Being the builder, builds your being

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For over five years self-build has been one of the fields explored within the group Building Production Technology at the Technische Hogeschool, Eindhoven by Jan Westra and colleagues. After some experience with self-build projects in and around Eindhoven and after an introduction to Walter Segal, John and Bertha Turner, Peter Stead and others at the self-build congress in Bern 1978, Westra initiated a course on self-build in Eindhoven in 1979. Since that time the author has been involved in workshops, forums, meetings and conferences in Germany, Belgium and England. Along with final thesis students working on this subject he founded HATTRICK, a permanent place at the University of Eindhoven for matters concerning Housing and Technology and in particular self-build methods. A grant from the department of architecture enabled the group to erect two small buildings on the premises, a modified Segal house and a playcard house, using doors. This article takes a look at the Lewisham project, the first large scheme for self-build in a non traditional way of building.

The clue

Building can be an awkward process. Building is about the change of place, form and state of material. This has been a trial over and over again and always more or less to the ways and means of the local context.

People in Holland as in many other parts of the Western world are housed in rather square rooms, connected (or rather often divided) by corridors. The rooms are programmed to suit specific functions. Regulations and byelaws have promoted this way of doing things and subsequently the mode of living. The whole approach seems to be so fixed and immortalized that peoples ways cannot be expressed in terms of 'being', but has to be turned into 'having' terms. I would like to put forward here that the theme 'human being versus human having' is inherent to a way of living, housing and building. The way in which someone is housed is often explained or expressed in 'having' terms, hardly does one ever try to describe the situation in 'being' terms. Houses that are on the market are normally advertised by their square meters, the front door, the flooring, the view etc; there is nothing about the activities, the way of living, nothing about the 'being'. But 'to be or not to have' is not the only phrase being questioned here. Housing, because of its fundamental roots and social necessity, can not be analysed as if it were furniture or peanut butter. Governments do not take action or responsibility for the production of cars, radios, fridges, washing machines, etc. but they do have the ultimate influence on education, medical care, defense and housing.

Trying to change ways or means always has to be projected onto the status of the object. Disregarding the status simply implies pleading for an utopia or a revolution. It is sad however, even today, that many officers, professors and ministers still manage to entertain an audience in outlining the view that housing is comparable to the production of aircrafts, cars or mobile homes, and thus unawares are aiming at a situation which is socially and technologically nonsense.

"Picture a typical family. They have completed a year of consultation with an automobile designer. Plans have been prepared, cardboard models studied, bids have been taken, plans modified, and a builder has been selected. The plans have finally been approved by the local authorities, cost adjustments and scheduling have been completed. Construction is about to begin. On the first day a truck arrives and dumps the first shipment of parts on the front lawn. It is raining and some of the metal parts are in danger of rusting. The contractor is at another job and does not move things under cover until the following day. A small connecting pin rolls off under a rose bush and is lost. A cardboard box containing bolts is soaked and splits open
Once the contractor hears that the parts are at the house he sends around a crew. The family is lucky to be assigned one of the contractor's best foremen. He and his men study the plans, search out the necessary parts, and begin the work. It is an unfamiliar design and a few trial and error efforts are necessary before the frame starts to take shape. Work is held up from time to time. One of the men must go back to the shop for a tool, another calls the designer with a question. The men are idle several days waiting for a replacement for the part under the rose bush. The pipe fitter is at his grandmother's funeral and the work is held up because the main crew cannot set the rear end until his work is done. There have been delays caused by keeping the brake system exposed until the local inspector checks it. Painting was delayed during a week of rain and the front bumper was scratched during installation with the wrong tool and has to be replaced. The rear upholstery arrived damaged. But the manufacturer discontinued his old line and the new fabric does not match the sample the family selected in the distributor's showroom. Eventually, the car will be finished. There is a small celebration among the beer cans, sandwich bags, parts wrappers scattered on the lawn. Six months later all of the "bugs" have been worked out. The car is running well, and the lawn looks like new. The financial details have been arranged, the construction loan paid off by a long-term bank loan, the final fees to the designer and the lawyer have been paid, and there are only a few outstanding lines and claims by subcontractors" 1).

Discussing the work of Walter Segal and describing the Lewisham experience will only be worthwhile when the climate is felt, since one could easily translate Segal's process into boyscout's work for the weekend. The human "havings" certainly will have very little understanding and appreciation for what has happened, the human "beings" are simply there: scattered over four sites in Lewisham in their peculiar houses.

