank to being ordinary citizens after
being dukes. You are bound to meet misfortune
if you are unarmed because, among other rea-
sons, people despise you, and this, as I shall say
later on, is one of the infamies a prince should
be on his guard against. There is simply no com-
parison between a man who is armed and one
who is not.
HELP WANTED

ATELIER VAN LIESHOUT
KEILEWEG 26
3029 BT ROTTERDAM HOLLAND
RC (31) 10 4778212

Carpenters: with basic knowledge of:
electrical wiring, plumbing, different building materi

Fibre glass workers:
with some experience working with resin and fibreglass

Custom car builders: with experience with hy-tokes, American and European cars, painting
and interior work

Designers: no experience needed

Knowledge of one or more of the following
languages required for all applicants:
English, French, Dutch and/or German
THE MASTER AND SLAVE-UNIT - I

The aim is to create a versatile and multifunctional building-system, which can be employed for permanent or temporary dwelling, refuge-shelter, sumptuous villa, office/studio or recreational purposes.

Important aspects in the Master and Slave-unit concept are:

innovative
versatile
spatial
aesthetic
inspirational
energy efficient
inexpensive
truckable

The Master and Slave-units are not limited in size or configuration, they offer user-determined architectural opportunities to create, expand or transform their own building at any time.

The Slave-unit:
A Slave is a cross between an annex and a piece of furniture. They supply extra width without adding excessive volume. Shape, size and height are dependent on their function. For example: a sleep-unit or a lounge-unit can be lower in height than a bureau-unit.
Their interior-furnishings can also be multifunctional and transformable from one function to another:

dinette>bed>cabinet>desk.

The utility-unit is a special kind of Slave. This contains all necessary facilities and equipment to run the house. Instead of the wall-panels one or more Slave-units can be 'clicked' to the Master-unit. They do not need any foundation at all and are finished the same as the Master-unit. This concept will allow customers to build their own addition themselves or change the exterior, conventionally or unconventionally.
THE MASTER AND SLAVE-UNIT - II

Some examples or Slave-units:

- lounge-unit
- sleep-unit
- utility-unit
- dinette-unit
- sit-pit-unit
- bureau-unit
- staircase-unit

Application:
Depending on the function of a building you can make different clusters of Master and Slave-units. The system is not tied to one level, surface or size, therefore many varieties are possible.

Private dwelling:
One utility-Slave is connected to one or more Master-units. To your own view you can add some other Slaves.

Dwelling/studio:
An utility-Slave, or a group of Slaves, added to an assembly of Masters or an existing shed.

Recreation:
One Master-unit with build-in facilities and some slide-out Slaves will offer you a comfortable and cozy holiday-house.

Emergency/refuge-housing:
Every family will receive a Master-unit with the necessary furniture like: tables, chairs and bunk-beds. Cooking, sanitation and gathering can be concentrated in a central cluster. At a later stage it is possible to move an change an emergency-dwelling to a normal house by adding utility and other Slaves. It is also possible to make cheap multi-story housing estates. For every floor a concrete slab and several combined utility-staircase-units are installed. The space in between units is covered with prefab concrete floor and roof-slabs and facade-elements. Building can be reduced to piling and stacking because all the facilities such as entrance, stairs, kitchen, bathroom, heating and electricity are pre-installed and need only to be hooked up.

Built into every 'Master and Slave' is the future possibility that the assembly can always be quickly converted in size, shape and use.

Joep van Lieshout 1994
URGES 1: THANATOS

According to Michel Carrouges, a bachelor machine is a machine which turns love into a death mechanism. The myth of the bachelor machine, which he tracked down in a series of artworks, is the most important myth of the machine age. The over-exaggerated inflation of the desire for sex, as depicted by Joep van Lieshout's enormous pricks, would appear to slot into that myth. And inextricably bound up with the latter is the equally intense desire for death, which is expressed in another series of works. The bed he made for strangulation sex with its slowly tightening straps serves as the best example. However, certain early works, such as the 'Operation Table', also show a perverse scientific-like interest in the body, coupled with torture and the final death of the research object. This is also reflected in the design of the table, a cross between a butcher's block and a gynaecological chair, the sex of the research object relatively accessible. The knives that successively paralyse, then deaden the lower body and finally bring about a gradual death are hidden in the table. Van Lieshout's fascination with fast motorized sports is also linked to this research into the limits of the libidinous extension of the body.

In order to win, the driver must become one with his vehicle: the motorbike is clamped between his thighs, the bucket seat of the car in which he is strapped by a full-harness seatbelt is moulded to his body. Van Lieshout took part in the Opel Ascona race at Zandvoort in the 1990 and 1994 seasons. The car, which was a hotted-up version of one of the most banal and bourgeois cars ever produced, was sponsored by artists, galleries, art magazines and museums. As such the project was an example of Van Lieshout's entrepreneurship. The man who senselessly flirts with speed, technique and danger shows how he uses the world of contracts and pragmatism to seek out the boundaries of life.
in fact no more than long beams behind which waiters can serve large numbers of congress visitors to refreshments in the break. The 'Bussing Stations' in the self-service restaurant in the Museum of Modern Art in New York fulfil an even more banal function: they serve as a surface for depositing large quantities of dirty crockery and cutlery, packaging and left-over food after a quick snack. It's got to go somewhere.

The bar was originally an American phenomenon, as we are reminded by the name of Adolf Loos's famous 'American Bar' in Vienna, one of the first places in that city where you could order a drink and consume it standing up. The name 'bar' itself also reflects that item of furniture's lack of pretensions. The English dictionary gives the first definition of the word 'bar' as rod or beam, and secondly a separation or barrier. The bars we are talking about form a separation between the domain of the bartender, his supplies and his till, and the public domain. Joep van Lieshout's bars are true to their name, particularly the enormously long 'Bar Units' in Rem Koolhaas's 'Grand Palais' in Lille, which are
Bussing Stations 1996
polyester
2 stations 130x65x305 cm
4 trolleys 90x45x80 cm
4 garbage cans 100x50x50 cm
Museum of Modern Art, New York
LOADING INSTRUCTIONS VAN.

1. REMOVE FURNITURE. TABLE (SLIDES OUT SIDEWAYS) BENCHES, WRITING CABINET AND ROLL UP COMMODES OF THE FLOOR. THIS CAN BE STACKED IN THE BACK AT THE VERY END.
3. NOW Put THE WHITE SQUARE INSIDE THE BIG, VOLUME TOWARDS THE FRONT OF THE VAN.
4. THEN COMES THE TRICKY PART OF PLACING THE STUDY'S SUBJECT INSIDE THE WHITE SQUARE. SLOPES INSIDE THE STUDY; IT IS A VERY TIGHT FIT AND NOT EASY TO SLIDE IT IN AT EXACTLY THE RIGHT ANGLE TO MAKE IT GO AS FAR FORWARD AS POSSIBLE - IN THE CASP OR DROP SIDE. SINCE THE FLOOR OF THE STUDY IS EXTREMELY DRY. FUTON CARDBOARDS ON IT TO ENABLE THE WHITE SQUARE TO SLIDE IN.
5. FINALLY THE FURNITURE FITS IN IN AN UPRIGHT POSITION (CUSHIONS AND SOME LEFT OVER SCULPTURES CAN BE PUT IN THE BATHROOM)

It is essential - since the bigger sculptures are not wrapped - that no two sculptures touch without some insulation cardboard is very good for tight fit. Also make sure the brown chamber cannot wiggle about.
DESIRE MACHINES

It works everywhere, at times ceaselessly, at others with interruptions. It breathes, warms, eats. It shits, it fucks The it... Everywhere there are machines in the truest sense of the word: machines of machines, with their clutches and gear-shift assemblies. An organ machine connected to a source machine: the current brought forth by this one is interrupted by the other one. The breast is a machine for the production of milk, and coupled with it there is the mouth machine. The mouth of the anorexic keeps the balance between an eating machine, an anal machine, a speaking machine, a breathing machine (asthma attack). In this sense, everyone is a home mechanic, to each person his own little machines. An organ machine for an energy machine, continuous currents and intersections. President Schreber has the celestial rays in his ass. Celestial ass. And don't worry, it functions; President Schreber feels something, produces something, and beyond that he is capable of developing the theory of it. What happens are machine effects, not the actions of metaphors.
SKULLS

In stark contrast to all Atelier van Lieshout’s self-expanding structures, machines and weapons, he has also produced a series of cells and helmets in which the owner can conversely withdraw and shut himself away from the world. Some of Van Lieshout’s cells are simply cabins to which someone can retreat to concentrate. Others are reminiscent of ‘floating tanks’ where you experience total relaxation sealed off from your surroundings and floating weightlessly on a saline-solution. The firm Koan Float claims that a period in the tank counteracts stress and pain, as well as raising one’s general resistance. Other firms even promise that a one-hour session in a floating-tank is equal to several hours of night sleep. Van Lieshout’s cells and helmets, however, are based on the Orgone Accumulators developed by the psychiatrist Wilhelm Reich in America towards the end of his life. Reich maintained that orgones were a mysterious, healing life-force that permeated everything. They are attracted by concentrations of themselves and, because the sealed Orgone Accumulators raise the body and air temperature by one degree, they attract more orgones. Reich’s experiments finally landed him in prison and his Orgone Accumulators - dubbed ‘sex boxes’ by the authorities - were destroyed and many of his books and manuscripts were burned.

In their book ‘L’Anti-Oedipe’, the philosopher Gilles Deleuze and the psychiatrist Félix Guattari described the schizophrenic not as someone who has Freudian problems with his mother or father, but with capitalist society. “He does not experience nature as nature, but as a production process. Neither man nor nature exists as a presence, but only as a process by which one thing generates another and by which the machines are linked up to each other. Everywhere production, or wish-fulfilment machines, the schizophrenic machines, all-embracing generic life: Me and Not-Me, inside and outside have become meaningless.” Over and against this endless, creative libidinous coupling stands the ‘body without organs’, the condition of the schizophrenic once he is sated by all his excesses. “To the body without organs, every machine connection, every machine production, every machine noise has become unbearable. Under the organs he feels the repulsive larvae and maggots and the careless activity of a God, who, in the act or organising, strangles him.” Deleuze and Guattari also quote Antonin Artaud: “The body is the body / it is on its own / and does not need any organs / the body is never an organism / organisms are the enemies of the body.” If Joep van Lieshout’s work can be characterized as a constant ambivalence between adapting to a system and perverting it, then the cells are the pivotal element which keep the oeuvre both in balance and in suspense.
HOW TO USE AN ORGONE ENERGY ACCUMULATOR

The Orgone Energy Accumulator was invented by Reich in 1940. The accumulator is intended to concentrate, for practical use, the Orgone energy that pervades space. The accumulator charges the organism with the bio-energy.

General Use of an Orgone energy Accumulator

The cabinet accumulator can be used for any undercharged condition (Anorgonia), including but not limited to the following: at the first suspicion of the onset of colds or other illness; in acute states of fatigue or exhaustion; after operations or childbirth; for chronic low, weak, or tired states; for shock; for food poisoning; for fainting attacks; for low resistance to infection.

Local Use of an Orgone Energy Accumulator

The local accumulator (cone, funnel, blanket, shower, etc.) is applied promptly within a few minutes to wounds, burns, contusions, lacerations, sprains, and other injuries as soon as possible after an accident. It is placed over affected areas, metal side inward, close to but not touching the body.

INSTRUCTIONS

Length and Frequency of Irradiation to Luminate

For general charging, one daily half-hour session is recommended. The initial local application is half an hour; application can be repeated several times a day for shorter periods of time, as needed. Irradiation with the cabinet accumulator is continued for either thirty minutes or to the point of lumination. Lumination is accompanied by the subjective feeling of heat, expansion, fullness—a soft, glowing sensation. Lumination time varies, depending on weather, time of day and personal energy levels. The accumulator is most effective under 50 percent humidity, around noon, in a fresh atmosphere. Overcharged people may not tolerate sitting inside the accumulator for more than five to ten minutes, while an undercharged individual may need weeks of daily charging to luminate.

Overcharge

Overcharge can be discharged by immersing affected body parts in liquids (water, alcohol, with hazel, epsom salts) or by prolonged soaking of the whole body in a tub bath.

Storage

The accumulator should be stored in a dry and airy place, such as a garage, balcony, or outbuilding. Local devices can be stored inside plastic bags, away from living areas.

Warning: Never use the accumulator near television, fluorescent lights, radium-dialled watches, microwave ovens, X-ray machines, or nuclear power plants. Do not use it during periods of nuclear fallout or during thunderstorms. Do not apply electric currents to the metallic parts.
REICH, WILHELM (Dobrzynica, Galicia, 24 March 1897 - Lewisburg, United States, 3 November 1957) Austrian psychoanalyst, worked from 1918 at the Vienna Neuropsychiatric Institute, graduating in medicine in 1922. He became a member of the Vienna Psychoanalytic Society as early as 1923. He focused mainly on psychoanalytic technique. His book Charakteranalyse (1933; Character Analysis) in which he describes and explains the different forms of (neurotic) character structures mainly as protective armour, has become a classic of psychoanalytic theory. Reich was also active in politics: he attempted a synthesis of the theories of Marx and those of Freud and in 1928 he founded the Austrian ‘Sexpol’ (sexual-politics) movement. His attempts to modify Marxism on the grounds of psychoanalytic insights (including the sexual needs of the individual) led him to be expelled from the Austrian Communist Party. The same fate befell him in Berlin in 1932. After spending some time in Copenhagen and Oslo, he settled in the United States in 1939. In the meantime Reich had developed his views to the extent that he connected the libido/sexual urge and the function of the orgasm with electrical charges and psychosomatic functional disturbances. He discovered ‘bions’ as the origin of life, and he connected these with cancer. Moreover he claimed to have found a method to capture cosmic rays for which he made cabinets and used these for therapy. Reich founded a school and to this day pupils practise his ‘vegeto or orgone therapy’. There is little doubt that Reich suffered from increasing paranoia, or a paranoid form of schizophrenia, in the last decades of his life; and this is also borne out by his last writings. The last few years have seen an increasing

revival of interest in Reich, particularly among the young. This goes hand in hand with the liberalization of sexuality on the one side, and a renewed interest in Marx and in marxist revolutionary theories and movements on the other.

