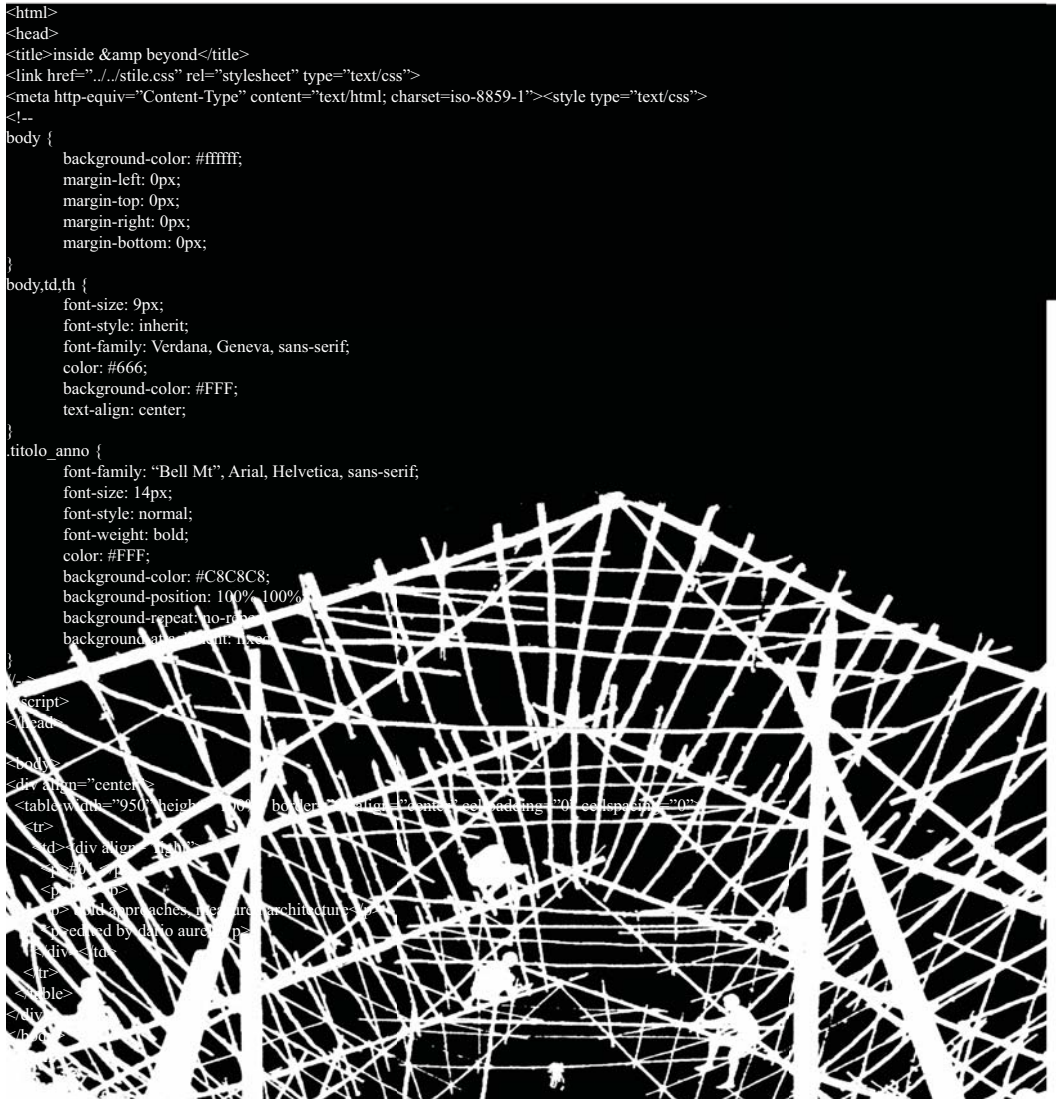

inside & beyond

#01

LOW

BOLD APPROACHES
MEASURED ARCHITECTURE

edited by Dario Aureli

Inside & Beyond
Annual Issue - A peer-reviewed e-jounal edited by
Giovanni Caudo, Giovanni Longobardi

n°01
Low.
Bold Approaches, Measured Architecture
edited by
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«L'ERMA» di BRETSCHNEIDER
Via Cassiodoro, 19 - 00193 Rome
www.lerma.it - lerma@lerma.it

Managing Editor
Gaetano Borrelli

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Inside & Beyond

Architecture and City, Topics and Texts for the 21th Century
Annual Issue
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Giovanni Caudo and Giovanni Longobardi
Roma Tre University

Inside emerging issues in architecture and the contemporary city, and **Beyond**; in-depth discussion of the topics, not only their specifics but also in a broader cultural and interdisciplinary context. The **Inside & Beyond** journal focuses on investigating issues and comparing opinions. The fully illustrated monographs are an updated collection of texts, which can be considered in light of the introductory critical essay. The digital format aims at the widest possible circulation.

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Inside & Beyond

#01 LOW

BOLD APPROACHES
MEASURED ARCHITECTURE

"I now think Gandhi was right when he said that all the building materials should be found within five miles of the site"

Laurie Backer

Photography: DesignBuildBLUFF

"LOW doesn't mean using a less complicated design-build process but lowering the environmental impact the process itself creates"

Bold Approaches, Measured Architecture

by Dario Aureli

LOW tech, LOW cost and LOW energy consumption are all terms frequently used in contemporary architecture. Examples of LOW architecture can be found around the world: homes made out of glass bottles at the end of the 1800s; the Garbage Housing [(1)] movement that exploded in the 60s and 70s; and an endless number of self-built straw and earth homes designed by visionary eccentrics. All of which speaks to the current interest in this type of architecture.

The sheer number of interesting projects makes it difficult to choose which to showcase. This investigation considers the results of a number of LOW architecture projects from an ecological systems perspective, putting aside the intentions of the designer or client. Acquired critical hindsight aims helps understand projects whose designers were unaware, and unconcerned, about working within a particular school or architectural movement. The overriding premise is to establish, however, a shared meaning for the term LOW.

INFINISKI is a concept company within the architecture and construction industry. The founders are a group of young professionals of different discipline and nationality: Loretxu García, trend analyst and journalist chilean, JulietteFrey, french, marketing&Comunications consultant, Spanish and Colombian ArchitectsJaimeGaztelu and MauricioGaleano, from Architecture studio James&Mau. Infiniski has HQs inMadrid-Spain and Santiago-Chile and is apt to launch projects on all 5 continents.