The history

The initiative is a coincidence. Walter Segal and Brian Richardson were introduced to each other by Colin Ward. The unorthodox and obstinate way of building found great appreciation with Brian Richardson, at that time Architect to the Borough of Lewisham. The idea of developing a housing scheme for self-builders became more manifest, since it was then soon introduced to politicians who were keen on the project. They agreed that the idea made sense; the houses could be built on sites that had been vacant for a long time because of poor soil conditions,

Houses that grow like trees.
The people who remained interested after that meeting chose a steering group who drew up a set of conditions to be discussed with the Council's officials:

- There will be no discrimination to applicants regarding age, income, skill
- Co-operation in tasks was only obligatory to communal matters, such as drains, paths and fences
- There should be a guaranteed council mortgage, no requirement of capital from the self-builders and the scheme should be financed on an equity-sharing basis.

These proposals were approved by the council and so the remaining group (78) selected 14 self-builders by ballot for the first four sites. Why it took almost three years from that moment to start building on site has also to do with the "being" and the "having". Doing things different-

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14th June 1976

Dear Mr Williams

Thank you for your letter asking for more details of Lewisham's self-build housing scheme. The purpose of this reply is to try to explain our thinking in more detail and to invite you to a meeting with us and Walter Segal, the architect, on Thursday evening, July 15th, if you are keen to join a pilot project to build such a home for your family.

The reason why Lewisham Council took a look at Walter Segal's design was that we were trying to find alternative ways of housing people in need - our housing waiting list has 14,000 families on it - that did not interfere with our rolling building programme, and that could make use of smaller sites that would probably be left unused for some years because their shape or situation would make them difficult to build conventional houses on.

Walter Segal has many years' experience of house design and timber engineering and has designed a system that seemed ideal for our purposes. But it does demand a considerable amount of work from the people who use it to build their own homes, particularly if they are unskilled in the building trades. That's one thing we should stress from the start. However, by designing a system that makes use of readily available materials, avoids deep foundations and minimises cutting and drilling, he has come up with a house that can be, and has been, built by people with no previous experience.

J Taylor ARIBA MRTPI Borough Architect
ly can cause trouble: officials trying to understand Segal's staccato drawings, the DOE (Department of Environment) getting tangled in the subsidies, neighbours seeing their property devaluated because of the "alien prefab". The effect of these delays have a positive side, however, people become so eager to find out why things are not running so well, that they - with their effort and motivation - can very well overrule the professionals after a while. The group had to stand up to these delays biding their time, usefully adjusting the plans with Walter Segal to their individual wishes and also attending evening classes in the upstairs room of the local pub, where they learned how to build the houses. During this period they kept meeting and discussing not in the least to hold the group together. There is a golden rule for the self-build that we've seen confirmed over and over again: self-build without a time-schedule is suicide. You cannot let anyone wait long once the approval has been granted. Finally they were allowed to start the work in 1979 and according to Brian Richardson 'working faster than materials could be supplied'. Although I think 'supplied' will not be the word the self-builders would use to describe the situation. Getting materials to site through the official pipelines was far from smooth. One might say as in many other situations, that as long as officials have anything to do with activities that are not totally known to them, the activity will dysfunction at every bureaucratic intersection. Walter Segal has fought these systems all his life putting up with the consequences and never giving up: "On a more serious level is the question of building control. This has gone completely away with officials without building experience taking a hand at designing and constructing and where a continuous flow of legislation, not written to be understood, together with enshrined bad practices of the time of yore, will, if unchecked, eventually bringing production in the field of housing to a standstill. At present it is merely putting years on completions and throws costs out of balance. They are very few officials in this country that possess a thorough working knowledge of the vast number of trivial regulations that constitute this impossible body of legislation which, applied in toto, can strangle almost any building project. Fortunately, most building inspectors are not entirely aware of this."