Prof. Dr. G.A. Ladee

Works: Der Trichtercharakter (1925); Die Funktion des Orgasmus (1927); The genital and the neurotic character (1929); Dialektischer Materialismus und Psychoanalyse (1929); The sexual revolution (1930); Charakteranalyse (1933; Eng. edition 1945).

ARCHITECTURE

With several of his works Joep van Lieshout entered into the domain of architecture. Although this appears a logical progression from his furnishings and complete interiors, the question nevertheless remains as to whether the houses - the 'Master and Slave-Units', the 'CastMobile' and the 'Mobile Home for Kröller Müller' - can actually be classed as architecture. A unique aspect of architecture is that the architect is not solely working for his client, he also has a responsibility to society. The building must fit into its surroundings, but it must also comply with rules and regulations, and there are countless authorities to ensure that it does. But because the life-span of a building is usually a long one, during the design process the architect not only has to consider his first client but must also aim to make the building usable for any future occupier. In the case of large-scale social-housing and office buildings this is termed conforming to market forces.

Van Lieshout's structures seem largely oblivious to all of this. It is typical, for example, that Galerie Fons Welters's new entrance was realized before the scheme was granted permission by the Amsterdam building inspectorate. Van Lieshout focuses entirely on the client, translating his desires from the inside out in a building. In fact Joep van Lieshout's buildings are simply interiors, closely reflecting the inhabitants wishes and personalities. Moreover they aim to offer optimum comfort - both physically and in terms of atmosphere. Inside the designs are dominated by a surfeit of deep-pile carpets, soft cushions, luxurious materials like snakeskin, and by intensely suffused colors that evoke a heightened atmosphere. These interiors engage in a shameless interplay of clichés often displaying a certain tarty garishness. And the exterior is the uneven result of that. The modular character ensures that if the buyer has more money to spend, or requires something new or simply gets it into his head that he wants something new, he is able to add new products and extensions to the existing basic outfit. The mobile homes can even be moved at the drop of a hat, if the owner decides he has had enough of the view. And here Van Lieshout's architecture plays on an essential aspect of the capitalist West, on an economy based on growth and instant satisfaction of individual desires. It is an architecture that is stripped of all the cushioning of society, one which allows people's most intimate needs to hang out.
JOEP VAN LIESHOUT INTERVIEWED
BY KLAAR VAN DER LIPPE

"So your use of color in space is it governed by chance, association and randomness?"
"Yes."

"Do you value color? Do you make a distinction between colors that you like and those you don’t? It seems as though you find all colors equally beautiful, don’t you really have any preference?"
"No."

"You use a lot of vivid colors in your work. Those of course are the most striking?"
"Yes."

"To put it another way. It’s the primary and secondary colors which are a sort of physical given. But with you they’re signals or traffic colours, that’s what we most closely associate with yellow, red and blue. Is that what lies behind your choice?"
"Yes."

"Looking round me here, though, I see completely different colors being brought in. Is that what you’re working with at the moment?"
"Yes."

"What particularly excites my senses is seeing color applied to large surfaces. It’s a completely new kind of experience. I feel it has a very stimulating effect on my state of mind. Do you feel that too?"
"Yes."

"Are there any colors that make you feel gloomy? Stupid question since I know you like all colors. In fact, I suppose it’s the absence of color that’d make you gloomy? Am I right there?"
"Yes."

"What do you think of this color combination, I find it really vibrant? What is it exactly: ochre combined with that pink wood, completely unexpected, but it’s actually extraordinarily vivid. Does it give you the same thrill?"
"Yes."

"Are there people whose choice of color you admire? I see you’ve got a book of René Daniels here. Do you like his use of color?"
"Yes."

"And what about Peter Struycken’s use of color? Because when I hear you talking about color and the combination of chance, on the one hand, and that intensity on the other, then it’s got to be something in which you can almost identify yourself. Would that be right?"
"Yes."

"But did you really mean it when you said that all the painters you know use color in an ugly way?"
"Yes."

"What always strikes me is how color changes, particularly taste in color. Purple and orange, for example, are typical colors which reflect trends and particular times. Are you fashion conscious in that respect?"
"No."

"But there are also colors that appeal to you to a greater or lesser degree at different times, you use them and then you drop them again."
"Yes."

"I don’t notice much color in your own interior. Really just the colors of the materials. The only color accents are in the curtains, fairly large, pronounced areas of color, the inside of your sleeping unit and your files. Is that deliberate?"
"Yes."

"People and color, intense colors, do they appeal to you? For instance, are you attracted to a woman who’s dressed in an all-pink suit like me?"
"Yes."

"Joep, thank you very much, it was a great interview."
EXPLANATORY MANUAL TO ACCOMPANY
THE WORKS OF JOEP VAN LIESHOUT

Introduction
This manual aims to provide an insight into the work of Joep van Lieshout and Atelier van Lieshout. In the future it will be expanded. And further information will be provided at forthcoming exhibitions in galleries, museums and other related venues.

Chapter I
1.1 General
After leaving the Rotterdam Academy of Fine Arts and Ateliers ’63 Joep van Lieshout (Ravenstein, 1963) set himself up as an independent artist in Rotterdam. Increasingly large-scale commissions have led to his employing assistants. Since 1995 the work is presented as products of Atelier van Lieshout.

1.2 Materials
1.2.1 Metal
Van Lieshout’s first official work is ‘The Forge’ of 1983. It is largely made out of metal, the bellows are of canvas. Metal is sometimes used for the construction of larger pieces of furniture, but is coated in fiberglass and polyester. The jewellery and the weapons, knuckleduster, knife and pistol are naturally made of metal. In his most recent work metal is used for its high heat-resistance: smoking and roasting ovens.

1.2.2 Polyester
Polyester is the best known of Van Lieshout’s materials. Its use has been described in a separate manual. The manual on building construction contains a chapter on polyurethane sandwich-construction. Polyester is simple to process yet the result is extremely durable. The addition of pigment gives the object a specific color, but it is not resistant to long-term exposure to sunlight. A colored object can always be given a new topcoat by Van Lieshout.

1.2.3 Wood
Wood is Van Lieshout’s most frequently used constructional material. The majority of the polyester furniture has a wooden interior structure. Timber is an excellent building material. Van Lieshout has also written a chapter on how to build timber frame structures. He has produced both freestanding structures and smaller timber extensions.

1.2.4 Meat
The production of edible goods is a new development in Van Lieshout’s work. In 1997 he had a pig slaughtered with the aim of using as much as possible of the animal. Using traditional methods he prepared, among other things, sausages from the intestines and offal, brawn and meatballs. He makes a point of using no preservatives. He uses traditional preserving methods such as smoking, pickling and bottling.

Van Lieshout’s interest in traditional methods of meat preparation sprung from a strong interest in food.

1.3 Forms
The forms of Van Lieshout’s objects are dependent on their functions as implements and the desired resonance. His design for a caravan will take a different form from that of a ring or an oven, both of which have highly functional requirements. Whatever the object, he seeks simple forms. And although a form may appear complicated it will be very simple to make. With large forms he avoids complicated construction methods by sticking sheets of plastic together which he subsequently inflates and coats with fiberglass or polyester. This enables him to turn an organic-seeming component into a rigid construction. This polyurethane sandwich-construction has great formal freedom.

1.4 Design
The artistic aspect of Van Lieshout’s work is a subjective matter which will be gone into at another time. The following aspects embrace general facets of the design process. Van Lieshout employs two design methods: improvising as the work proceeds or precisely implementing what the design sketch says. A creative approach to these design techniques produces exceptionally beautiful results.

Chapter II
2.1 Exhibitions
A proper understanding of Joep van Lieshout and Atelier van Lieshout’s work can only be obtained by visiting exhibitions featuring one or more of Van Lieshout’s work. To follow the artist’s development exhibitions of this nature need to be visited regularly. In the Netherlands Galerie Fons Welters in Amsterdam regularly showcases new work. Shows featuring his work are also organized in France, Switzerland, Italy and the United States.

2.2 Permanent displays
2.2.1 Permanent displays open to the public Various works by Van Lieshout are on permanent display both in the Netherlands and abroad.
The following museums in the Netherlands have works by Van Lieshout on permanent display: Museum Boijmans Van Beuningen, Rotterdam; Centraal Museum, Utrecht; Museum Kröller Müller in the Hoge Veluwe and the Sportmuseum, Lelystad. Other permanent installations are the container bar in the Rotterdam Museumpark; the lobby and office at Galerie Fons Welters in Amsterdam and the mobile exhibition space CASTMobile in Tilburg. In addition the Alliance Française in Rotterdam was refurbished by Atelier van Lieshout.

His work outside the Netherlands includes the restaurant of the Museum of Modern Art in New York for which he supplied some of the furnishings; bars and toilets for the Grand Palais in Lille (architect Rem Koolhaas); the bar in the Base Nautique in Bandol in the South of France; office units for the Jack Tilton Gallery in New York, as well as the reception area of the Museum für Gegenwartskunst, also in Zürich.

2.2.2 Permanent displays not open to the public
Both in the Netherlands and abroad, there are several of Van Lieshout's works on permanent display - such as various private bathrooms and kitchens - but not open to the public. Van Lieshout also made special skylights for a house designed by Rem Koolhaas. These works can only be viewed by kind permission of the clients concerned. But it is doubtful whether they would enhance an understanding of Van Lieshout's oeuvre.

Kitchen 1995/1996
polyester
220x286x320 cm
private collection, Amsterdam

Bathroom unit 1993
polyester
220x210x320
private collection, Rotterdam

Kitchen unit 1995
polyester
240x200x300 cm
private collection, Amsterdam
A: “God damn it, that peanut butter is still sticking to my shoe!”
B: “You read that article as well didn’t you?”
A: “I didn’t know it would be there. They don’t put that sort of thing in the newspaper.”
B: “I’m going to have a milky coffee, what do you want?”
A: “Get me a beer, do they have beer here actually?”
B: “Here.”
A: “I read that you can get chewing gum off the pavement with it.”
B: “It was fun wasn’t it, seeing all those old pieces again. It’s such a long time ago.”
A: “It can’t have been that long ago. I remember that at school everyone was saying ‘Pollens’ and ‘A peu nerveux’.”
B: “My father always read the Telegraaf which reported the whole story about Phil Bloom, bare tits on TV. He was sorry he’d missed it.”
A: “Yes, but that was a long time ago.”
B: “Good thing we were watching the VPRO the following week. When Phil Bloom was sitting behind that newspaper.”
A: “It’s a shame there’s no chewing gum on the floor here, then I could try it out.”
B: “My Dad said that of course she wouldn’t be starkers this time.”
A: “Who?”
B: “He said it wasn’t possible, twice in a row.”
A: “Oh, you’re not still on about Phil Bloom are you?”
B: “Then she removed the newspaper.”
A: “And of course she was still starkers.”
B: “My dad nearly choked on his coffee.”
A: “Is this bar also part of the show?”
Generally regarded as an extravert art-entrepreneur who is out to create crude effects simply for the money, people tend to view his ideological commitment with more than a twist of irony. In my opinion this is a one-sided picture of the artist.

The works of the last few years in particular reflect an almost romantic longing for something beyond society; for alienation; for self-provision. Take, for instance, the vehicles with divergent functions like the love-caravan (‘Bais-ô-Drôme’) or the ‘Modular House Mobile’, but also the sculptures in which people can withdraw - the so-called ‘skull rooms’ - or cut themselves off, the ‘Orgone Helmets’; and not forgetting the home-made guns and stabbing weapons and, most recently, the slaughtered and completely butchered, ready-to-eat pig, along with all the necessary equipment.

Here’s a brief description of the ‘Orgone/Study/Book Skull’. (...) In a certain light it looks like a lump of ice that’s just started to melt. (...) Voila, a small study: tabletop, bench, bookshelves, desk lamp and a sort of built-in writing desk. All in the typical Van Lieshout-Twin Peaks-style: multiplex and teak oil.

As the title suggests, the sculpture is a ‘cross’ between the ‘skull rooms’ and the ‘Orgone Helmets’. ‘Skull rooms’ are closed polyester chambers - the first versions were rather skull-like in shape, hence the name - into which an adult can just fit. Soft cladding on the inside and a door with a heavy, pronounced handle suggest sober but relatively comfortable seclusion. They can be used to cut yourself off and rediscover yourself. The ‘Orgone/Study/Book Skull’, with its small window and the functional furnishing of the interior, differs from the ordinary ‘skull rooms’. It’s a mobile study: at the moment it’s in an exhibition and as a responsible curator I can reassure visitors: the door is open. But it could just as well be placed outside in a wood or beside a bed of reeds. This must really appeal to you: it’s a perfect hybrid of your office and your temporary and mobile writer’s cell in the North-East Polder.