Infiniski designs and builds eco-friendly houses and buildings based on the use of recycled, reused and non polluting materials up to 80%: used containers, train rails, palettes and bottles; recycled aluminum, iron and wood. Noble wood coming from sustainable forests, ecological painting, and thermal insulation made out of recycled cellulose etc. It incorporates alternative and renewable energy depending on the needs and budget of each.

INFINISKI

2009 Manifesto House

Photography: Antonio Corcuera

Infiniski's alternative method of construction is based on an industrialized building process that permits a reduction in costs, time and environmental impact,

"Low tech, Low cost, Low energy consumption architecture is achieved by an informed, increased complexity in materials, construction techniques, awareness of the site's environment and culture and traditions"

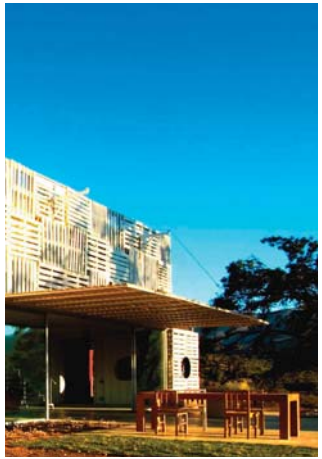
What's LOW?

LOW doesn't mean using more straightforward design-build processes but lowering the environmental impact the processes create. More precisely, LOW means reducing the degree of complexity with which a project impacts its surrounding environment, a reduction made possible by in-depth investigations of the site as well as available materials and technology.

According to the complexity theory [(2)] Niklas Luhmann developed for social systems, any living system must have a clear understanding of possible environmental disturbances. The more complex a system is the greater its ability to interpret its environment [(3)]. LOW architecture projects are the result of complex processes, processes based on understanding and reducing the complexity of environmental impact in both a project's design and construction. Simply put, LOW results can often be obtained by HIGH amounts of process. LOW tech, LOW cost, LOW energy consumption architecture is achieved by an informed use of increasingly complex materials and construction techniques, and an awareness of the site's environment and the culture and traditions in place. LOW architecture is not created by accident but is the result of specific choices made consciously and judiciously.

A pragmatic approach

The basic concerns behind many of the projects under consideration are to minimize the use of resources, optimize energy consumption, and make production and management costs compatible with a building's future use. A precise strategy based on a pragmatic approach to the construction process, this responds to specific requests for a specific place at a specific time, making informed choices given the available techniques and each project's priorities. Depending on the environment in which each architectural system is inserted, the choices will be different. From a purely methodological point of view, an approach of this kind, based on a series of initial constraints and an awareness of resource scarcity, imposes the need for both



INFINISKI
2009 Manifesto House

Photography: Antonio Corcuera

...while resulting in a better architectonic quality and improved design. It relies on modular architecture and the iSO standard of international transport.

"an approach based on a series of initial constraints, imposes the need to investigate new solutions for designing and building the desired structure, a process that can free creative potential."

designer and client to investigate new solutions for designing and building the desired structure, a shared process that frees creative potential.

New materials and new techniques or traditional materials and techniques can be used to meet new needs, reinterpreted and reused in new methods of construction. Seeing construction through this lens means that agribusiness greenhouse structures can become residential verandas, shipping containers a building system, straw bales transformed into excellent insulation and junked car windshields can become glass walls in a civic centre. Equally, open brick work can take the place of windows and a rediscovered ancient building technique and be used to build a modern hospital. Bamboo assemblage techniques can be reinvented to meet new uses while reviving forgotten artisan skills. This approach entails higher risk and produces interesting, sometimes surprising results, whose efficiency however remains primarily a function of competence.

Ready made and made in situ

The wider public became aware of this stripped-down pragmatic approach when used as the fastest and most efficient response to emergency situations. Works by Shigeru Ban after the 1995 Kobe earthquake and following various other environmental disasters in the recent past are prime examples. Championed by educators and spread by initiatives to raise public awareness, culturally as well as socio-economically, the approach has produced nowadays a vast array of projects.

Created in the same cultural breeding ground, the projects have similar ethical and social implications to movements like "Appropriate Technology" and the postindustrial ecological and social consciousness that developed in the 1960s. The endless panorama of adherents is populated by charismatic characters working on the cutting edge of experimental architecture, looking for new ways to design and build.

Laurie Baker, an English expat architect in India since 1945, has spent his life spreading the use of traditional brick and mud construction among Indian farmers, using a series of pamphlets popularizing the efficient, economical, building technique. Another example is Fabrizio Carola, an Italian architect who has been experiment-

Photography: Pablo Sarabia

INFINISKI
2009 Raulinsiki House

Depending on the project Infiniski will use prefabricated steel modules, re-used maritime container sand/or wooden prefab modules.

"The first are assemblages of prefabricated materials (ready made); the later are based on materials available on site or even on materials made directly at the building site (made in situ)"

ing with a technique based on a traditional Nubian building method, while training and using local labour forces to build projects in Mali and Mauritania. Samuel Mockbee, a professor from Auburn University, got a group of students involved in building low cost buildings for the rural poor in Alabama. This led to the creation of an ad hoc university program which today has dozens of built projects to its credit and hundreds of enrolled students.

Considered together these different experiences in different parts of the world, either by individual designers, or begun as research projects in architecture studios, or by groups of citizens pursuing the bottom up process for creating civic projects, or even associations and universities, present a variety of results and some interesting invariables. The search for commonalities formed the basis for understanding the works' complex realities; the works can be divided into two typologies of approach to the project and its construction, the *ready made* [4] and the *made in situ*. The first are assemblages of prefabricated materials, often those designed for other uses; the later are based on techniques and materials available on site or even on materials made directly at the building site.

With creative roots in the 1900s avant-garde movements like *Objet trouvé* [5] and Assemblage, and Italian *Arte Povera's* "libero progettarsi" [6] *(freedom to think and act)*, many projects reinterpret regional vernacular or traditional architecture in light of this new awareness and today's new uses. In comparing the different approaches, ready made and in situ, the words 'contextualize' and 'de-contextualize' in terms of construction materials play a key role. One approach uses de-contextualized, reinterpreted elements, the other a thoughtful, careful selection from the means available within the range of a few kilometers.

To some designers choosing industrially produced material to lower construction costs doesn't mean giving up performance. Agricultural greenhouses, shipping containers or cladding more often used for industrial sheds, well assembled, can be appropriate answers to the needs of both designer and client, even though less costly. This approach calls for extreme accuracy in construction and detailing to give credibility to the unexpected use of a material. Instead, some designers seem determined

Patrick PARTOUCHE is French architect who for some years has chosen to use conteiner and greenhouses to assemble dwelling-houses for single families.

Photography: Manuel Djamdjian

Patrick PARTOUCHE
2000 Maison-Serres

Deux serres en extension d'une maison métallique, sur la base de « la performance énergétique passive ». Les serres apportent un confort exceptionnel en demi-saisons.