What is most urgently needed is a ten-year moratorium to stop any further legislation. Necessary, too, as an immediate temporary measure, is the introduction of automatic relaxations to precede the revocations that will eventually have to be applied. Such relaxations will assist in bridging the gap between the present legislation and the practical instruments that will replace it. Unwinding the apparatus should defer redundancies. In both planning and building control new policies are bound to reduce the amount of required administration and to result in economies from which this country will draw considerable benefit". 4)

The concept

Meeting Walter Segal is a confrontation with a vast and profound well. He grew up in Monte Verita near Ascona, but did not adopt any great liking for the cultural esprit of the environment (such as Dadaism). Instead he tried to find a place to become an architect in a sensible and worthwhile way. As he found in Delft, Berlin and Zürich that wish was not easy to be fulfilled. It finally became ETH Zürich, because one could study with only a few hindrances, as he puts it. He does not trust any institutionalised knowledge, authority or power. From his first assignment, the "case piccolo" in Ascona through fifty years of prac-
own weapons: he has changed parts of the building code, showing impertinent mistakes or has proven to the officials that his buildings would not be blown away. Unlike a tiny drop on a hot plate this one persists and does not go away. It is interesting to see that he has in fact put an enormous amount of enthusiasm into a young generation of architects and students, fed up with the detached and managerial role of the architect. Architects have become docile instruments of production power and its capital; they have proved themselves unable to realize the potential of either traditional crafts or new techniques. Walter Segal's direct approach, his uncamouflaged way of drawing, extensive calculations of apparently simple construction elements, his eloquency and of course his style of life are a constant threat for everyone who is trying to abide by the rules, conform to the authority or the professional. He likes people 'that try to reach for aims beyond the standard package of life', people who are braking patterns. In that respect it will be interesting to see to which extent the patterns have changed it will be interesting to see to which extent the patterns have changed in Lewisham. Setting the track for a new goal is one thing, keeping on the track is quite another .... The synthesis to his way of building has its roots in the construction of a little house in his garden in 1965. The house was meant to be a temporary shelter for his family during the time a new house was being built on the premises. Annoyed by the prices of mobile homes and temporary or instant housing he claimed to erect a house for far less money and so he did. Using "off-the-peg" building materials such as uniform timber members, boards, sheets, and other hardware. The family lived in the house for over a year and loved it. Life was direct and related to the house. Visitors who came to the house liked it as well. Some liked it so much, that they asked whether it was possible to design a similar house, but for permanent use. Thus in the late 60's houses were built in Yelling, Ballygarrett (Ireland), Halstead and in London. It meant a sudden change when one looks at the list of buildings that preceded those houses, mostly blocks of flats in and around London. The development of this method started then, has not
stopped since. It was an approach as it has turned out, which has lent itself to clients who want low cost housing put up by builders as well as owner-builders.

Self-build

It seems easy to determine self-build in a definition, yet the more you get confronted, the more you see the complexity of the matter. The emphasis is undoubtedly on self rather than on build, although in the process of a project it is the building that becomes the attractive part. There is nothing new about self-build. People who have thought so are the ones who are discovering the whole phenomenon. The question is whether it was institutionalised or socially recognized, or whether it was the usual offbeat struggle of people in the margin of society. John Turner and Hans Harms have discussed in several publications the status, the importance and the potential of the phenomenon of self-build and self-help. Although they do not agree with each other on every aspect, to say the least, both their views are worth noting since the abstraction in the objectives enables one to take up a position irrespective of the actual building. (The actual building normally obscures the objectives and underlaying motives: it is the period in which the pictures are taken, 'preferably against the sunlight').

The questions that Turner and Harms raised during the post-doctorate course on self-build which I initiated in 1979 in Eindhoven still stand, though maybe modified in detail. The key words are: goal, motivation and effect. First, John Turner arguing the trilogy autarchy-autonomy-heteronomy:

"The image is not that of everyone building their own houses or, even, of anyone having to do so. As repeatedly pointed out in Freedom to Build and elsewhere, the corollary of the freedom to do so is the freedom not to have to do so. The image is that of the traditional town: large numbers of small producers and distributors serving a very large number of persons, associations, small enterprises and local institutions. Many, if not all of the small towns and 'architecture without architects' that we all admire so much, were built more or less according to the principles of local, if not always individual, dweller control. It is sometimes supposed that this 'bottom-up' view, and the principle of autonomy is utopian. It is not. It is based on observations of what works and heteronomy fails. If 'self-help' is used in this sense of autonomy, I am all for it. But if it means enforced, involuntary self-building, or programmes of self-building organised by outside agents, I am against it in principle while open to the likelihood that in some cases, it is the better choice among several evil alternatives". 5)

And Hans Harms in a very recent book on self-help housing about the why's:

"Interestingly, the reasons given by people for self-building are: first and foremost, that it is the only way in which they can own a home; secondly, that they want to live undisturbed and without paying rent; thirdly, that they need more space; fourthly, that it provides something for their children, fifthly, that it provides them with security for old age; and sixthly, that they want to live in the country and to have a higher quality house. None of them mentioned self expression which is often thought by architects to be a strong motivation. The biggest problem for the self-builder remains the high interest rate on mortgages and the very low value of his labour. Self-help of this kind does not question the exploitative nature of the high cost of finance capital in the process: in fact, it supports it. In most cases the self-helper has to pay on a mortgage more per year than before in rent over a period which may go beyond his lifetime, so the benefits of lower housing costs will be postponed to a second generation when the house will need major repairs and modernization". 6)

Turner and Harms, as well as quite a few others including myself, have been going round in circles, inner circles at that, explaining to each other the possible effects and potentials of self-build. There has been a tremendous rise in the amount of conferences on the topic. Even officials, with their very different motivations have stepped down to recognise
"Being or having":
self-build: when we are not able; do-it-yourself. They almost have joined our circles. Professionals remain like priests talking about marriage not only because they have not had the actual experience, but also because they are not of the self builders kin. But what do the self-builders have to say?
The self-builders in Lewisham are an extraordinary group of people. Every visit to the sites for the past two years has been a very valuable experience. It is in no way like monitoring a building project, it is like trying to estimate the experiences they have. Referring to the clue of "being or having" they only talk in terms of being. It is building your house that is important, having or rather owning a house comes in second, at least in the beginning. They have grown confident in being able to do it. We have only recently made a selection for our self-build files from sixteen hours of video of self-made interviews with the Lewisham self-builders. That is an amazing document. The documentation starts a few years ago with a bustrip to the first Segal self-build house in Woodbridge, Suffolk. In the bus are the fourteen selected Lewisham families. They gazed at the house of the Holland's in Woodbridge, the first couple to find out that the building method of Walter Segal can be easily done by the layman and laywoman.*

In the living room of the Hollands, Michael Holland explains the philosophy behind the building of, the living in and the enlargement of the house. The 14 selfbuilders are eager to find out, at the same time they feel uneasy about what their potentials will be to complete their own project. The video documentation then shows the change after three years.

During these three years we can see how these changes have effected both the self builders themselves and the circumstances in which they now live. People who previously had no experience in public speaking or who were not used to taking on such apparently complex tasks, could all do it. Holding a discussion or explaining the building process to visiting groups, even giving a lecture is no problem to Ken Atkins, for instance, the chairman of the group. Some citations from the self-builders, which are also documented on the video are: 'Next time we would not need anybody'; 'once you know about things there is nothing to it'; 'I would like to start all over again in my own way'. The most important thing about self-build or any other form of selfdetermination is not only as they, the marvelous Lewisham self-build gang show, about building or getting decent housing, it is also becoming another "being". Ken Atkins says, when he refers to escaping from his jungle, the apartment block, where he and his family lived before: 'It is like getting out of a cave into a completely different world with many very different people who are in general nice and interesting'.

Professionals can never identify themselves with the self-builder through analyzing what should be proposed for 'them'. The dilemma for people who are involved in the professional side of the self-build projects is, that they are not. They can discuss and make clever remarks concerning the matter, but they never will be able to feel the underlying striving and motivations the self-builders have. It again is a matter of "being" or "having"; I mean being some-

(* Before that time all the Segal structures had in fact been erected and finished by professional craftsmen).
one opposed to having little or nothing. There have been busloads of building site-tourists to the Lewisham projects wondering around and gazing at the peculiar way of building; very few will understand what is behind it all. Self-build goes beyond the "doing-things-yourself". Being someone in the process in stead of having the opportunity within a system, is all the difference. The economic recession of this era may contribute to better conditions for those who try to escape the system, since the professionals as a whole have failed to recognize the potentials of the ordinary people and have obstinately refused to promote alternatives. Reconsideration of what is necessary, even obligatory, to house people and of the way the housing is produced, through all levels, is a matter that will certainly have to be discussed, especially in an era of recession.

The way

The way of building could be described as the knitting together of off-the-peg materials without changing their shape or state. In common or traditional buil-
ding there is quite a lot of shaping, changing of state (concrete) and of course of placing materials. To me those activities represent the eminent keys in describing the way of building.