I always see Van Lieshout as a present-day Jean-Jacques Rousseau. Last winter I started reading his ‘Confessions’ - I never finished it - and was struck by the description of the ‘Ermitage’ which his patroness Madame Louise d’Epiney allowed him to use.

“One day when we went to look at the works being carried out with Madame d’Epiney, we walked on a quarter of a mile as far as the reservoir of the park, that bordered on the forest of Montmorency, where there was a fine kitchen garden with a small derelict house called the Ermitage. I was struck by that lonely and exceptionally lovely place from the moment I saw it (...) a refuge that might have been made for me.”

After Madame d’Epiney had had it refurbished for him so that he could work and live there he was extremely happy: “I wept on the hands of my friend and benefactress.”

Although, as curator, I was very happy with Joep’s work I never went on any part of his body, instead I just made over the requested purchase price. But I’d gladly one day dampen some paper with ink to write an essay on Jean-Jacques Van Lieshout. Later, later.

The ‘orgone’ in the title refers to the material from which the ‘study skull’ is made, that is alternate layers of glass wool and metal (steel wool I
In the 1940s the bizarre American psychologist Wilhelm Reich developed the idea of a new kind of positive energy present in all living matter, 'orgone energy'. Reich maintained that many disastrous historical events and personal tragedies were the result of this energy being blocked. People sitting in his 'Orgone Energy Accumulator', a cabinet made of alternate metal and non-metallic materials, could absorb the extremely health-enhancing and stimulating 'orgone' energy. Reich rented out his 'Orgone Energy Accumulators', but he soon attracted the attention of the Food and Drug Administration. And maybe there's a connection here of William Burroughs. After Reich had been in prison for some time, Burroughs built various 'orgone boxes'. He usually spent about twenty minutes in them and noticed a genuine accumulation of energy which manifested itself as a tingling feeling in the skin. When he came out he felt invigorated and on some occasions he had a spontaneous orgasm. "Look, no hands."

Burroughs referred to 'orgone energy' again several times in 'The Naked Lunch'. He described the clientele of 'The Meet Café' as 'sellers or orgone tanks'. By the way, I did finish reading 'The Naked Lunch' at the time, but didn't think all that much of it.

As I've already said I use the 'Orgone/Study/Book Skull' as a work and study space. A 'princely' retreat where I sit surrounded by the paintings that I like. Paintings which I think should be looked at repeatedly and at length, slowly and with concentration, thereby building up an intimate relationship; "sealing a bond" as K. put it. Metaphorically speaking, the 'skull' is the appropriate place for that. In practice, every day a few visitors come along saying that they, too, would really like to have one like it. This always provokes a discussion on youth, travelling or desires. And so I never get to work or study. I've had a sign made saying 'curator not available' which is displayed in the 'Orgone/Study/Book Skull', if I'm really working. And do I really acquire energy from it? It's warm inside, but it's still clean - look no marks.

I hope you'll find a chance to drop by and see it soon.
Greetings from the 'Orgone/Study/Book Skull', and see you very soon.

Arno
URGES 2: EROS

Joep van Lieshout’s work embraces an ambiguous conflict between everyday reality and more extravagant desires and longings. Alongside the works made for immediate ‘use’, like the furniture and building structures with their often forthright ‘normality’, he has also produced a series of works which are governed by explicit primeval urges, by ‘eros’ and ‘thanatos’. This is reflected in the works consisting of gigantic two or three-dimensional enlargements of the word ‘KUT’ (cunt), the ‘Bioprick’ and the ‘Pitiful One’. ‘KUT’ is a form of coarse graffiti intended to violate the sterile spaces of museums and galleries. The enormous abstract phaluses are reminiscent of 1950s abstract art, but in every case they lack the suggestion of sensuality of a Henry Moore, for example. Instead, in their smooth slipperiness they look like giant dildos which makes them seem rather meaningless and vacant. But they take on an entirely different charge once we realize their relative lightness and the ease with which they can be lifted up and held up as an extension of manliness. Although still vacant and absurd, they are suddenly transformed into implements, machines. They thus rather unexpectedly tie in with the rest of the work, all of which is also useful and includes implements and jewellery in the form of weapons. If implements are an extension of the body, then so too are furniture and architecture. After an amputation there is frequently a long-term recurrence of phantom-limb pain - an often intensely felt pain in a lost limb. The successful use of prostheses and implements depends on their being accepted by the body’s proprioceotor.

Joep van Lieshout’s gigantic pricks are an expression of such an intense desire to extend the body that it is almost like a phantom-limb pain. It is typical, however, that this should only concern an extension of the male sexual organ. ‘KUT’ remains an abstract word. Or should we see the word cunt as alluding to the exhibition space into which Van Lieshout has penetrated?
The Pitiful One 1996
polyester and mixed media
180x140x260 cm
Seusages 1997
pork meat, blood and intestines
various dimensions
"The pieces of furniture you see here," continued our host, "are alive; they move at a given sign." Minski clicked his fingers and the table in the corner of the room moved rapidly to the centre: five chairs drew themselves up to the table, while two chandeliers descended from the ceiling and remained hanging above the table. "There's nothing mysterious about it," said the giant, as he showed us the composition of these pieces of furniture from closer to. "You see this table, these chandeliers and these chairs are all made up of a group of young girls, each arranged in the correct order; my meal is to be served on the backs of these creatures; others serve as candelabra; and our posterioris will rest on these comfortable chairs, on the soft faces and pliant breasts of these young maidens. And therefore the ladies are invited to lift up their skirts and the gentlemen to remove their trousers in order that, as is written, flesh shall rest on flesh."

... Twelve naked girls between the ages of twenty and twenty-five entered bearing the dishes; and owing to these being made of solid silver and scalding hot, on coming into contact with the living elements from which the table was composed, they precipitated a droll convolution, like the rippling waves of the sea. More than twenty dishes of meat were brought to table, and on the side tables, each one fashioned from a group of four young maidens, was arranged every variety of wine.

"Dear friends," said our host, "as I've already told you, only human flesh is served here: these dishes contain no other ingredient."

"Let us taste it," said Sbrigani: "it's absurd to turn one's nose up at something such as this; aversions are founded on nothing other than the absence of habit; every kind of meat is a suitable food for man, since Nature supplies them all, and in truth the consumption of human flesh is no more unusual than eating a chicken."
SURVIVAL 2: SLAUGHTER

We have long tended to view urbanization as a process of civilization, but it has become increasingly clear that this is just an illusion. Even in situations where towns and cities have not yet degenerated into a sort of urban jungle, we are beset by the feeling that at any moment order can tip over into chaos. The breakdown of the electricity supply leads to anarchy. We compulsively watch films in which strings of people are massacred or simply die a horrid death, preferably for real: snuff movies or videos of ‘Faces of Death’. On holiday we try to go back to nature. Companies organize survival trips to bring their staff closer together.

In the past the slaughter of a pig was part of village life and it was followed by a feast. Today the slaughter of animals has been relegated to hermetically sealed slaughterhouses on the urban fringes. Similarly people used to die at home where they were laid out so that people could come and pay their last respects there. Today this takes place in the sterile and anonymous surroundings of a hospital outside the city. The urban periphery is also the designated location for graveyards of cars and people, for garden allotments and caravan parks.

The Austrian artist Hermann Nitsch has suggested that the removal of death from society leads to an intensification of the need for violence, which can finally even lead to war. His Orgien Mysterien Theater celebrates death in a spectacle that is somewhere between a church ritual and a rock concert; a spectacle in which blood flows profusely. Abreaktionspieler: art as therapy and catharsis to reconcile us to our own capacity for violence.

Joep van Lieshout lives and works in a place which is a dumping ground for everything that the city cannot accommodate: squalid small-time businesses operating in old gasometers and derelict sheds; stacks of stinking skins lying out on the street waiting to be tanned; cheap studio spaces for artists. From his living room he looks out onto a municipal ‘sex drive-in’ for street prostitutes, a sort of parking place where women - or those who wish to pass as women - are picked up by men in cars. There between sight-shields people can satisfy themselves. In the past prostitutes plied their trade in the centre of the city, but that was too confrontational for the authorities. In this type of environment survival is the name of the game. Van Lieshout's most recent work is all about slaughter. He slaughters animals himself, preserves the meat according to traditional methods and also builds special tables and ovens to this end. A mobile home is furnished for a life that needs no large-scale infrastructure. And a manual makes it possible for anyone who so desires to follow his example.
Butcher's block 1997
steel and wood
91x91x91 cm

Cutting table 1997
polyester, wood and meat mincer
75x75x160 cm

Pig Pen 1997
wood
76x80x150 cm

Ladder
wood
225x45x10 cm

Shelving unit for preserves 1997
wood
275x50x200 cm
glass jars with meat, vegetables, fruit and various sausages
“hanging from the ceiling of the room is a rope with a butcher’s hook attached to the end of it, and on that hangs the slaughtered, skinned and bloody lamb (head downwards). on the floor of the gallery, beneath the lamb, a white cloth spread out, with bloody entrails placed upon it. an actor pours blood onto the lamb (the blood drips onto the entrails and the white cloth). the blood-covered lamb is swung through the room, the walls, floor and audience are splashed with blood. blood is poured out of buckets onto the entrails and the floor of the gallery. the actor throws raw eggs against the walls and onto the floor and chews a rose. the bloody skin of the lamb hangs on the blood-stained, jute-covered wall. blood is poured over it.”
Fragment of a recent conversation between Piet de Jonge and Salvador Dalí

PdJ: “What, for you, was the most important thing in your life?”
SD: “The two all-important things that can happen to a painter of our time are:
1. To be Spanish
2. To be called Gala Salvador Dalí.
And those two things are exactly what happened to me. As my first name Salvador suggests, my destiny is nothing less than to save modern painting from laziness and chaos.”

PdJ: “When did you decide to change your appearance? You were a handsome young man and you changed into an eccentric artist.”
SD: “After reading Zarathustra I decided to grow bushy side-whiskers, which covered my cheeks right up to the corners of my mouth, and let my jet-black hair grow as long as a woman’s. Nietzsche aroused the idea of a god in me.”

PdJ: “You’re saying that Nietzsche turned you into a god with long hair and a huge moustache. Did you finally also want to become a goddess? Or just an Übermensch?”
SD: “My Übermensch was destined to be no less than a woman, the Uber-woman Gala.”

PdJ: “You recently made a portrait of your wife Gala with two grilled chops balanced on her shoulder?”
SD: “Yes, that’s right but they aren’t grilled. They’re raw.”

PdJ: “Why?”
SD: “Because Gala is also raw.”

PdJ: “And what’s the connection between your wife and chops?”
SD: “I love chops and I love my wife. So I see no reason why I shouldn’t paint them together.”

PdJ: “Thank you very much for taking part in this conversation.”
By producing his works in unlimited series and by operating as a builder, Joep van Lieshout has taken the first steps towards redefining the meaning of artistry. The manuals, however, go one step further still: detailed step-by-step descriptions of how to create an artwork or a piece of furniture from polyester, or how to build your own house simply and cheaply and how to slaughter animals and preserve and prepare the meat. This is the ultimate democratization of artistry. There are of course precedents for this kind of work process in art history: Fluxus artists and later also conceptual artists had previously made charts and detailed concepts which, if executed by someone else, would produce works of art. Several of Sol LeWitt's wall paintings, for example, consist of carefully detailed handbooks which show how anyone can produce the work, and even include possibilities for personal interpretation.

But Van Lieshout's manuals only obliquely touch upon those aspects. At the very most, the existence of a certain tradition in the visual arts makes it possible to place the work in history. Van Lieshout's manuals are much more direct. These are no charts that produce an end result within a certain framework, rather they make it possible for other people to work just as he does. They are directly based on the handbooks and instructions which accompany semi-manufactured products, thus making it possible for others to implement their own wishes by following Van Lieshout's example. They thus leave it open for anyone to fulfil their own, entirely personal wishes and desires.

These manuals speak the language of the professional, the technical expert, the experienced handyman - just as Van Lieshout previously used the language of cheap furniture and anonymous industrial mass-produced articles - but in this case the result is unpredictable. The manuals make it possible to release specific products which side step both the market and the ideology of the artist. They are partly based on the handbooks which alternative groups - particularly in the United States - have developed for building eco-friendly homes out of consumer-society waste. But here the endorsement of modernity is turned into a criticism. A criticism, however, which is not purely nostalgic in the sense of harking back to pre-industrial forms of housing, living and production, but one that accepts the underlying situation as a real fact yet, at the same time, shows that anyone can sidestep the forces of state, market and technology if he will only roll up his sleeves and get down to it.
BUILDING CONSTRUCTION MANUAL

STUD FRAME CONSTRUCTION
1.1 general characteristics
1.2 materials
1.3 tools
1.4 design
1.5 basic construction
1.6 windows and doors
1.7 fittings
1.8 completion
1.9 on site construction

POLYURETHANE SANDWICH CONSTRUCTION
2.1 general characteristics
2.2 materials
2.3 tools
2.4 design
2.5 basic construction
2.6 utilities
2.7 fittings
2.8 windows and doors
2.9 completion
1.1 GENERAL CHARACTERISTICS

STUD FRAME CONSTRUCTION is a simple building method with many advantages. It:
- is cheap
- is rapid
- is versatile
- is lightweight and heat efficient
- can be prefabricated
- requires few tools

The floor, wall and roof are all constructed from wooden frames which are covered on one or both sides with sheathing. The frames for the walls consist of studs and bottom and top plates, the frames for the floor consist of floor joists and end joists. The studs are spaced equally between the bottom and topplates so that the sheathing will always meet over a stud. Likewise, flooring joists are equally spaced to ensure that the flooring sheets will meet over a joist. The walls, floor and roof panels are attached to each other and form a structural whole. The static loads on the structure are transmitted by the studs to the floor joists, whilst the dynamic and wind loads are absorbed by the sheathing.