"In comparing the different approaches, ready made and in situ, the terms 'contextualize' and 'de-contextualize' used in regards to construction material play a key role. "

to use all the resources available near the site, even discarded [7] material. Tires, windshields, sheet iron, cardboard packaging, scrap wood, license plates, can all be given a second life. The use of earth and natural materials is a category in itself, including bricks made in situ, bamboo, and other traditional components. The *made in situ* approach to these materials is usually based on the simple device of reintroducing them as worthy building materials by reinterpreting and reviving local building techniques.

In one instance involving the local population in the building process brought to light construction techniques that had been abandoned in favor of unsustainable new technologies. Fabrizio Carola recounts how he chose to use the ancient Nubian compass technique when he realized that it was much more adapted to the local climate and a much cheaper alternative to the cement being used in Mauritania and other Central African countries. At the time, the use of cement was often determined more by political considerations; building techniques imported from more industrialized countries being seen as the most immediate expression of modernization. It's no coincidence that Fathy's writings from the time express the need for architects to act as go-betweens for tradition and modernity, valuing regional building techniques and stressing their overall importance and crucial role in defining a new understanding of contemporaneity more closely connected to the local culture.

A geographical reading

It would be easy to generalize the ready made approach as belonging to more industrialized countries by virtue of their surplus productivity, and the made in situ approach as being typical of less industrialized countries due to the difficulty in finding non-local building material. The reality is somewhat less clear, with the designers themselves, the interests and needs of the clients, the local culture, and

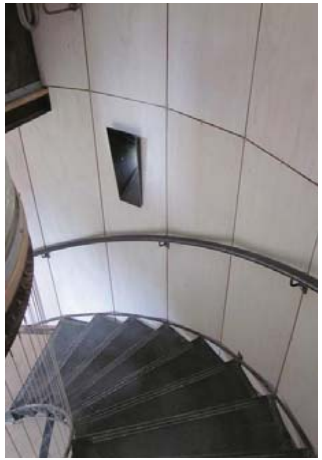
Pippin and Ella WRIGHT-STOW (brother and sister), founders of F3 DESIGN, define themselves as a "NZ family business, Aotearoa based, Limited Liability company with unlimited talent". F3 Design is "a collective umbrella for the good ideas that regularly arise from discussions around the Wright-Stow dinner table (...) The duo's parents, Angela and Stuart Wright-Stow - owners of the famous Little River Gallery - played a large role in the initial set up of F3 DESIGN, providing huge knowledge through their many years of self employment and myriad of skills".
They take care of the design at different scales, "Architectural, exhibition, graphic, custom furniture design and business fit-outs run alongside and in conjunction with the manufacture of products".

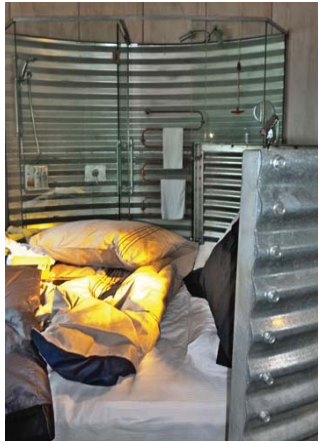
F3 DESIGN
2013 SiloStay

A group of disused grain silos near Christchurch in New Zealand are being fitted out as motel rooms. F3 Design came up with the concept of reusing the industrial structures,

"Both these strategies are available to the designer, and can be selected according to the reduction in complexity the new element of architecture needs to introduce in the site's environment."

changing times and economic situations all coming into play. More than a geographical reality, the use of one or the other approach in a LOW architecture project is the result of a series of variables. The sampling of these cases, notwithstanding its limited scope, illustrates the problems inherent in geographical readings. The two separate methods, seemingly in contrast, also have unexpected points of convergence. This is often the case in the United States, a nation whose environmental complexity has led to the undifferentiated presence of both approaches. Citing Niklas Luhmann, the *made in situ* and *ready made* approaches can coexist within a few meters of each other because they represent two approaches with the same *functional weight* with which to balance the environment of the site and the environmental impact of the architectural system being inserted. Both these strategies are available to the designer and can be used according to the required reduction in complexity the built architecture needs for it to be introduced into the site.





F3 DESIGN
2013 SiloStay

which were used to store feed for farm animals. F3 Design propose that grain silos could also be reused in cities as offices or information centres.(*de zeen* magazine)

"These two separate methods, seemingly in contrast, also have various points of unexpected convergence, as in the United States, a nation whose environmental complexity has led to the undifferentiated presence of both approaches."

“if the architect does not bare himself completely and start from zero, technological culture will forge ahead without him”

Reyner Banham

Photography: Danny Bright

topics

"Currently, both categories –high and low– are applied to the concept of technology indicating a different vision or conception of the world"

The Technological Choice as an outlook on the world

a+t magazine. Issue 9, Low Tech. 1997 www.aplust.net

by Javier Mozas

Rem Koolhaas's comments on Technology in his dictionary[1] are as follows:

"If may well be that we have hitherto understood as architecture, and what we are beginning to understand of technology are incompatible disciplines. The architect who proposes to run with technology knows now that he will be in fast company and that, in order to keep up, he may have to emulate the Futurists, and discard his whole cultural load, including the professional garments by which he is recognized as an architect".

These lines match those at the end of the book Theory and Design in the First Machine Age[2] by Reyner Banham; Banham adds that if the architect does not bare himself completely and start from zero, technological culture will forge ahead without him.

Architecture has always maintained a love-hate relationship with technology. On occasions it has come close to the more advanced techniques used in industrial production but on others, in reaction, it has returned to the origins of the primitive hut. Architecture has always moved up and down the wide spectrum of technology, depending on the architect's knowledge or the degree of technological development of the country in question at the time. However, today the choice of degree of technology in architecture is closer to a philosophical attitude than an approach conditioned by the available information on building materials or systems available to the agents producing it.

Currently, both categories –high and low– are applied to the concept of technology indicating not only a greater or lesser sophistication in the industrial process required to produce a given item, but fundamentally, a different vision or conception of the world.

LOT-EK is a design studio based in Naples and New York. Founded in 1993 by Ada Tolla and Giuseppe Lignano.
The LOT-EK's approach to construction through the adaptive reuse of existing industrial objects and systems is the basis of projects at all scales. Committed to ecologically-responsible, intelligent methods of building. Beyond the inherent sustainability of design methodology, LOT-EK is committed to researching and implementing innovative ways of conserving materials and energy. As with all technological elements, we are interested in highlighting sustainable technologies visually, as ingredients to emphasize overall design concepts.