In order to follow the principles of the Segal doctrine one must choose a module. The module, if rightly chosen could bring all the structural components and materials into relation with each other. You can not change the production forces by simply imposing the module on them. It should be the result of an analysis of building materials. "God bless our module" was the credo of the sixties and seventies and in the search for a common approach, professionals in their confusion decided for the 10 and 30 cm modules, disregarding the actual sizes of materials, and construction details. We will probably live to see the last deaththroes of the decisions that were then made. Segal's approach is to design a way of building that will easily incorporate the available materials on the market. The result of his investigation is a 60-6-60 grid in which the 5 cm is in fact the dominating measurement as it is represented by numerous little pieces of wood (spacers, blocks) that lead the self-builder on the way. Once the portal frames are placed on the piers, the taking of measurements is superfluous. The 60-5-60 zones are combined with overlapping elements such as the wall battens measuring 10 cm. This trivial arrangement allows the self-builder to place the outer and inner wall package without a problem, because the tolerances and verticality can be easily met.

In traditional building one of the issues is how to fasten down different elements. The joints here are the essential parts of the construction: systems live or die because of joints. The way Segal proposes to group the materials is almost the opposite, as he tries to make as few fixed connections as possible.

The wall package consist of three layers tightened between battens on the inside and outside. The arrangement means that one can wait up until the last moment to make the final adjustments to the facades. In Lewisham one could see couples working on the kitchen outfit one weekend while the finished walls were still not in. This means that in contrast to most other ways of building, the sequences of placing the materials after the portals and the roof are made are rather independent. The self-builders found this of great advantage, because they could, within certain ranges, select their weekend or evening activities depending on the weather, the number of people on the site or their mood. Even now when almost every house is lived in you can see facades that have not been lined up; 'it is a job you can do when you have time and when the weather is all right'.

Apart from many details which from lack of space cannot be dealt with here, I should at least mention Segal's insistence to have materials handled only once and to have no more than five or six crafts-based activities in total. Comparing that aim again with the more common way of building it makes sense to limit the activities and crafts for self-builders. In contrast to the Lewisham scheme, people building their own houses in the same way as professionals do, are in fact acting as labourers; delivering newspapers could also pay a professional and might work more effectively. In Lewisham the carpenters that were in the group of self-builders had to adjust to the Segal system just in the way the other ones did. And of course some were stronger than others, but in the long run despite the predictions of the suspicious experts, all of them, regardless of age or sex have made it. The self-build scheme in Lewisham could be described as
"building apart together". (BAT)
Unlike other schemes the independence of the members of the groups is tremendous. The BAT relation of the members means they only need help from others on special occasions, such as raising the portals. Therefore the building race can differ to a great extent and of course the starts can be individual. During the building process the setbacks the self-builders experienced were caused by the strictly uncoordinated procedures that were officially found necessary to get the materials to the site. In order to have a smooth process there should be no intervening parties that have no related interests; in Lewisham, because of official rules for ordering the materials, self-builders were often stuck for weeks. "If they would have allowed us to spend the money that was granted to the project, we could have ordered the materials ourselves directly, probably cheaper and much quicker".

The aftermath

Referring to the "clue" the Lewisham scheme has proved that actually anyone could be or become a 'human being', when the basics are there. Current opinion is favourable towards innovations, different thoughts, experiments etc. and it is certainly a hopeful development. Up till now we never recognized the impossibilities we created together. The ones fighting then get a better chance today. Segal is just one of them, the self-builders are just fourteen families, but a recent BBC program about the Lewisham project made over 1000 people respond. "We don't know how to handle this, we might as well be professionals!". Ken Atkins said hoping to get more schemes going; the perspectives are good, it is becoming a disease after all.

At a tiny site at the Eindhoven University Grounds we have only very recently put up a Segal structure and experimented with different combinations of materials. As we found out woodwool slabs only come in 50 cm widths in the Netherlands, so we tried 60 cm Stramit (pressed straw in cardboard) and also dense Rockwool slabs. The thickness of 5 cm is available for both materials. Also we changed the inner and outer Glasalasheets and tried various ways of fixing the battens. After working irregularly for only two weeks we have discovered a few golden rules for certain details and materials, but we also came to the conclusion that in fact regardless of the kind of materials or elements one wants to apply, the basic principle is very sound and it works. We are planning to continue along similar lines, to keep on experimenting, illustrating to experts and officials the merits and costs of building, organizing and living. One just can hope that tiny drops open big eyes.

Notes