1.2 MATERIALS

JOISTS: The dimensions of the joists depend upon the function of the building and its required strength. Choose different materials for a caravan than for a structure with several storeys or a unit on which heavy structural demands will be made.

Joists are available in US and European sizes. American sizes are 38 mm thick and have a height of 64, 89, 140, 184, 235 or 286 mm. Some popular European sizes are 28 x 45, 28 x 71, 46 x 46, 46 x 70, 46 x 96 and 71 x 225 mm. For walls, 38 x 89 mm and 46 x 96 mm are widely used sizes. If the situation permits, 38 x 43 mm, 28 x 71 mm or 27 x 45 mm joists can also be used. For maximum span and the corresponding joist sizes, refer to table 1.

Table 1: Floor and Roof Joists

<table>
<thead>
<tr>
<th>Maximum span for floor and roof joists</th>
<th>single sheathed</th>
<th>glued, double sheathed</th>
</tr>
</thead>
<tbody>
<tr>
<td>distance on centers</td>
<td>0.40</td>
<td>0.60</td>
</tr>
</tbody>
</table>

**European lumber**

<table>
<thead>
<tr>
<th>Joist Size</th>
<th>0.40</th>
<th>0.60</th>
<th>0.40</th>
<th>0.60</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 x 146</td>
<td>2.25</td>
<td>1.95</td>
<td>2.94</td>
<td>2.52</td>
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<tr>
<td>40 x 171</td>
<td>2.70</td>
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<td>3.64</td>
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<tr>
<td>40 x 196</td>
<td>3.20</td>
<td>2.80</td>
<td>4.27</td>
<td>3.71</td>
</tr>
<tr>
<td>46 x 146</td>
<td>2.35</td>
<td>2.05</td>
<td>3.15</td>
<td>2.73</td>
</tr>
<tr>
<td>46 x 171</td>
<td>2.90</td>
<td>2.50</td>
<td>3.85</td>
<td>3.36</td>
</tr>
<tr>
<td>46 x 196</td>
<td>3.40</td>
<td>3.00</td>
<td>4.55</td>
<td>3.99</td>
</tr>
<tr>
<td>46 x 221</td>
<td>3.90</td>
<td>3.45</td>
<td>5.25</td>
<td>4.62</td>
</tr>
<tr>
<td>59 x 146</td>
<td>2.60</td>
<td>2.30</td>
<td>3.50</td>
<td>3.01</td>
</tr>
<tr>
<td>59 x 171</td>
<td>3.20</td>
<td>2.80</td>
<td>4.27</td>
<td>3.71</td>
</tr>
<tr>
<td>59 x 196</td>
<td>3.75</td>
<td>3.30</td>
<td>5.04</td>
<td>4.41</td>
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<tr>
<td>71 x 146</td>
<td>2.80</td>
<td>2.45</td>
<td>3.78</td>
<td>3.29</td>
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<tr>
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<td>71 x 196</td>
<td>4.00</td>
<td>3.55</td>
<td>5.39</td>
<td>4.69</td>
</tr>
<tr>
<td>71 x 221</td>
<td>4.60</td>
<td>4.05</td>
<td>6.23</td>
<td>5.46</td>
</tr>
<tr>
<td>71 x 246</td>
<td>5.20</td>
<td>4.60</td>
<td>7.07</td>
<td>6.16</td>
</tr>
<tr>
<td>71 x 271</td>
<td>5.80</td>
<td>5.10</td>
<td>7.91</td>
<td>6.93</td>
</tr>
</tbody>
</table>

**North American lumber**

<table>
<thead>
<tr>
<th>Joist Size</th>
<th>0.40</th>
<th>0.60</th>
<th>0.40</th>
<th>0.60</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 x 140</td>
<td>2.05</td>
<td>1.80</td>
<td>2.73</td>
<td>2.38</td>
</tr>
<tr>
<td>38 x 184</td>
<td>2.90</td>
<td>2.55</td>
<td>3.92</td>
<td>3.36</td>
</tr>
<tr>
<td>38 x 235</td>
<td>3.90</td>
<td>3.45</td>
<td>5.25</td>
<td>4.62</td>
</tr>
<tr>
<td>38 x 286</td>
<td>4.95</td>
<td>4.35</td>
<td>6.65</td>
<td>5.81</td>
</tr>
</tbody>
</table>

By adding blocking or bridging, the maximum span can be increased by one step.
Wood is a natural material and therefore some of the lumber may be bent or distorted. Use the straighter lumber where they are most needed: for example, as end joists, bottom and top plates and headers (load-bearing beams above windows and doors - see figures 1.1 and 1.2). If the beams are not too distorted, they can be used as joists and studs. Use bowed joists with the crown of the bow pointed up. Very badly distorted lumber can be used as blocking or braces.

Figure 1.1

Table 2: Headers

<table>
<thead>
<tr>
<th>Maximum span in meters with vertical load in kg/m</th>
<th>400</th>
<th>800</th>
<th>1200</th>
<th>2000</th>
<th>3000</th>
</tr>
</thead>
<tbody>
<tr>
<td>vertical load in kg/m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European lumber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>96 x 96</td>
<td>1.40</td>
<td>1.00</td>
<td>0.80</td>
<td>0.60</td>
<td>0.50</td>
</tr>
<tr>
<td>146 x 96</td>
<td>2.15</td>
<td>1.50</td>
<td>1.20</td>
<td>0.95</td>
<td>0.75</td>
</tr>
<tr>
<td>221 x 96</td>
<td>3.30</td>
<td>2.35</td>
<td>1.90</td>
<td>1.45</td>
<td>1.20</td>
</tr>
<tr>
<td>American lumber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89 x 89</td>
<td>1.25</td>
<td>0.90</td>
<td>0.70</td>
<td>0.55</td>
<td>0.45</td>
</tr>
<tr>
<td>184 x 89</td>
<td>2.65</td>
<td>1.85</td>
<td>1.50</td>
<td>1.15</td>
<td>0.95</td>
</tr>
<tr>
<td>286 x 89</td>
<td>4.10</td>
<td>2.90</td>
<td>2.35</td>
<td>1.85</td>
<td>1.50</td>
</tr>
</tbody>
</table>

If the beams of a built-up header are glued together, then the bearable load is increased.

SHEATHING MATERIALS: The desired strength, weight or price category are the determining factors in the choice and thickness of the sheathing material. Of course, where the surface of the sheathing is visible its appearance also plays a determining role in the choice of material.

FOR FLOORS an 18 mm underlayment or occumé plywood is a very common choice. Underlayment is a cheap plywood made of pine wood and available with tongue and groove. The surfaces of these sheets are often coarse, distorted and uneven. But if the floor is to receive additional covering, they are a good choice. Underlayment sheets measure 122 x 244 cm. Occumé plywood sheets are smooth and flat. They have no tongue and groove. These sheets are very suitable if the floor needs to be smooth and even. Because they are available in many sizes, it is possible to choose thinner sheets if the distance between the joists is in accordance. Occumé sheets measure 122 x 250 cm or 153 x 305 cm and sometimes more. OSB board is made of large compressed wood chips. They are cheap and rather more even than underlayment sheets. Particleboard is very cheap, even and smooth. However, these sheets have a low load bearing capacity. They should therefore only be used for temporary or cheap structures. They measure 122 x 244 cm, 125 x 250 cm or 153 x 305 cm.

FOR WALLS 8 mm occumé plywood is the most commonly-used choice, because the sheets are strong and smooth. It is also possible to use thinner sheets without reducing the distance between the studs. CDX is 9 mm thick and has the same properties as underlayment. CDX is cheaper than occumé. Use them only when the walls are going to be covered with a facing material such as corrugated aluminum or bevel-siding etc. OSB board is also available in 9 mm and can be used like CDX. Gypsumboard is a cheap and common solution for interior use. This board in 9.5 mm or 12.5 mm thick. The 9.5 mm sheets are 60 cm wide and up to 480 mm long. The 12.5 mm sheets come in sizes ranging from 120 x 250 cm to 120 x 300 cm. Particleboard is also available in thin sheets. Use them for cheap and temporary structures.

VAPOR BARRIER AND BUILDING PAPER: In order to keep out water and to prevent vapor condensing in the walls, floor and roof, it is necessary to install a vapor barrier on the inside and a building paper on the outside of
the frame. The vapor barrier is a thick plastic foil which checks all water
and vapor. Building paper is made of coated paper or perforated plastic
and checks water droplets but lets water vapor through, so that the cavities
remain dry. If one of the sides of the wall is treated with polyester, then it
is no longer necessary to install such a layer on that side of the wall.

INSULATING MATERIALS: The cavities between the studs are filled with
an insulating material. For lightweight structures with thin walls use polystyrene foam. These sheets are available in various thicknesses and are
easily sawn with a circular saw. If the thickness of these rigid foam sheets
is the same as that of the studs and if it is effectively ‘clamped’ between the
sheathing material, then the insulation will also add to the strength of the
wall. For thicker walls, rock wool or glass wool is used. For this, use the
semi-hard sheets which have been specially developed for stud frame con-
struction. The sheets can be sawn 6 mm wider than the space available and
pressed tightly between the studs so that all the gaps are filled. You can
saw or cut these sheets with a large knife.

SCREWS AND NAILS: The whole structure can be nailed, screwed or sta-
pled. A pneumatic nail-driver or stapler is fastest, but a hammer and nails
work just as well. To fix the floor joists to the end joists, use at least three
100 x 4.0 mm nails. To fix the studs to the bottom and top plates, use at
least two 80 x 3.5 mm nails. Sheathing is fixed with 55 x 3.0 mm nails every
150 mm around the edges and every 300 mm in the middle.

1.3 TOOLS
Few tools are needed when build-
ing a stud frame construction:
a hammer, saw, tape measure, carpenter’s square and chisel. However,
to work faster it may be useful to
use some of the following tools:
• circular saw
• jigsaw
• electric router
• angle grinder
• drill
• electric screwdriver
• crowbar
• sledgehammer
• chalkline
• pneumatic nailer
• nail remover

1.4 DESIGN
The artistic aspects of the design are a subjective matter which we will con-
sider on another occasion. The following points concern general aspects of
the design process. First choose how you want to work: Improvise during
the building process or reproduce exactly what is shown on the blueprints.
The first way provides the freedom and flexibility to adapt the design. The
advantage is that you can begin immediately without a preparatory phase;
the disadvantage is that construction work takes longer and that more
materials are lost. The second method requires that you make all (design)
decisions on paper before building; the construction work will be faster and
cheaper.

With both methods, a number of points need to be taken into account:
• When making openings (windows and doors), one should ensure that the
building is not weakened. This means that there should remain enough
‘meat’ around the openings to carry the weight of the roof and walls to
the floor and the ground.
• In large open spaces, it is sometimes necessary to add extra interior walls
in order to prevent distortion.
• With very light structures, we can recommend that the fittings form an
integral part of the wall or floor, to add extra sturdiness.
• Glueing the sheathing to the studs considerably increases the strength
of the construction, so that it may be possible to use lighter materials.
• With large openings, a header and extra studs need to be used. It is some-
times necessary to place additional bracing or steel rods in order to sub-
stitute for a missing load-bearing wall. It is very sensible to submit the
design to a professional designer.
• When constructing a permanent building, the location, layout and fall
of natural light are of great importance.
• If you want to add an annex or slave-unit, strengthen the construction
of the wall and floor. In places where the wall is subject to considerable
stress, it is necessary to divert this through steel strips over the roof or
walls. Consult a designer for advice.
• In places where you want to hang heavy objects like sinks etc. It is neces-
sary to install blocking between the studs.
1.5 BASIC CONSTRUCTION
Prefabricated construction has an advantage over on site building because it does not depend upon weather conditions and all the necessary materials and machinery are at hand. In other words, the work is faster, more comfortable and more accurate than on location.

FLOOR: Decide on the shape and dimensions of the floor. The size of the floor frame is the same as that of the final outside dimensions of the building, minus the thickness of the exterior sheathing. Lay out a set of end joists and floor joists. The distance between the floor joists depends upon the flooring and the desired strength (see table 1). Marking off: hook a tape measure over the end of the end joist and mark off the location of the end joist along the floor joists. The distance between the centers of the joists is usually 407 mm or 610 mm. Ensure that the joint between the flooring sheets falls precisely on a joist (a rule marked in inches is very useful in this case, because the distances between centers are exactly 16" and 24"). Lay the second end joist next to the marked-off joist and copy the marks across using a carpenter's square. Nail or screw the floor joists to the end joist. Check that the frame is straight. With rectangular frames, the diagonal measurements must be equal. Make sure that there are no unwanted distortions. Once the flooring sheets have been fixed to the frame, no changes can be made. No vapor barrier layer is required. Carefully lay down a flooring sheet and nail or screw this to the frame. A chalk line (a holder with a roll of string with colored chalk) is a very useful aid to mark the location of the joists under the flooring sheets (see figure 1.3). For extra strength, the sheets can also be glued. Repeat until the whole frame has been covered. Make sure that the frame does not shift before all the flooring sheets are fixed. If the end joists are not long enough, two joists can be attached to one another using a wooden block glued behind the end joists and screwed firmly to them. If the short sides of the flooring sheets do not have a tongue and groove, some blocking should be placed under the joint. Now turn over the floor panel and push the insulation material as closely as possible against the underside of the floor surface. For a sandwich panel, an extra layer of flooring material needs to be added. The floor can be further strengthened by fitting one or more rows of bridging or blocking (see figures 1.4 and 1.5). Turn the floor back over and start on the walls.