LOT-EK
2008 PUMA City

Twenty-four shipping containers are retrofitted and transformed into a transportable retail and event building that travels around the world

"Two contributions of rather theoretical content were made with regard to the way technology ought to be used; the pattern language by Christopher Alexander and the Archigram's drawings"

I would highlight two viewpoints which I consider to be of interest for their opposing conceptions. Both contain, nevertheless, the key to understanding the technological blend which is currently taking place in certain fields of artistic creativity.
In the sixties, two contributions of rather theoretical content were made with regard to the way technology ought to be used. The first was developed by the mathematician and architect Christopher Alexander, through the language of patterns. The second was materialised in the series of drawings and writings of the Archigram group.

Intermediate technology and patterns

Well before sustainable development was even talked about, in certain papers written in the sixties on alternative economic theory the concept of "intermediate technology" had already been established(3). The objective was to create mixed agricultural-industrial structures in developing countries. These attempts were based on aiming for the rational development of traditional production methods, in such a way that the population of those countries could improve their living conditions. The technological level they had achieved before these rationalisation initiatives took place might be called embryonic and was associated with basic, small-scale industries using intensive labour.
To increase the technological potential in order to achieve intermediate technology meant raising the level of cost-of-equipment-per-work-place investments to bring these closer to the cost in countries with a more advanced degree of technological development.
Transferring this concept to the field of architecture, we have the example of the project for low-cost housing carried out in 1969 in Peru by the United Nations Center for Environmental Structure, in which Christopher Alexander took part. In this Peruvian case, he applied his theory of patterns adapting it to a developing society. In other words, he brought in the following characteristics: the unconscious repetition of traditional models, the simplification of constructive solutions and the promotion of architecture without architects.
The language of patterns uses images or simple mental formations which become more complex as they combine together. From these elementary formations, any architectural form can be made up. The rules for composing forms are similar to the

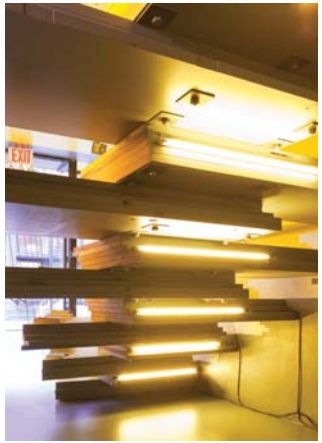
LOT-EK
2010 APAP OpenSchool

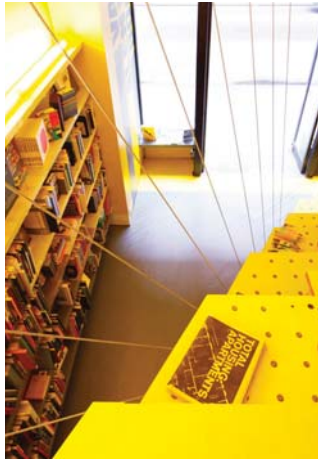
Eight shipping containers are combined in a fishbone pattern generating a large arrow-like volume that hovers three meters over the landscape.

"Although this intermediate level has surpassed its embryonic stage it must still be described as low technology albeit with the added value of the rationalisation of the constructive process."

rules of grammar which govern language. Every society has its own language and code of patterns for designing their homes. Every human group therefore possesses a different degree of development in their basic language of composition, depending on the degree of complexity of their social structure.
At that time, Alexander justified the crisis in modern legacy with the excessive development of personal languages which overlooked basic models of human behaviour. For this reason, he carried out a kind of anthropological search in an attempt to retrieve information on civilisations which would never have contaminated their spatial relations with corrupted concepts. For the instance mentioned above, in Peru, the constructive methods proposed can be described as intermediate technology. A considerable number of labourers are employed. Materials are cheap and traditional, such as bamboo for example, but building techniques have evolved and blocks are fitted into place without cement thanks to the precise geometry of the joins. Bamboo canes are joined with urethane, rather than with rope, and in this way the beams or structural slabs formed are stronger.

Although this intermediate level has surpassed its embryonic stage and is based on the theory of patterns, it must still be described as low technology albeit with the added value of the rationalisation of the constructive process.
There are other examples of this type of architecture in Europe, such as the work of Aldo van Eyck. The interest shown by this Dutch architect in the African culture of the Dogon people, has acquainted him with the organisation of tribal societies, their symbols and rites. In the preliminary diagrams for the Pastoor van Ars church, in 1969, The Hague, a centre line can clearly be seen in the composition which agglutinates a series of semicircles, reminiscent of the formations which occur in groupings of primitive settlements. Each one of these spaces conforms to a basic layout, and the "grammar" of the ensemble sets flexible rules, almost allowing free combinations. The exterior of the building is hermetic and it is illuminated through skylights, reflecting van Eyck's attraction to Islamic architecture. The constructive solution given to the outer walls consisting of plain concrete blocks, adds a further fea-





LOT-EK
2011 Van Alen Books

Photography: Lot-ek

14-foot-tall seating platform crafted from a stack of 70 recycled doors. The doors are sourced from Build It Green! NYC, a nonprofit supplier of salvaged building materials.

ture of economy, and another of an ethical nature which brings to mind the austerity of Calvinistic thought in northern Europe.

Fordism and Archigram

Returning to the economic context, the term "Fordism"[4] was adopted by radical economists to explain the growth of consumer trends in the fifties, giving rise to guaranteed markets in the West which remained stable up until the oil crisis.
Customers were guaranteed and production rocketed, and as a consequence of the profits earned by companies, large amounts were invested in capital goods. The technological development this process brought about increased the difference in technological capacity between the North and the South.
The comments of Henry Ford, published in 1926 in Adolf Behne's book "Der moderne Zweckbau" (Modern Industrial Construction)[5] have a heavy materialistic flavour.

"A necessary condition for greater efficiency and a human production process, is a clean, well lighted and properly ventilated working space. Our machines are placed very close together; each square foot means a certain increase in production costs, which in addition to the extra transport costs which arise from placing the machines six inches further apart than is strictly necessary, are ultimately charged to the consumer. For this reason, our machines are closer together than in any other factory in the world."

In 1961, after a number of preliminary meetings, the Archigram group was formed[6]. Its acceptance of a consumer society –enabling it to fit into the previous economic trend–, and of sophisticated technology allowed this group to produce a series of images which had nothing to do with traditional materials. No adobes, bamboo, canes or matting; not even stone or wood. Everything was made of plastic, modules and plug-ins, pneumatic or suspended structures. With the aid of the imagery supported by high technology, a free rein was given to a whole catalogue of new forms. The buildings devised by Archigram had greater links with the world of industrial design than with the history of architecture.

Peter Cook wrote en 1969 in a familiar analogy, that the production systems of the future for buildings and of cars would converge. He wondered whether the two would be prefabri-

ASH SAKULA
Founded by Cany Ash and Robert Sakula the studio Ash Sakula work on an unusually broad range of projects both in Britain and overseas.

Cany Ash and Robert Sakula have the thriftily enterprising, lateral-thinking attitude of the artist, earning their crust turning the utilitarian into gold.
The Times

ASH SAKULA
2006 Peabody Housing

The project demonstrates that low-budget housing can be both attractive and innovative.
Detail Magazine

"...they did not attempt to build houses as cars, nor cities like oil refining plants, but that they wished to use a new language adapted to a newly created situation."

cated and mobile. He based the future of architecture on systematised construction, which in his opinion covered a wider spectrum than the industrialised construction of last century. Warren Chalk, another founder member of Archigram, acknowledges however that they did not attempt to build houses as cars, nor cities like oil refining plants, but that they wished to use a new language adapted to a newly created situation. Archigram accepted high technology, consumer society and fashions, to the extent that their architectural drawings had connections with "pop" and cartoon strips. Historical continuity was rejected, but the precedent of Russian constructivism and the futuristic vanguard was undeniable.

The work of Frei Otto in the sixties represents the practical application of these ideas, in a sense removed from the architectural and aesthetic conventions of the times. He was, and remains, a combination of architect and engineer, with many of the qualities characteristic of inventors. He used a tautstretched roof in the Munich Olympic Village in 1968-1972, inspired by the lightness of the tent. The provisional character of these useful shelters is transformed to a more permanent nature. Two types of membrane are used: one consists of polyester fibre and the other is of transparent, flexible acrylic glass panes. Through his strict conception of simple, pure forms, spectacular effects and distortions in forms are avoided. He shared with futurists the view that it was altogether ridiculous that buildings should be built from a collection of parts which had to be transported to the site, adjusted and fitted in place manually using century-old methods.

The merging of high and low technology

The two previous standpoints, namely the application of intermediate technology and developed post-Fordism, perpetuate the classical dichotomy which we might call Nature/Civilisation, or Critical regionalism/Productivism[7] depending on whether we refer to basic general concepts or specific terms used by any given critic. Currently, the return to architectural honesty is becoming increasingly important. Nevertheless, certain ecological attitudes would have it that truth consists of a return to the primitive hut, crafts and traditional materials. Ecological factions are excessively drastic when they insist on the need to avoid land-consumption, to eliminate disposable products, to do away with containers, to use natural insulating materials, to recycle materials from demolition sites, to suppress the use of PVC, to limit the use of rare woods and to encourage the use of timer-taps and low consumption

ASH SAKULA
2004 Sparkenhoe School

A new build flexible theatre space is fronted by foyer, multimedia and changing spaces created by a radical recladding of the shell of a redundant prefab.

toilets.
The Handbook of Sustainable Building[8] has even been published in which indications are given for methods for selecting the most appropriate and environmentally safe materials. The Handbook gives three preferences for each constructive area, and a specific section on non-recommended products. PVC, extruded polyurethane products and tropical woods are the most restricted. If the contents of this Handbook were compulsory, the greater part of construction work currently in progress would not be acceptable and furthermore, the entire construction industry would be obliged to alter its approach and manufacturing lines.
However, some part of this worship of recycling and protection of the environment will remain, and its implementation will increasingly affect building regulations. A new concept is being created, in such a way that in the future it will be necessary to combine high and low technology to achieve the desired techniques. We find ourselves before a melting-pot in which technology is valid if it is environmentally acceptable; we must not look on this mixture as surprising. In short, it is a question of benefiting from both of these technological categories. Merging and integration are more important than the two concepts on their own. Nevertheless, if ecology and sustainable development are added to technological sophistication, new and surprising situations arise. As we shall see below, if preconceived ideas are pushed aside and if we accept mixing high with low, we shall arrive at the conclusion: why not put adobes and the space race together in the same cocktail shaker?
In 1986 the National Space Commission of America [9] proposed that NASA should include in its programmes research plans for construction systems and systems for protection against radiation on the basis of easily available raw materials. During their brief walk on the Moon, the Apollo astronauts did not require very great protection from radiation. But in the case of a more permanent base on the Moon it would be necessary to have an economical means of protection besides having to import all the necessary basic structures from Earth. To this end NASA proposed to manufacture Moon-soil-bricks, applying technologies currently existing on Earth for the production of traditional ceramics. In this way, we encounter once again a

ASH SAKULA
2008 Adnams Café

A new flagship building, with a new square for weekly farmers' markets. Reclaimed timber from the Southwold beach and Suffolk pebbles are used in the market square surface.

case of intermediate technology, in which the technical level is not increased –as mentioned at the beginning of this text, for developing societies– but to the contrary, bringing the sophistication of the space race down to the level of the adobe. Manufacturing bricks from Moon-soil for building space shelters, is certainly a strange marriage of technologies.

Droog Design and the importance of ethics

The Droog Design foundation, Amsterdam, organised an exhibition at the New York MoMA which consisted of objects which were identifiable with this line of thought, stemming from the merging of different technologies, since the materials obtained are combined together in different ways. In some cases, through the research work of the University of Delft Space and Aviation Laboratory and in another, with boxes made from dried dung. All these objects contribute fresh ideas with their clear and concise resolution. They are characterised, as Paola Antonelli points out [(10)] by "visual economy" and a "poor" image. The adjective droog or dry, shares its identity with a minimalist approach to design, which comes close to the ideas of the Nieuwe Abstractie (New Abstraction) movement, which took place in Holland during the sixties and seventies with the aim of "objectivising the creative process" and to give continuity to the tradition of De Stijl. The Droog designers produce their own objects in many cases and are actively involved in a rebellious movement against producers and well known brands.

In the words of Antonelli, referring to last year's exhibition on Droog Design at MoMA:

"In good recent design, ethics are as important as aesthetics. All the objects in this exhibition reflect a strong moralistic attitude (...), their modesty is only on the surface, but it is not coquettishly false."

They reflect a new way to do things, because behind them there is a new way of thinking.

At this moment there is a new outburst of artistic creativity affecting such far-apart spheres as sculpture and architecture, and is based on these very same principles. The work of the artist Pello Irazu, shown on different occasions at the Soledad Lorenzo Gallery [(11)] in Madrid, in clarity and conciseness in the

ATELIER D'ARCHITECTURE AUTOGÉRÉE

AAA has been created in 2001 by Doina Petrescu and Constantin Petcou, as an interdisciplinary network which include a multiplicity of viewpoints : architects, artists, students, researchers, retired, politicians, unemployed, activists, inhabitants and all concerned users.