WALLS: The walls are fitted on top of the floor. The dimensions of the wall are derived from the floor panel. Mark off the bottom and top plates in the same way as described for the floor section. Decide where to make the windows, doors and other openings. If a large opening is desired, the load from the roof must be diverted to the floor. It is necessary to place studs on either side of this opening and to install a header. This is a thick beam or a trussed header horizontal (see figure 1.1 and 1.2). The number of studs and the size of the header can be determined from table 2. Depending upon the situation, it may be possible to reduce the number of studs and to omit the header. Lay out the studs, bottom and top plates and fasten them together. At this point, also make sure that the frame is completely square and straight before fitting the vapor barrier layer and the interior sheathing (see figure 1.7). Once all the panels are finished, they can be attached to one another with long screws.
FLAT ROOF: The dimensions of the roof are identical to those of the floor panel. Fix extra joists and crossbeams for any openings or skylights (see figure 1.8). Cover the frame with the vapor barrier foil and only sheath the underside of the roof, so that the cavities are accessible for the installation of electrical fixtures, etc. Lay the roof panel on top of the walls and fasten it with nails or screws.

UTILITIES: The best time to install the utility fittings depends upon the building method, but in general they are installed altogether just before the insulation and the last sheets are fitted. The fittings are installed in accordance with local regulations using the appropriate materials sold there. Great care must be taken with this work because it is very difficult to make modifications later. Where necessary fit blocks to which pipes, wires and other fittings can be screwed. Cold water pipes must be additionally insulated to prevent condensation. It is highly advisable to check and test all the installations before the final sheets are fixed.

1.6 WINDOWS AND DOORS
A variety of different options which do not require any special provisions are possible, such as mounting the glass in window rubber or using aluminum prefab ship windows. Make sure in advance that the openings have rounded edges and that the material is of the correct thickness. For other windows and doors, frames need to be made (see figures 1.6 and 1.9).
sheets are installed, the protruding edges can be removed; if a polyester laminate finish is used, round off all the corners so that the laminate will go around them (for further information about this, see the glass-fiber reinforced polyester manual). If the exterior is to be covered with another material, it is usually necessary to ventilate the space between the wall and the siding material. This can be done by fixing laths to the wall and then attaching the siding material to this. Vinyl and lead flashing also needs to be fitted to prevent leakage (see figure 1.6).

1.9 ON SITE CONSTRUCTION
If it is not possible to prefabricate, then the more traditional method of building on site must be used. The major difference is that the floors and walls cannot be laid flat and sheathed horizontally. The structure first has to be built as a frame and then held squarely in place with braces. Then the exterior is sheathed, the utility-fixtures, insulation and vapor barrier fitted, and finally the interior is completed. The frames themselves are somewhat different because otherwise there would be no stud to attach the interior sheathing to (see figure 1.10).

1.7 FITTINGS
In very light structures, fittings such as tables, cupboards and shelves can be incorporated to support the structure. This is best done before the exterior sheathing is fitted, so that everything can be tightly screwed from the outside.

1.8 COMPLETION
Once the technical fixtures and other fittings have been installed, the placing of the insulating material and the building paper can begin. The insulating material should be installed accurately so that there are no cold-bridges (places which are less insulated and so attract condensation first). Carry out a final check and use an angle grinder to grind down nailheads and irregularities. The exterior sheathing can now be fitted; it is important that the sheathing overlaps the frames so that a strong joint is formed. Once all the
2.1 GENERAL CHARACTERISTICS
Polyurethane (PU) sandwich construction uses only synthetic materials. It combines light, brittle polyurethane foam with strong glass-fiber reinforced polyester (GRP). The PU foam is used as the core and insulating material of the structure and the hard, watertight GRP for the interior and exterior layer. The combination of these two materials forms a strong, light building material, which:
• is extremely light
• allows great freedom of design
• is heat efficient
• is versatile
• can be prefabricated
• requires few tools

2.2 MATERIALS
POLYURETHANE FOAM is a highly efficient insulating material which is used in the construction of refrigerated vehicles, containers and for tank and pipe insulation in the petrochemical industry. Amongst other shapes, the foam is available in sheet, block, spherical, cylindrical and concave forms (figure 2.2). The specific weight and degree of fire resistance can be selected according to the function and requirements of the building. A weight of 50 kg/m³ is suitable in most cases.
GLASS-FIBER REINFORCED POLYESTER is a two-component synthetic resin which is reinforced with glass fibers. Further information can be found in the glass-fiber reinforced polyester manual.
ADHESIVE: the foam can be glued with a thixotropic contact adhesive. This is available in tins and caulking gun cartridges.
2.3 TOOLS
- handsaw
- compass saw
- sandpaper
- electric screwdriver
- stopping knife

2.4 DESIGN
Buildings made using this method are very light and strong. If extra strength is required at particular places, apply extra layers of polyester. When there are major loads or spans, it is necessary to install reinforcements or headers from other materials. Where heavy objects, window or door frames are fitted later, wooden or steel frames need to be installed so that there is a firm base to fix them on to. Creative combinations of the various shapes in which PU foam is available makes it possible to create exceptionally attractive designs (see figure 2.1).

2.5 BASIC CONSTRUCTION
The whole structure can be built in PU foam and then covered with polyester. However, the foam structure is not strong enough to bear its own weight, so it is necessary to make a supporting structure to keep it stable until a layer of polyester has been applied (see figure 2.3).

FLOOR: The floor can be made from PU foam which has been covered with polyester. For extra strength, the floor can be made of wood. A ‘strip floor’ can also be made: Make a temporary floor from concrete-form-work plywood and rub anti-adhesive wax onto the surface. Apply one or more layers of polyester and lay alternate strips of PU foam and plywood onto the wet polyester. Then firmly weight down the floor with stones. Once the polyester has set, the stones are removed and the upper side can be coated with polyester. Once this layer has also set, the floor can be separated from the concrete-form-work plywood. Once the floor is ready, you can start with the walls.
WALLS: The walls are also made from PU foam. Depending upon the design, begin fitting sheets or cylindrical sections on or around the floor. Apply contact adhesive to both surfaces, wait ten minutes and then press them firmly together. Insert a number of wooden (kitchen) skewers through both parts so that they do not come loose. Depending upon the scale of the construction, proceed with the building of the supporting frame. The supporting frame can be built either inside or outside the structure. The PU foam can be attached to the supporting frame with screws or wire. Rounded corner pieces can be made from segments which are sawn out of the cylindrical sections. These segments are put together like those of an orange (see figure 2.4). It is better to use segments which are 6 mm thicker than the rest of the material, so that some ‘meat’ is left which can be sanded down later to even out the different segments. So-called ‘collar pieces’, other shapes and transition-forms can be made in the same way. Another possibility is to make a large block out of leftover-foam, then sand it down into the desired shape or transition-form. Once the basic construction is finished, cut off the skewers and wire that stick out. Sand down the seams by using a large sanding block. This block can be shaped in the same form as the cylindrical section or corner piece. Then apply a layer of reinforced polyester and fill irregularities and joints with two component filler. The structure is now strong enough to remove the frame. The installation of utility fixtures and fittings can now begin.

2.6 UTILITIES
The utility fixtures can be installed in the usual way. The grooves for the pipes and wires can be made using a chisel or router. This is best done when only one side of the structure has been covered with polyester.

The socket and switch boxes can be set in the foam using a few dabs of polyester filler. The wires can be fixed by making the grooves very tight. Depending upon the regulations, household cable can also be used instead of standard electrical wiring.

2.7 FITTINGS
Fittings can be installed when either one or both sides of the structure have been covered. The fittings themselves can be made of PU foam or wood. They can be screwed in place from the outside using long screws and washers. Tighten the screws so that the heads lie completely below the surface of the foam. Hide them using filler and polyester laminate. The fittings can be finished off by covering the fittings with a seamless layer of polyester during the completion phase.
2.8 WINDOWS AND DOORS
If opted for panes mounted in window rubber or prefab ship windows, saw holes in the sandwich sheets after the first layer of polyester has been applied. Make sure that the sandwich sheet is the correct thickness for the windows to be used (see figures 2.5, 2.6 or 2.7). For other windows and doors, frames need to be made.

DOOR AND WINDOW FRAMES: In order to give these frames sufficient strength, and to provide a mounting for hinges and locks, it is necessary to install a wooden framework and to glue the foam around this framework. A window can easily be made by fitting laths to the framework (see figures 1.6 and 1.9). If necessary, install raincaps at the top of the frame so that no water can seep in. Sometimes it is advisable to fit raincaps at the base of the frame.

DOORS: As an alternative to standard doors, you can make a door with a flange. Lay (anti-adhesive waxed) concrete-form-work plywood on the ground and cover it with a layer of polyester. Lay a standard wooden door on top of this and weight it down with stones. Once the polyester is set, the upper side of the door can be coated. Strengthen the flange with a number of additional layers of polyester. Remove the door from the concrete-form-work plywood.

2.9 COMPLETION
Once the whole structure has been checked, the remaining layers of polyester can be applied. For normal use, two layers of polyester with a weight of 450 g/m² are sufficient, whilst for floors four layers of 450 g/m² are needed. If major structural demands are to be made of the building, more layers of polyester can be added. Carbon or kevlar reinforcements can also be included in the laminate. These special materials have a tensile strength up to 20 times greater than that of steel.

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GLASS-FIBER REINFORCED POLYESTER MANUAL

1. GENERAL PROPERTIES
Unsaturated polyester resin is a mineral oil distillate. It has a specific, easy to recognize smell. The substance has a consistency like syrup and the color can vary between crystal clear and a very light blue or yellow transparent tint. The most common are general purpose resins, gelcoat and topcoat.

1.1 TYPES OF RESINS
General purpose resin: a resin for general applications like fiberglass coatings and laminates made in a mold.
Casting resin: specially made for casting, there many different types available like the crystal clear type for embedding objects. There are also types that can be filled with a variety of materials. These resins are used for artificial stone making and industrial casting.
Gel-coat resin: thicker than standard resin it is specially made for the first layer when laminating in a mold.
Top-coat resin: Thicker than standard resin and used as the final layer of a laminate.
Polyester filler: resin mixed with fillers like chalk or glass bubbles.
Special resins: some examples are, chemical resistant, flame retarding, temperature resistant and ultraviolet resistant resins.

1.2 ACCELERATOR AND HARDENER
Polyester resin is a three component system that hardens after accelerator and hardener are added. Normally resins are preaccelerated in the factory. You just have to add 1 - 3 % MEKP-hardener immediately before starting work.

1.3 POTLIFE, HARDENING
After adding hardener you have a limited time (potlife) before the resin hardens. The potlife is dependent on the amount and type of hardener/accelerator, temperature and UV light. If you are in the unlucky situation that the resin starts to gel while working, throw it away, clean your tools in acetone or methylene chloride, take a new bucket and continue immediately. After a short time the resin hardens but it takes a couple of weeks before it reaches its optimum strength.

1.4 TEMPERATURE
The optimum temperature for processing polyester is between 15 and 25 °C. If you have to deal with lower or higher temperatures you have to adjust the percentages and types of hardener and accelerator. For low temperatures you have to use different chemicals. See the list that is printed below. For higher temperatures reduce the amount of hardener.

At 15 °C: 3 % MEKP + 0.2 % cobalt
At 12 °C: 3 % MEKP + 0.5 % cobalt
At 10 °C: 3 % MEKP + 0.5 % cobalt + 0.2 % DMA + 1 % BP-hardener
At 8 °C: 3 % MEKP + 1.0 % cobalt + 0.5 % DMA + 2 % BP-hardener
At 4 °C: 3 % MEKP + 1.0 % cobalt + 0.5 % DMPT + 2 % BP-hardener
At 0 °C: 3 % MEKP + 1.0 % cobalt + 1.0 % DMPT + 3 % BP-hardener

1.5 GLASS FIBERS
Hardened polyester-resin is not very strong. By reinforcing the resin with fillers or glass fibers the mechanical properties increase immensely. The process of reinforcing resin with glass fiber is called laminating. The finished product is called

GLASS-FIBRE-MAT
CORE-MAT
GLASS-FIBRE CLOTH
'glass reinforced polyester (GRP)' or 'fiberglass'. The most common types of glass fiber are chopped strand mat and woven glass fabric. Woven glass fabric gives more structural strength but is more expensive and less versatile than the chopped strand mat. Chopped strand mat consists of filaments of glass fibers that are cut in 50 mm lengths. The fibers are bonded with an emulsion or powder that dissolves when it comes in contact with resin. Powder-bound mat impregnates faster and is suitable for molding, translucent laminates or coatings. Emulsion-bound mat keeps its texture and is more suitable for accurate work. Both types are extremely easy to manipulate and follow the form on which they are applied. Glass-fiber cloth is available in 50-160-280-400 and 580 g/m², glass-fiber mat in 225-300-450-600 g/m² or as a surfacing mat of 40 g/m². Core mat is a felted glass-fiber blanket and is used for sandwich constructions. It is 4 mm thick and has a low weight and resin consumption.