"Our projects are embedded in their local contexts, reactivate everyday practices and initiate translocal platforms for cultural production. They are based on long term processes which enable the claiming of urban space from very diverse social and cultural positions and collective and democratic transformations."

AAA's network is both locally and internationally, through shared projects and good friendship relations...

Atelier d'Architecture Autogérée
2006 Le 56/Eco-interstice

Photography: AAA

"This project explores the possibilities of an urban interstice to be transformed into a collectively self-managed space. Initiated in 2006 in St. Blaise area, in the East of Paris,

use of materials and in its approach shows a tendency toward the harshness of the droog objects. The construction entitled Watching television together. (1, 2, 3 positions) carried out between 1990 and 1991, in plywood and laminated plastic, could very well belong to the same collection of these designers, if it showed utility in a predominant role in opposition to the artistic content.
This work accepts with ease the use of adjectives such as poor, clear, concise, with the addition of shades of naivety or playfulness which is also customary in Dutch pieces. It is therefore a case of convergence between artistic creations and the merging of different types of technology which prophecy new rules of the game. The use of the play of light, colours, transparencies, the removal of materials from their habitual context and the novelty of images and sensations, indicate the presence of a different way of understanding the world which is the result of a merging of two categories –high and low– which have existed up to now.

Atelier d’Architecture Autogérée
2006 Le 56/Eco-interstice

the project engaged a partnership between local government, local organisations, inhabitants and a professional association which run training programmes in eco-construction.

"Communities, societies, or countries have evolved historically with the type of technology that reflects their level of development and factor endowment."

Appropriate Technology for Socioeconomic Development in Third World Countries

Excerpted from : The jurnal of technology studies
Volume XXVI, Number 1, Winter/Spring 2000

by Anthony Akubue

(…) One of the early pioneers and practitioners of appropriate technology was Mohandas Karamchand Gandhi. "the poor of the world cannot be helped by mass production, [but] only production by the masses" (Schumacher, 1973, p. 153). From Gandhi's perspective, any concern with goods requires mass production, but concern with people necessitates production by the masses. The Charkha (spinning wheel) was Gandhi's ideal appropriate technology device, and he saw in it a symbol of freedom, self-reliance, and a technical means that was right for India. The idea of technology discriminately enriching a minority of people at the expense of the majority or putting masses of people out of work to increase profit was in Gandhi's view counterproductive and unacceptable. However, Gandhi was not uncompromising in his rejection of large-scale, capital-intensive industrial enterprises. Modern-sector industrial development, in Gandhi's view, should supplement and reinforce the development of small-scale industries and agriculture in the hinterland. In a quote credited to Gandhi, he expressed his choice of the development path suited to the Indian sub-continent:

If I can convert the country to my point of view, the social order of the future will be based predominantly on the Charkha and all it implies. It will include everything that promotes the well-being of the villagers. I do visualize electricity, ship-building, ironworks, machine-making and the like existing side by side with village handicrafts. But the order of dependence will be reversed. Hitherto, the industrialization has been so planned as to destroy the villages and the village crafts. In the State of the future it will subserve the villages and their crafts… (Bhatt, 1980, p. 172)

DESIGNBUILDBLUFF is built upon the foundation and earlier achievements of the University of Utah's Design+Build Studio, founded in 2000. Led by Hank Louis, adjunct professor and principal architect of Gigaplex. DesignBuildBLUFF is a non-profit organization that builds environmentally sustainable homes in the Navajo Nation. DesignBuildBLUFF introduces first-year graduate students in architecture to the culture and history of Utah's desert southeast, where they design, and ultimately build a home for a Navajo Family.

DesignBuildBLUFF
2007 Benally house

Photography: DesignBuildBLUFF

Dora, an Apache, met her husband Baxter, a Navajo, at an Indian school in Oklahoma - the schools tend to spread tribes about so that they might not congregate and rediscover

"One of the early pioneers and practitioners of appropriate technology was Mohandas Karamchand Gandhi: the poor of the world cannot be helped by mass production, [but] only production by the masses"

From Gandhi to Schumacher

Born in Bonn, West Germany, in 1911, Schumacher moved to England in the late 1930s. As a German immigrant in Britain, he endured a period of trial and tribulation during World War II. In the end, Schumacher distinguished himself as a great economist and worked in different capacities for various British establishments, including the position he held for more than 20 years as senior economist and economic advisor to the British National Coal Board (NCB) (Kaplinsky, 1990, Schumacher, 1974; Willoughby, 1990). His experience as an employee of the NCB persuaded Schumacher to reconsider his support of large-scale organizations.

Schumacher was first sensitized to the problems of scale by the NCB's attitude to the problems of pneumoconiosis [black lung disease], a lethal disease of the lungs associated with coal-mining. Instead of recognizing the self-evident health consequences of coal-mining, the NCB chose to defend itself rigorously and to fight (and subsequently win) the legal argument on technicalities. In saving itself relatively small sums of compensation (2-3 million Pound Sterling), Schumacher believed that the NCB had ceased to concern itself with people. More importantly, he believed that such uncaring attitudes were not exceptional but were an inevitable consequence of the organization's scale. (Kaplinsky, 1990, p. 137)

Schumacher's new philosophy was further shaped from a 1955 trip to Burma, where he served under the auspices of the United Nations as economic adviser to U Nu, the country's prime minister at the time (Crittenden, 1975; Rybczynski, 1980; Schumacher, 1974; Willoughby, 1990). While in Burma he encountered an economic setting quite unlike what he was used to in Germany, Britain, and the United States. With very low income per capita in Burma, which would be tantamount to poverty from a Western view, Schumacher was amazed that the Burmese went about their daily lives apparently quite happy and content. Living in Burma also revealed to him some of the inadequacies of a growth-based conventional development strategy. Such a strategy encouraging the use of capital-intensive technology from the industrialized societies was having some harmful consequences in Burma and other Third World countries. These observations, among others, led Schumacher to the conclusion that the "problems of economics do not have any final solution, because they are human problems, that can be 'solved' only within a particular set of circumstances for a particular time and particular place" (Cornish, 1974, pp. 276-277). Living in Burma also brought

DesignBuildBLUFF
2007 Benally house

culture. Baxter, whose nickname is Coyote, he happily joined in the building process while all of the time insisting, that this was Dora's house - she'd never had one in her entire life.

"Workplaces have to be created in the areas where the people are living now, and not primarily in metropolitan areas into which they tend to migrate."

Schumacher in contact with Buddhist economics, one of the most influential forces behind his thinking and ideas.

Another major event that occurred while Schumacher was in Burma was his discovery of Gandhi, a man he later called the greatest economist of the 20th century (Crittenden, 1975). According to Crittenden (1975), Schumacher was a self-proclaimed "indiscriminate thief of ideas," who credited much of his ideas about development and preservation of the natural environment to Jesus, the Buddha, and Gandhi. In subsequent years, through contacts and familiarity with Gandhi's work, Schumacher developed the ideas and reputation that earned him an invitation to Hyderabad, India, in the early 1960s. While in India at the invitation of the Indian Planning Commission and his friend Jayaprakash J. Narayan, he gave a seminar on Technologies for Small Industries in Rural Areas (Dunn, 1978). His visit to India was a welcomed opportunity for Schumacher, for he was able to study Gandhi's approach at close range and meet with acclaimed Gandhian economists.

The Birth of Intermediate Technology

Motivated by disillusionment with large-scale organizations and his experience in Burma and India, Schumacher developed the ideas behind the concept of intermediate technology, which became the linchpin of his seminal book Small Is Beautiful: Economicss If People Mattered, published in 1973. Perhaps, more than the others, Gandhi's work exerted the most influence on Schumacher. In using the term intermediate technology, Schumacher envisioned a technology for the Third World that was midway between, for example, a hand hoe and a tractor. As Schumacher (1973) described it, "Such an intermediate technology would be immensely more productive than the indigenous technology…but it would be immensely cheaper than the sophisticated, highly capital-intensive technology of modern industry" (p.180).)

In order for the concept of intermediate technology to be considered useful, it must be conducive to meeting the challenges outlined in the following propositions:

• Workplaces have to be created in the areas where the people are living now, and not primarily in metropolitan areas into which they tend to migrate;

• These workplaces must be, on average, cheap enough so that they can be created in large numbers without this calling for an unattainable level of capital formation and imports;

• The production methods employed must be relatively simple, so that the demands

DesignBuildBLUFF
2004 Rosie Joe house

Photography: DesignBuildBLUFF

A rammed-earth Trombe wall for temperature regulation, a south-facing wall all of found and gang-mulled windows whether wood, wood-clad, vinyl or aluminum,

for high skills are minimized, not only in the production process itself but also in matters of organization, raw material supply, financing, marketing, and so forth;

• Production should be mainly from local materials and mainly for local use. (Schumacher, 1973, pp. 175-176.)

To tackle these challenges, Schumacher and his colleagues founded the Intermediate Technology Development Group (ITDG) in London in 1965 (Schumacher, 1974). Since its inception, the ITDG has been providing information on existing low-cost, labor-intensive technologies, creating nonexistent technological innovations, and publishing important how-to-do manuals on affordable do-it-yourself work methods. The organization has also been responsible for convening major conferences on simple, low-cost technologies for small-scale industries. For example, in 1968 a trail-blazing conference convened at Oxford University. The aim of this conference was to promote intermediate technology for Third World development and enlist industrial involvement in its development (Rybczynski, 1980). As it happened, one of the issues raised at the conference was the necessity of a name change. Intermediate technology was viewed to be suggestive of a technology that was inferior or second-rate (Kaplinsky, 1990; Willoughby, 1990) and conveyed only the economic and engineering aspects of innovation. The term was further "criticized for implying a technological fix for development problems, separate from the social and political factors involved" (Hollick, 1982, p. 214). The phrase appropriate technology was suggested as a substitute, in part for including the social and cultural dimensions of innovation (Pellegrini, 1979), and, unlike intermediate technology, for not evoking the specter of inferiority. The rationale was that with appropriate technology the chances of its acceptance by those for whom it was intended would be greatly improved. Although intermediate technology is still used, appropriate technology has become the popular and more widely used appellation. The world owes the appropriate technology movement to Gandhi and Schumacher, who are widely acknowledged as its progenitors. (…)

What Is Appropriate Technology?

Appropriate technology may have been practiced for many generations in the past, but there is something new about it today; it has evolved into a development approach that is aimed at tackling community development problems. Viewed in this

DesignBuildBLUFF
2004 Rosie Joe house

Photography: DesignBuildBLUFF

the ceiling and roof structure made entirely of recycled pallets, exterior walls of straw sandwiched by clear acrylic, interior walls clad with discarded road signs.

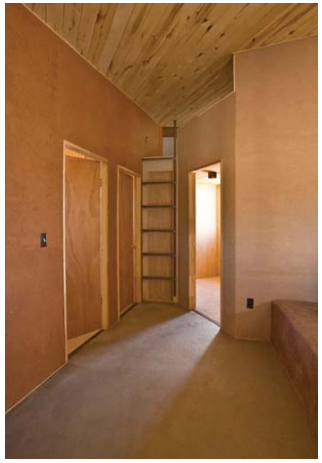
"Appropriate technology is not about taking a stand against technology, but about technology being a heterogeneous collection of social and technical options rather than a homogeneous phenomenon."

way, appropriate technology cannot be seen simply as some identifiable technical device; rather, it is an approach to community development consisting of a body of knowledge, techniques, and an underlying philosophy. (…)

Appropriate technology (AT) is now recognized as the generic term for a wide range of technologies characterized by any one or several of the following characteristics: low investment cost per workplace, low capital investment per unit of output, organizational simplicity, high adaptability to a peculiar social and cultural environment, sparing use of natural resources, low cost of final product or high potential for employment. (Jequier and Blanc 1983, p. 10)

The last definition not only suggests the criteria for technological appropriateness, it also implies that there is such a thing as inappropriate technology. Such characteristics have been well documented by various writers and appropriate technologists (Carley & Christie, 1993; Congdon, 1977;Darrow and Saxenian, 1986; Dunn, 1978; Evans and Alder, 1979; Hazeltine & Bull, 1999; Jequier & Blanc, 1983; Schumacher, 1973), and as a result will not be treated in depth here. The appropriateness of technology is not limited only to job creation, using local resources, and utilizing renewable energy resources but it is also about being affordable, easy to maintain, compatible with existing infrastructure, efficient in the use of scarce natural resources, environmentally benign, and partial to small-scale.

To many people, appropriate technology is always small, simple, cheap, and labor-intensive. Perhaps Schumacher, more than anybody else, contributed to that general perception. However, Anderson (1985) made the point that "scale, complexity and expense are not always positively correlated. It is possible for a large machine to be both simple and cheap and for a small one to be highly complex and expensive" (p. 68). It is not generally acknowledged that Schumacher expressed a similar idea about the issue of scale. For example, Schumacher stated: "Whether a given industrial activity is appropriate to the conditions of a developing district does not directly depend on 'scale,' but on the technology employed" (p. 179). It is conceivable that Schumacher's commitment to smallness of scale was provisional rather than absolute, and may have had more to do perhaps with the prevailing idolatry of bigness still evident in today's technological society than anything else. "Schumacher once told friends that, had he lived in a world of small organizations, he would have written a book called Big Is Beautiful" (Toffler, 1980, p. 247).