1.6 CUTTING THE GLASS-FIBER MAT
For laminating objects which have sharp edges use a knife or scissors to cut the mat about 5 mm larger than the surface that you want to cover. For objects with rounded edges rip the mat carefully to size by hand along a straightedge. Ripping the mat gives it a frayed, hairy edge that enables it to overlap and blend invisibly with the next piece. A quicker alternative, without measuring, is to hold a piece of mat against the object and rip it along the edges of the surface that you want to cover.

1.7 FILLERS
Use fillers to give the resin more strength or special features. For example: to make a lightweight filling compound, mix up to 20% glass-bubbles with the resin. This compound hardens after adding 4% MEK-hardener. Standard filling compound can be made by adding up to 75% chalk or talc to the resin. Use Benzoc-peroxide paste as hardener. Casting: You can give more structural strength and reduce shrinkage by adding additives like; chalk, sand, marble powder, metal powder, chopped glass strand, milled glass fibers, glass bubbles. Reduce the amount of hardener and accelerator to reduce the buildup of heat when casting large volumes.

1.8 TOOLS
Tape measure, straightedge, knife, plastic buckets, weigh scales, measuring cylinder, paint roller, brush, metal washer roller, gloves, mask, sandpaper, angle grinder.

1.9 CLEANING
Clean your tools with acetone or methylene chloride. Skin can be cleaned with water and soap or special hand cleaner.

1.10 SAFETY
- Take care with fire.
- The hardening process of resin produces heat. Take care with leaving leftover bulk in the bucket since the exothermic reaction can cause fire.
- Avoid contact of any chemical with skin, wash contaminated areas with large quantities of water. After contact with eyes wash contaminated areas and seek medical aid.
- In event of ingestion, drink large amounts of water or milk. Induce vomiting, seek medical aid.
- Work in a ventilated area or wear a mask.
- Wear gloves while working with resin.
- Wear a mask while sanding the laminate.
- Never mix accelerator and hardener directly together.
2. COVERING OBJECTS WITH REINFORCED POLYESTER
The following directions are for obtaining the typical 'Atelier van Lieshout look'. The covering can be applied to: furniture, sanitary facilities, interior or exterior walls, floors and roofs.

2.1 PREPARATION
Fill large gaps and irregularities with two-component filler. Hammer in or sand off nails or bits of hardened filler that stick out. Smaller gaps and holes like tight flat joints and nail or screw holes don't have to be filled since the fiberglass layer will cover them. Small objects don't need to be primed. Prime larger objects with a suitable primer. For wood and other dry absorbent surfaces use a polyester resin with 30 % styrene added. If the surface is damp or for better adhesion use polyurethane primer. After applying a primer wait until it is gelled but still tacky before you start laminating.

2.2 IMPREGNATING
Normally one layer of glass-fiber mat of 300 g/m² is sufficient. For outdoor use, apply 450 g/m². For roofs use two layers of 450 g/m². For colored laminates use resin with 3 - 5 % pigment added. Mix 1 - 3 % hardener with as much resin as you can apply during its 15 - 30 minutes pot life (1 - 4 kg). Use a paint brush or roller to apply some resin to the surface of the object. Stick the piece of mat onto the resin and apply more resin with the roller on top of the mat, when you use a brush don't smear but stipple the resin onto the mat. Use enough resin, about 700 g/m² (for a 300 g/m² mat) and make sure that the mat is fully impregnated and that it sticks to the surface of the object. Light spots indicates that you haven't used enough resin and a muddy, disintegrated blubber that you've used too much. Before the resin hardens roll out the air bubbles with a steel washer roller. Roll in different directions until all space between the laminate and the object has disappeared. For objects with straight edges, don't roll around the corners let the mat over the edges. As soon as the resin has gelled, you can easily cut off the excess mat by running a knife along the edge of the object. Sand the edges after the resin is hardened and impregnate the adjacent surfaces.

When all the surfaces are covered, check the surface for irregularities and imperfections by sanding lightly with coarse sandpaper. Dedustify, and get ready for the sub topcoat layer.

2.3 SUB TOPCOAT
Depending on color, add 5 - 0 % pigment to the resin. Mix it with 1 - 3 % hardener and roll it vigorously and evenly onto the fiberglass surface. This should take about 200 - 300 g/m². After this layer has dried, sand it to remove sharp points and irregularities and to ensure that the next layer will adhere well. Clean the surface with a vacuum cleaner or compressed air. Rub it of with a damp cloth with acetone.

2.4 FINAL TOPCOAT
This is the most important step of the entire process because it determines the quality of the final result. It is also the most difficult part because it is very sensitive to atmospheric conditions, composition of the topcoat and to the method of application. Estimate the amount of resin needed (vertical surfaces 400 g/m² and horizontal surfaces 1000 g/m²). Make a mixture of 50 % resin and 50 % gel-coat. Mix in 5 - 20 % pigment and 1 - 2 % paraffin-oil. Paraffin-oil forms a thin layer on the surface of the wet topcoat. This film protects the topcoat from reacting with atmospheric oxygen. This reaction prevents the final layer from hardening fully and causes it to remain sticky. Take as much of the prepared topcoat as you can use in 10 - 15 minutes and add in 1 - 3 % hardener. Be generous with the topcoat. Roll it on evenly with long steady strokes. Work from one side of the object to the other. For vertical surfaces use so much resin that it almost starts to sag. Don't be afraid to use too much! For horizontal surfaces pour lots of topcoat on and spread it so it forms a thick even layer. Once you have applied the topcoat do not touch it again. You will destroy the protective layer of paraffin that has risen to the surface of the wet topcoat. The disturbed area will never harden and will remain sticky. Leave your work along until the topcoat has hardened and a beautiful, silky shine appears.

IMPORTANT
- The room temperature, the temperature of the object and of the resin mix must be between 15 - 25 °C.
- Avoid drafts.
- Avoid excess humidity.
- Avoid dust and dirt in the air, on the roller and in the resin.
- Measure your percentages of pigment, paraffin and hardener accurately. If in
doubt, make a test with a small amount.
* Be generous with the topcoat, fling it up, even it out with long strokes, and leave it.

3. MOLDS AND CASTS
INTRODUCTION
You can use a mold to make one or more castings of the same model. The exact form and surface of the model will be duplicated. If the surface of the mold is shiny; the casts will be shiny. If the surface is mat; the cast will be mat. If there are any cracks or small irregularities; they will show up on the surface of the cast. Molds are comparatively cheap and easy to make, even if you just want to make one casting.

There are different types of molds:
* positive molds
* negative molds
* temporary molds

They can be made of:
* wood
* fiberglass
* steel
* cardboard
* inflatables
* polyurethane foam
* slat frames
* polyethylene foil

To be able to remove the finished casting from the mold you have to prepare the mold carefully with release agents. After the mold is prepared, you can apply a layer of gelcoat and one or several layers of glass-fiber laminate. After the laminate has hardened, you can remove the casting from the mold and repeat the procedure.

3.1 RELEASE AGENTS
Before you use the mold you have to apply a release agent. Smear a thin layer of release wax on the surface of the mold, wait until the solvent has evaporated and polish the wax with a woolen cloth. A very thin layer of the wax will stay on the surface preventing adhesion between the mold and the laminate. When you are using the mold for the first time you have to repeat this process twice.

For castings which are difficult to release you can also apply a layer of Poly-Vinyl-

Alcohol solution on top of the polished release wax. Apply a thin layer of PVA with a spray gun, sponge or a lint free cloth. Be sure that the water-soluble PVA is completely dry before you start laminating. After the casting has been separated from the mold clean it with warm water to wash off the remains of the PVA solution.

3.2 LAMINATE
The first layer of a laminate is gelcoat. Gelcoat prevents the glass fibers of the laminate from appearing on the surface of the casting. Being thicker than standard resin it can be applied on vertical surfaces without sags or runs, for colored laminates add 10 - 20 % pigment to the gel-coat. Gently mix 2 - 4 % hardener to the gel-coat and carefully roll or brush on the gelcoat in a thick and even layer of about 400 - 800 g/m². For a very fine finish, apply a second layer after gelation. After 1 - 3 hours you can resume laminating. For the next layer roll resin onto the gelcoat and lay the pre-cut pieces mat onto the wet resin and impregnate thoroughly. For fine work use either 300 g/m² powder bound mat or surface mat for this layer. Remove air bubbles with a metal washer roller. Continue to impregnate 450 g/m² glass mat until you have reached the desired thickness. When applying the glass mat into the mold, let it hang over the edges by 1 - 3 cm. During gelation, when the laminate reaches its leather-like state you can easily cut off the mat that is sticking out with a knife. Do not apply more than three layers at one time since the reaction heat may warp or shrink the cast. For thicker laminates it's better to incorporate a layer of core-mat between two layers of mat. Core-mat increases the thickness and strength with a minimum of materials and weight. Before applying the coremat impregnate both sides on a piece of board, lay it in the wet resin and cover it with another layer of mat. Sand with coarse sandpaper and finish the surface as described in §2.3 and §2.4.
3.3 RELEASING THE CASTING
Eight hours after you finished the laminate the casting can be released from the mold. Always start by hammering on the mold/casting with a rubber hammer. When you work with a mold that consists of more parts, drive a wedge between the flanges of the parts. To remove the casting from one piece mold a small lip or handle can be built onto either the casting or the mold to pull them apart. The best method is to incorporating small air pressure pipes. Drill a small hole through the mold and fix a small copper pipe on the outside of the mold with some fiberglass. By putting air pressure on the pipes the cast will release easily from the mold.

3.4 MAKING A MOLD
A casting that is made from a mold has a slick and a rough side. If you want to have a slick exterior you must use a negative mold. For a slick inside use a positive mold and work around the outside of the mold. A temporary mold can be made of a wide variety of materials. The mold stays in the cast as an integral part or it becomes unusable after the casting is done.

3.5 GEOMETRIC MOLDS
Wood is very suitable for making molds with a more geometric lay-out. Depending on size, form and construction, it will last 1 - 10 castings. For repeated castings it’s better to make a fiberglass mold of first cast that you made from a wooden negative mold or make a mold directly from a positive wooden mold. To construct a mold, use A-grade quality plywood. Assemble the accurately sawn pieces of plywood with glue and screws. Make it strong and add reinforcements where necessary to prevent warping or bending. Round of the sharp edges with a router with a radius of 7 mm or more. Prime the surface with polyester or polyurethane primer. Fill the screw holes, joints and damages with polyester filler. Use a round filling knife to fill the interior edges of the mold. Sand the patches with medium coarse sandpaper and repair imperfections.

Depending on the surface and the desired finish, apply a layer of topcoat and/or two component spray-filler. After drying, sand the surface with 220 grit sandpaper. Clean, degrease and spray the mold with a DD lacquer. Wait for one week to allow the mold to harden fully and start casting as described in §2.2.

It is very important that a mold is self-releasing; this means that the form of a mold must be a little bit tapered. If the mold is not self-releasing or difficult to access with a roller it is better to make a partitioned mold. A partitioned mold consists of different parts that are bolted together, after lamination the cast can be released by dismounting the mold parts. To make a partitioned mold define the borders of the different mold parts and build a dividing wall to form future flanges of the mold part. The dividing walls can be made of cardboard, wood or steel shim that are fixed with Plasticine or a glue-gun. Apply release agent and cast the mold part and its flanges. Leave the mold part on the model, take away the adjacent temporary dividing walls and continue with the following piece(s) until all parts are made. Drill assembly holes through the flanges and release the mold parts. Depending on the shape of the mold, reassemble the mold parts and cast it. For complicated casts or when you can’t reach in the mold to laminate it, it’s better to cast the independent mold parts and glue or bolt the casted parts together later.

3.6 ORGANIC SHAPES
For round or organic shaped casts, you can use polyurethane foam. PU-foam comes in various shapes or it can be made of two component polyurethane resin. The foam can be modeled with a saw, rasp or sandpaper, you can also include existing objects that approach the desired shape. Use two-component filler to make fluent transitions. Reinforce the surface with a layer of fiberglass. Finish the mold as described above. It’s also possible to use different materials like clay, plaster, metal as long the material is dry since water obstructs the hardening of the resin.
3.7 INFLATABLES
One of the more unconventional systems is using inflatables. Cut plastic foil to the desired shape, weld or tape the pieces together and inflate the form with a vacuum cleaner. You can correct or change the form by tucking the foil into the inflated form and tape the seam. Use an electric paint-stripper to straighten wrinkles or change the form. The heat will soften the plastic and the air pressure will push the wrinkles out. For additional shaping you can increase the heat, the foil will soften further and a bubble will arise on the surface. After the construction is finished you have to solidify the form. Resin is not suitable to apply directly onto the foil since it will dissolve the plastic. The simplest way to solidify the form is to cover it with an insulator that keeps the solvent away from the foil. Suitable insulators are newspaper, aluminum foil, resistant plastic foil. Glue a few layers of these materials onto the form with wall paper glue. Use the pre-preg method to apply a layer of fiberglass after the glue dried. The pre-preg method means that you impregnate a piece of glass-fiber mat on a piece of plywood. Take the wetted glass fiber off the plywood and lay it carefully on the inflatable. Another method to solidify is using polyurethane foam. This two-component foam doesn’t affect the foil. Mix equal parts of resin A and Resin B in a cup and pour it over the form. The mixture rises immediately and forms a thick insulating shell that you can cut, and shape. Cover the form with fiberglass.

3.8 SLAT FRAMES
Another temporary mold is a slat frame mold. The method is based on a set of rafters with thin timber slats fixed to it. Leave 2-3 cm between every slat and fix them to the rafters with nails or steel treads. Glue polythene foil onto the slat frame. Impregnate precut core mat on a piece of plywood, roll resin on both sides and lay it carefully on the slats. Try to keep the joints between the pieces of core mat as small as possible. Wait for the resin to harden and continue laminating until you have reached the desired thickness. If necessary you can remove the mold and laminate the other side of the cast. For rounder forms you can also use steel bars and wire-netting instead of rafters and slats. The wire-netting can be manipulated by pinching the darns with a pair of tongs.

3.9 INTEGRATED MOLDS
This is a fast method where the mold stays part of the cast. Construct a form with prefabricated fiberglass sheets. Cut or saw these sheets and fix the pieces momentarily with tape, glue or screws. Cover the structure with one or more fiberglass layers. The laminate supplies the strength to the structure and joints especially when you cover both sides of the object. Instead of the prefab fiberglass sheets you can even use card-board or thin plywood.

3.10 REINFORCEMENTS
Sometimes it’s necessary to build in reinforcements to make the mold or cast extra strong and to prevent it from bending and shrinking. Reinforcements are made with rigid materials such as wood or non rigid materials such as a rope or a roll of newspaper. The reinforcement materials can be fixed to the laminate with one or two layers of fiberglass. Do not fix the reinforcements when the laminate of the cast is not completely cured. The reaction heat and shrinkage of the fiberglass might cause indentations on the surface of the cast.
3.11 TRANSPARENT AND TRANSLUCENT APPLICATIONS

Some standard resins are suitable for transparent laminates or castings. But if the product is exposed to direct UV-light you have to be sure that the resin is UV stabilized. There are special resins available for this goal, they are highly transparent and have a refraction angle that is similar to the

refraction angle of the glass fibers.

If these resins are combined with suitable glass fibers they will blend invisibly. Do not use emulsion bound glass mat because the binder won’t solve completely. Powder bound mat or glass cloth gives a more transparent laminate. Ask your dealer for advice. Special transparent pigments are available.

3.12 MOLDLESS SKYLIGHTS

This method is very appropriate for making skylights that haven’t standard sizes or shapes. They have a beautiful shape and light diffusion. To make the skylights you can work directly on the opening in the roof or you make a reconstruction of this opening so that you can work inside or in advance. Nail a piece of cloth on the sides of the opening. Don’t stretch the cloth but let it hang in the middle so that it forms a negative dome. Spread a thin polyethylene foil over the cloth that prevents the resin from drawing into the cloth. Apply one layer fiberglass on top of the foil. A gelcoat layer is not necessary. Impregnate the glass fibers carefully. Use enough resin to prevent whitish spots and roll out airbubbles. After this first layer has hardened, continue with the following layers. To prevent warping and color deviation, do not make the laminate too thick. Use clean tools and buckets, take care with dirt. After the laminate has hardened, you can take of the skylight, turn it around and peel of the polyethylene foil. Apply a topcoat layer on both sides of the dome and fix the dome on the opening.

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PORK MEAT PROCESSING MANUAL

This guide specifically describes the practical aspects of butchering a pig at home. There also exist legal regulations, such as inspection before and after slaughter, but these are not examined in detail.

1. SLAUGHTERING A PIG AT HOME

Utensils required
stun mask or stun gun
various knives and sharpeners
saw
cleaver
meat hooks

various trays and buckets
scrapers
gas burner/two sheaves of straw
ladder
clean cloths
wooden cutting block
seamless wooden table
chopping block
meat mincer
sterilising pan
preserving jars
smoking oven
Requirements of the slaughtering place
When slaughtering at home, stunning and slaughter usually take place outside, on a flat hardened surface. A sink or sufficient clean water should also be available. The processing of intestines - which may contain faeces - is legally forbidden in the same area as slaughtering and butchering.

Hygiene
Slaughtering tools and utensils are cleaned in hot bicarbonated water, hooks are scoured or made from stainless steel. Clothing should remain as clean as possible. If the meat comes into contact with clothing contaminated by blood or faeces, bacteria are spread. The meat should also be touched as little as possible with the hands, and the skin of the pig should not come into contact with the meat. In order to clean the hands and any cloths, buckets of clean water are required, which should be replaced regularly. As little water as possible should be used: it reduces the quality of the meat. After slaughter, clean all the utensils etc. with hot soda water.

The pig's last 24 hours
Because home slaughtering usually takes place at the farm, it is seldom necessary to transport the pig to the place of slaughter. If it is necessary, this should take place at least 24 hours before slaughter. During transportation, every effort should be made to avoid bruising the animal and causing it unnecessary distress. Prior to slaughter, the pig should be rested for 24 hours - especially if it has been transported; this improves its quality. During these 24 hours, the pig should not be fed, but it should be given water. When bringing the animal to the place of slaughter, gentle persuasion is better than force. This prevents bruising - as a result of hitting it - which will leave permanent marks on the meat.
Stunning
In order to prevent the pig suffering, it is first stunned. This can be done with an ‘official’ stun-gun - which operates like a firearm - or with a manual stun mask, with which a bolt is hammered into the brain by hand. When using a stun-gun, the correct point to fire the bolt is at the intersection of two imaginary lines, one running from the upper end of the base of the left ear to the inside corner of the right eye and the other from the upper end of the base of the right ear to the inside corner of the left eye. Do not place the equipment any higher, as the skull and fat are thicker there. This may cause the bolt to misfire, panic the pig or not render it fully unconscious. When using a manual stun mask, the imaginary intersection is already indicated by the position of the hole in the mask when placed over the pig’s head. The fatal knife-stroke to the chest immediately follows stunning.

Bleeding dry
For this, a knife approximately 18 cm long is required, which should be sharp and whetted - but should not have been sharpened immediately beforehand. This would make the incision too clean, causing the blood to coagulate too rapidly and stop the bleeding. The knife-stroke should cause the pig to bleed rapidly. For this, the animal should be lying on a flat surface, with the slaughterer placing his knee on the pig’s head, behind the ear. With the other leg, the animal’s lower jaw is pulled back - so that the throat is stretched - and one hand is used to lift the pig’s foreleg. With the other hand, the knife is inserted and pulled horizontally downwards in an oblique movement, ± 10 cm in front of the breastbone, where the veins are located. Sever these with one stroke - or in any case until the blood flows rapidly out. The knife-stroke must be accurate, so as to allow the blood to flow as rapidly as possible into the blood tray. During collection, the blood should be con-
tinuously stirred, otherwise it will coagulate and become unusable for making blood sausage (see ‘preparation’ below).

Removing the hair
The pig's skin is scorched with a gas burner to remove the hair, which is then scrubbed off with water. This can slightly burn and scratch the skin. The claws on the toes need to be more heavily scorched so that they can be removed using the hook on the scraper. Any remaining hair and skin is scraped off using a sharp knife and scrubbed off with water and a brush. Finally, the ears and eyes are cut out. Instead of a gas burner, straw can also be used. Spread out one sheaf of straw over the surface on which the pig is to be laid. Then spread out a second sheaf of straw on top of this. Stuff small bundles of straw into the pig's mouth and ears, under its legs and between its toes. Then set light to all the straw. Any difficult areas can be tackled by applying an extra bundle of straw. Any hair and skin remaining after this process can be scraped off as described above.

Hanging
Expose the hamstrings in the hind legs by cutting into the flesh from behind. Tie the pig's hamstrings to the ladder. Then insert the knife just outside the anal cavity and cut in the direction of the head until the colon is visible. Do not damage this! Place the ladder upright.

2. REMOVING THE ORGANS AND ENTRAILS
With a boar, insert the knife midway between the hams and follow the thick tendon to the pubic bone. Then cut into the middle of the abdominal wall and remove the tendon which lies in the fat. Then cut open the abdominal wall to the depth of the peritoneum and as far as the breastbone, without cutting the entrails. Then cut into the
peritoneum from above, directly below the hams. Grasp the entrails which are thus exposed with one hand and push them back so that they are not damaged by the knife. The intestines can now be removed from inside the pig by cutting loose the bladder at the place where the tendon was. With a sow, the womb is removed first, then the bladder. Moreover, the animal should not be slaughtered when it is in heat, as its hormonal balance makes the meat unsuitable for salting.

In order to completely free the entrails, the colon is first cut carefully away from the fat, as far up as the kidneys. The anus itself - including its crown of flesh - remains attached to the intestines. By carefully pulling, and cutting loose the kidneys, all the entrails except the kidneys can be removed and placed in a container as one whole. Then the breast flesh is cut through to the bone and the breast cleaved. Other parts, such as the windpipe (which is cut loose along the spinal column to the base of the neck vertebrae) to which the lungs, pancreas, gall bladder and heart are attached, are also cut carefully away from the intestinal tissue and cut loose at the throat. Be extremely careful around the gall bladder and pancreas: damage to the gall bladder may cause bile to contaminate meat or fat, making it unsuitable for consumption. The tongue is then also completely cut out, and a hook pulled through the windpipe so as to hang the organs outside, behind the pig. Then immediately cut away the gall bladder from the liver and remove it. The rest of the thoracic organs are then briefly rinsed in cold water. If an inspection is taking place, then the kidneys are cut away from the tissue, but left inside the pig. Now that the abdominal organs have been removed, the spinal column is cut very precisely down the middle, the spinal marrow removed and the spinal fat cut through.

Then rinse the open carcass clean, wipe it dry and let it hang for two days.
3. PREPARATION OF THE INTESTINES FOR SAUSAGE-MAKING
The intestines are prepared directly after removal from the pig. After
the following treatment, they are preserved in clean water for two to
four days, then rinsed immediately before processing. The intestines
are first carefully separated from one another and from the intestinal
tissue by hand. They are then rolled up in the same way as a garden
hose and cut through in one stroke, into lengths of ± 2 meters.
As much as possible of the clear contents and faeces is then removed.
Place the intestines in lukewarm water. Avoid damaging the intestines,
which are very delicate. In the processing room, the intestines are sort-
ed and laid out on a table. Carefully remove the attached fat with the
thumb and forefinger, without stretching the intestines. When doing so,
make sure that they are not contaminated by the remaining faeces and
mucus.

Small intestine
This is the part of the intestine most widely used for making sausages.
It is cleaned immediately after slaughter: lay out the intestine out on a
board and squeeze the mucus out with the back of a knife. The mucus
collects at the end of the piece of gut, which should be cut off and
thrown away. Then place the intestine in clean, lukewarm water, after
which it should be cleaned again in order to be certain that all traces
of mucus have been removed. After this, again place it in lukewarm
water until use, two to three days later. Immediately before use, turn
the intestines inside out.

Turning the intestines inside out
Parts of the gut other than the small intestine are turned inside out
before cleaning in order to remove faeces, etc. To do so, insert two fin-
gers into one end of the intestine and turn the end inside out. With the
other hand, push the gut firmly so that a kind of sac is formed.
Pour some water into this and the gut will turn itself inside out. The treatment of different parts of the gut varies. The large intestine is, after it has been turned inside out, cleaned in the same way as the small intestine. After it has been turned inside out, the rectum is cleaned by hand so as not to damage the white skin. The stomach is first turned inside out, after which the tripe is peeled off, but not cleaned, or simply eaten. The appendix. In order to use the golden membrane from the appendix, the membrane is carefully cut loose, and then pulled down from left to right. The membrane is washed in lukewarm water, after which it is turned inside out and cleaned. If the guts smell strongly, they can be placed overnight in celery, parsley or lovage water.

4. BONING, PREPARATION AND PRESERVATION

The pig is divided into two half heads, two rump hams, two sides of belly fat, two strips of pork fat, lard, two rib sections, two shoulders, four trotters and the offal: lungs, stomach, kidneys, spleen, liver and intestines.

BONING

For this a cleaver and a well-sharpened boning knife are required, the latter being held like a dagger to follow the bone. The use of this grip, and continually cutting towards yourself, requires great care. There is also the danger of the knife snagging against joints, breaking and the blade flying out. In this guide, the processing of the meat, etc., are dealt with in such a way that the meat can be preserved without freezing.
Head
First, the head and the jawbone are cut free from the shoulder to the bone and cleaved between the neck vertebrae. They are then well scrubbed so that brawn can be made from them.

Ham
To prepare this, the rump is cut free from the beginning of the chops to the hip joint and then cleaved.

Ribs and shoulder
To free these from the belly pork, the back is cut through as far as the ribs. Saw these through. Then the belly fat is cut into from the shoulder and the ribs separated from it by first breaking the joints with a knife and then cleaving it apart. From this, either chops can be cut or a rolled roast prepared. For the latter, the meat is cut away from the ribs and all but a thin layer of fat cut off. This keeps the meat juicy. For ‘Kassel rib’, it is first boned so that it can then be pickled and smoked. It can later be fried or boiled (served with sauerkraut). The veins are removed from the tenderloin.

Belly fat
When the ribs are sawn through, their ends remain in the belly fat. Carefully cut these out along the bone.

Trotters
Locate the cartilage in the joint with the point of a knife, pull it loose and cut it away.

Lard
Lard is a coarse, granular fat which is easy to distinguish from the firmer belly fat. To remove the lard lying on the belly fat and rib cage and around the kidneys, carefully separate it under the diaphragm.
and along the tenderloin with a knife. Then pull off the lard, and in the
grain area push it loose in order not to tear it, so that none remains
attached to the belly wall. The tripe which is still attached to the belly
wall is pulled off to be melted down with the lard.

PREPARATION
After the division of the meat, this guide concentrates primarily upon
its preservation, preceded by the preparation of meat products. Each
of the following methods of preparation is concluded with a particular
preservation method.

Brawn
Place two halves of a pig’s head - and, if desired, two trotters - in a
pan of water, add one chopped onion and 25 grams of salt, and simmer
until the meat separates from the bone. Remove the meat from the pan,
remove any small bones from it and chop it finely. Mix this with: 1.5 dl
vinegar, 5g pepper, 1/2 grated nutmeg, 4 sliced gherkins, 1 teaspoon
ground nutmeg. Add water to form a smooth mixture and simmer for
15 minutes. Rinse out stoneware moulds with cold water, pour in the
brawn, cool and allow to set, then cut into blocks. Then store.

Meatballs and sausages
Coarsely mince spare meat, off-cuts, fat and less attractive pieces of
meat in the mincer, and divide the mince to make balls and/or sau-
sages. Meatballs: mix the mince with rusk crumbs and 20 grams of
salt per kilogram, and season as desired. Mince the part for meatballs
again, this time finely. Fry the meatballs.
For sausages, mince the meat again, this time finely, and place a sau-
sage-maker containing the rolled up gut over the outlet of the mincer.
Fill the skins evenly (avoid air pockets forming between the meat) and
tie off the sausages approximately every 15 cm. Bind the ends of the
skins with cooking string. Then blanch the sausages in hot water. Fry
them in lard. Then preserve the sausages.
Trotters
Simmer the trotters in salted water until the meat is half cooked. Then preserve the trotters.

Rolled pork rib
Once the meat has been well boned and trimmed, season it with salt, black pepper, sage and garlic, and roll it up tightly: begin with the left hand on the thick side, push down firmly with the right hand and continue pressing to maintain the tension. Do this until the meat is completely rolled up. Tie up the rolled meat and roast it 'rosé' with rosemary, coarsely chopped onion and garlic. Then preserve it.

Black pudding
Mix the pig's blood with pepper, salt and two packets of crumbled rusks and fill the gut with this (use the part of the gut above the colon). Cut the pork fat into strips and add this to the mixture. Tie off the sausage and boil for 20 - 45 minutes. The sausage is ready when no blood flows out when it is pierced with a knitting needle. Allow to cool. The sausage will keep for one to one-and-a-half weeks fresh, or six months to one year if preserved.

Dry Brabant sausage
Use lean pork: shoulder meat and the better off-cuts. Cut these into large pieces. Cut fat into thin slices. The ratio of meat to fat should be 7:3. Mix this well with 26 grams of preserving salt (see 'salting' below), two grams of white pepper, one gram of nutmeg and, if desired, ground cloves and garlic. Cool to 2°C and then mince coarsely, placing a sausage-maker containing the rolled up gut over the outlet of the mincer. Fill the skins evenly (avoid air pockets forming in the meat) and twist the skin after about 40 cm. Tie off the ends. Then dry for two days (see 'smoking' below), then smoke briefly and dry again.
**Buckwheat meat loaf**

Thoroughly boil the lungs, heart, kidneys, spleen, liver and crackling (from 250 grams of melted fat) in three liters of water, with: 1 teaspoon of aniseed, 3 teaspoons of ground cloves and a little nutmeg. Finely mince the cooked offal and put the mixture back in the cooking pot together with: 500g buckwheat meal, chopped gherkins and 250g of cubed fatty meat. Cook this until it starts to solidify, and then allow it to cool in a cold rinsed bowl. For immediate use: turn out of the bowl, cut into slices and fry in hot fat until both sides are brown. Storage time: for immediate use, a few weeks in the refrigerator; after preservation, six months to one year.

**Preservation**

The shelf life of meat and meat products can be extended, without freezing, by heating, drying, salting, smoking, preserving or a combination of these. In all these methods, the product is treated in such a way as to resist contamination by bacteria and mould.

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**SALTING**

**Preparation**

Once both halves of the pig have been divided, the meat to be salted must be cooled sufficiently (2 °C) and be firm. If it remains soft, then it is unsuitable for salting. For the salting solution, heat ± 30 liters of water to ± 25 °C. Add to this a raw potato, cut in half. Then add just as much salt compound (see recipes below) as is required to make the potato float.

Recipe for preserving salt:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>kitchen salt</td>
<td>10 kg</td>
</tr>
<tr>
<td>potassium nitrate</td>
<td>100 g</td>
</tr>
<tr>
<td>cane sugar</td>
<td>200 g</td>
</tr>
</tbody>
</table>

Mix the ingredients as follows: first mix small quantities of kitchen salt with the potassium nitrate, then larger quantities, and then mix in the sugar to form a homogeneous mixture.

Alternative recipe:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>kitchen salt</td>
<td>10 kg</td>
</tr>
<tr>
<td>nitrite</td>
<td>60 g</td>
</tr>
<tr>
<td>cane sugar</td>
<td>200 g</td>
</tr>
</tbody>
</table>
Important: never use more than six parts of nitrite per 100 - more than this is poisonous! Mix the ingredients as in the first recipe. Then cool the salting solution to 4 - 5 °C.

Ham, 'Kassel rib' and bacon
Coarse salt is rubbed into the pieces of meat in order to break down the surface structure, so that later - during salting - the salt soaks in better and deeper. Allow the dry salt to work in for two hours before placing the meat in the salting barrel. When doing this it is important that all the pieces of meat are completely immersed in the solution. To prevent exposure to the air whilst it is in the cask, it is advisable to place a plank and a stone on top of the meat in the solution. The salting period depends upon the size of the pieces of meat: 4 - 5 weeks for hams, one week for bacon and 'Kassel ribs'. The salting barrel should be checked regularly - the solution should remain clear and slightly pink in color. If it becomes cloudy or green, scum collects on the surface or it smells badly, then remove the meat immediately. Check it for mould or decay (which should be removed) and rinse it. Then clean the salting barrel with hot bicarbonate of water and place the hams, etc., in a fresh solution. At the same time as checking the salting solution - at least once per week - the meat should be turned and the lowest pieces brought to the top. After salting, rinse the hams, 'Kassel ribs' and bacon with cold water brush them clean to remove any remaining salt. Then dry and smoke them (see 'smoking' below).

PRESERVING AND PICKLING
General
Preserving is a sterilization process. It is not necessary to place the meat in liquid - it can also be preserved 'dry'. As little seasoning as possible should be used when preserving, herbs and spices encourage decay. Pickling is a means of preservation in which acid kills bacteria. Another means of preservation is to cover meat which has first been
sterilized with hot fat or gelatine, which once set, seals it from the air. This method is not considered here. In this case, all the methods described make use of preserving jars, for which the same preparation procedures apply. Clean the jars and lids with bicarbonate of soda and check them for cracks and damage. Check for porosity and tears in the rubber rings and boil them in bicarbonate of soda. Drain the pots, lids and rings until they are dry.

Preserving
Fill the jars and, if desired, top them up with cooking juices, gravy or stock. Close them (with metal clips) and place them in a sterilising pan filled with water. A sterilising pan is a very large pan containing a grid or wire netting which prevents the preserving jars from touching its bottom or sides, which could cause them to crack during heating. The jars should be immersed 2 cm under the surface of the water and simmer for one hour after the water has come to the boil. Jars with a capacity greater than 1.5 liters need 20 minutes longer. Once the sterilization period is complete, remove the jars from the pan and place them on a non-conducting, non-cold surface (such as a wooden board) to cool. In this description, the meat is sterilized once. A second sterilization is also possible, 24 hours later. This extends the shelf life, but does result in some loss of taste. Finally, the jars are labelled with details of their contents, date of production and ‘best before’ date. Store them in a cool, dry place.

Pickling
Fill the jars, and then top them up to 0.5 cm below the rim with a mixture of 50 % water, 50 % vinegar and herbs. Place a piece of grease-proof paper on top of this and cover this with a layer of pure vinegar. Then seal the jars well and label them with details of their contents, date of production and ‘best before’ date. Store them in a cool, dry place.
Smoking
Prior to smoking, the salted pieces of meat are rinsed with cold water and scrubbed, then dried. An attic is an ideal place for drying. In any case, it should be done in a cool, dry, draughtproof place. Hams, bacon and 'Kassel rib' takes 7 - 10 days to dry, dry Brabant sausage somewhat less. This guide only describes 'slow, low temperature smoking': ± one hour per day at ± 20 °C. This makes the products keep longer than smoking them for a shorter period at high temperatures. Moreover, this method avoids fat melting and dripping out of the meat. The wood used, including shavings and chips, should not come from painted or otherwise treated waste wood. The fumes from these can be poisonous and affect the meat.
Oak or beech or both are the best woods to use, but the wood of fruit trees is also suitable. Adding juniper berries, sage, laurel, heather or even seaweed gives the meat extra taste.
A smoking oven is simple to make from two oil barrels placed one on top of the other. A small door is made at the base, and the 'lid' at the top is removed and rack made from which the meat is hung. Cover the top with wet cloths whilst the meat is hanging in the oven. Make a small wood fire in a metal tray (20 x 20 x 40 cm) at the base of the oven. Once this is burning thoroughly, cover it with a thick layer of wood shavings. This extinguishes the fire and produces smoke. Check smouldering every 1 - 1.5 hours and top up the tray with wood and shavings. The length of the smoking process depends upon the size of the pieces of meat, the taste desired and the oven. Once the meat is smoked, the meat will have lost one quarter or even more of its weight. Ham can be given extra taste by smoking it for half an hour on the first day and then, whilst it is still warm, rubbing in pepper, nutmeg, cloves, thyme and tenderized laurel leaves. Allow the ham to cool for 48 hours with the herbs on it. Then smoke the ham for one hour and allow to cool for 48 hours, before repeating the process. After this, smoke to taste: intotal 16 - 21 hours, at 1 hour per day.
The following smoking times are recommended for the Van Lieshout smoking oven:

- Dry Brabant sausage: 3 hours;
- Hams: 16-21 hours minimum;
- Bacon: 8 hours;
- 'Kassel rib': 8 hours.

**Storage**

In order to prevent moulding and decay during the storage of smoked meats, they should be regularly checked for moist patches. This can be avoided to a great extent by a careful choice of storage place. A deep wooden chest - lifted off the floor on, for example, blocks - may be suitable. Spread a layer of sieved ash from the fire over the floor. Tightly wrap the pieces of meat in clean canvas or thick cotton and lay them on the ash. Spread another layer of ash on top (repeat this process if the quantity of meat so requires). Cover the top layer of stored meat with a layer of ash. Another possibility is to sew the hams, etc., into canvas or linen bags and to cover these with three layers of whitewash.

Hang them in a cool, dry place, shielded from sunlight, at a temperature of ± 15 °C. Ham, bacon and 'Kassel rib' will keep for an unlimited period of time. When the ham is finally consumed, it should be checked that it is still firm and smells good. To do this, insert a knitting needle right down to the bone. When this is withdrawn, no liquid should leak out. The needle should be clean and dry and smell slightly of smoke.

The author is not responsible for any consequences resulting from neglect or failure to strictly follow hygiene regulations, and any consequences of textual errors or descriptions in the recipes and methods described.

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Sources for Quoted Authors

*2 Multiple-Multiplying-Multiplication, catalogue published by Jan van Eyck Academie, Maastricht 1991, pp.28-32
*4 Multiple-Multiplying-Multiplication, catalogue published by Jan van Eyck Academie, Maastricht 1991, pp.28-32
*5 ibid.
*6 This is a modified version of a text written by Piet de Jonge for Het Meubelboek (the Furniture Book), Dutch furniture design 1986-1996, The Hague 1996. He has since bought two small tables from Atelier van Lieshout: dark and savannah brown.
*8 Viennese Story, exhibition catalogue Wiener Secession, Vienna 1993, pp.154-159
*9 Welcome Stranger, The follow up, exhibition catalogue, Welcome Stranger, Amsterdam 1994
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*13 Wilhelm Reich, Prof. Dr. G.A. Ladee, Grote Winkler Prins, 16th volume, 7th printing, Elsevier, Amsterdam-Brussels 1973, pp.215
*14 Jong Holland, Journal for art and design after 1850, No. 2/1995, pp.32-33
*17 During the Theaterpark HOBOken in June 1995, each day a different writer was asked to contribute an article to the daily newspaper. These articles were stuck onto Atelier van Lieshout's yellow container bar.
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Joep van Lieshout travels between the worlds of easy-clean designs and the non-functional area of art. His work offers practical solutions to everyday problems: his self-developed ‘skull rooms’ and campers, furniture and practical objects, sextoys and weapons are poised on the interface between high and low art. At the same time they are the objects of personal obsession, buildings and implements, which are the materialization of secret wishes.

This book offers a survey of the creative powers of Joep van Lieshout (born 1963, Ravenstein), one of the foremost Dutch artists of the day. Piet de Jonge and Bart Lootsma provide a comprehensive introduction to Van Lieshout’s thought-world. In addition the book contains numerous references for further study.

For those who cannot afford to acquire a genuine Van Lieshout this book contains several clear, simple manuals providing the skilled handyman with a step-by-step guide to the (re)construction of the objects illustrated. Discover the secret wealth of modern living - together with Atelier van Lieshout.

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