Photography: DesignBuildBLUFF

DesignBuildBLUFF
2009 WhiteHorse

The raised house allows the ubiquitous 'blow-sand' to pass beneath it, rather than quickly pile up alongside. The air that flows pleasantly refreshes the back deck.

Diversity in the Choice of Technology

The characteristics or criteria of appropriate technology discussed above are not meant to imply that there is a perfect technology or a panacea that can resolve all the socioeconomic problems of the Third World at once. The fact remains that circumstances vary from one Third World society to another, and what is appropriate for one country or social setting may not necessarily be appropriate for the other. As Willoughby (1990) pointed out, "the concept of appropriate technology attempts to discriminate between different technologies according to their relative suitability for specific purposes or situations" (p. 6). Appropriate technology is not about taking a stand against technology, but about technology being a heterogeneous collection of social and technical options rather than a homogeneous phenomenon. From this collection, the best choices are then made based on the objectives to be accomplished and possible human and environmental effects. (…)

The notion of appropriate technology suggests that all alternatives should be researched for "best fit." Appropriate technology is not, and should not be viewed as a second-best solution. Conversely, neither should its role be over-estimated: appropriate technology is not a universal substitute for the conventional modern technology. Appropriate and modern technologies are complementary rather than contradictory, and the emphasis given to the former does not and should not rule out the use of the latter in those cases where they are particularly well adapted to local conditions. (Jequier, 1979, p. 3)

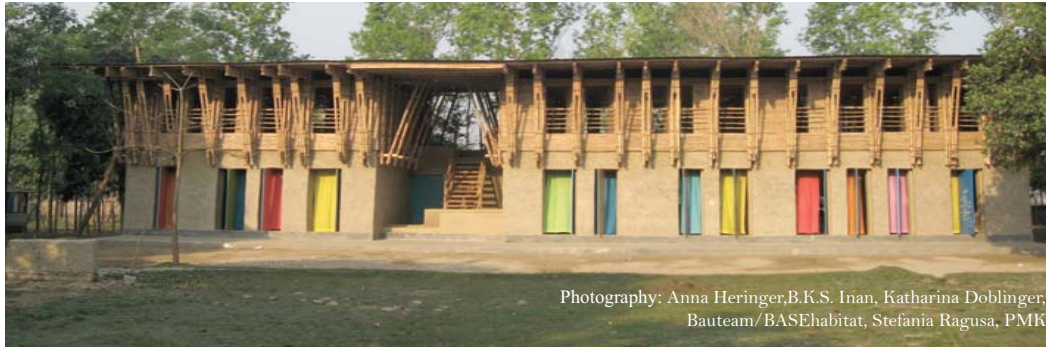
In 2005 the project studio BASEHABITAT – building in developing countries – was set up in the University of Art, Linz/ Austria. BASEhabitat, combines theory and practice in projects that employ the means of building technology and the art of space to make a contribution to a sustainable improvement and maintenance of the quality of life in developing countries.

...Today we can erect buildings in which no outside energy is needed to provide a pleasant internal climate, buildings that use the resources of their location rather than destroying them and offer people new challenges and new work. All that is necessary is additional intelligence, more team-work, more sensuality, joy and beauty. In this respect there is no difference between the „rich north" and the „poor south" of this world. BASEhabitat is a test area for this hypothesis.

Prof. Roland Gnaiger, head of department die architektur

BASEhabitat

2006 METI School



Photography: Anna Heringer,B.K.S. Inan, Katharina Doblinger, Bauteam/BASEhabitat, Stefania Ragusa, PMK

Anna Heringer developed her project after making a preparatory analysis of the village with three further Linz students in 2002. Heringer, who has known the country for years,

"Since antiquity, man has reacted to his environment, using his faculties to develop techniques and technologies... Man's creations were natural when built of the materials offered by the landscape."

Natural Eenergy and Vernacular Architecure

Excerpted from :
Natural Eenergy and Vernacular Architecure . Principles and examples with reference to hot arid climates,
by Hassan Fathy, edited by Walter Shearer and Abd-el-rahman Ahmed Sultan, and published by Chicago for The United Nations University in 1986;

by Hassan Fathy

Since antiquity, man has reacted to his environment, using his faculties to develop techniques and technologies, whether to bake bread or make brick, in such internal psychological balance with nature that humanity historically lived attuned to the environment. Man's creations were natural when built of the materials offered by the landscape.

Learning to manipulate clay, stone, marble, and wood, man penetrated their properties, and his techniques gave expression to his aspirations toward the divine. In architecture, environmental harmony was known to the Chinese, the Indians, the Greeks, and others. It produced the temples of Karnak, the great mosques of Islam, and the cathedral of Chartres in France.

With the advent of the industrial revolution, the inherited techniques and perfected knowledge of creating, using handmade tools, were lost and are now forgotten. Energy-intensive mechanized tools have diminished man's personal, cellular contribution to the fabrication of objects, the building of structures, and the growing of food. The lesser the challenge for man to imprint his genius, the less artistic is the product.

The resulting economic and political disturbances are visible today. Production of beauty, once the prerogative of millions, is replaced by industrialization, even of bread, under the control of a minority of owners. The negative consequences of the industrial revolution have disturbed the natural organization of the divine concept for human-

Photography: Anna Heringer,B.K.S. Inan, Katharina Doblinger, Bauteam/BASEhabitat, Stefania Ragusa, PMK

BASEhabitat
2006 METI School

devoted her diploma thesis to the school building for Rudrapur that was carried out in 2005. Anna Heringer (design) and Eike Roswag (technichal planning)

"Learning to manipulate clay, stone, marble, and wood, man penetrated their properties, and his techniques gave expression to his aspirations toward the divine"

ity.
Sixty years of experience have shown me that industrialization and mechanization of the building trade have caused vast changes in building methods with varying applications in different parts of the world. Constant upheaval results when industrially developed societies weaken the craft-developed cultures through increased communications. As they interact, mutations create societal and ecological imbalance and economic inequities which are documented to be increasing in type and number.
Profoundly affected is the mass of the population, which is pressured to consume industrially produced goods. The result is cultural, psychological, moral, and material havoc.
Yet it is this population that has an intimate knowledge of how to live in harmony with the local environment. Thousands of years of accumulated expertise has led to the development of economic building methods using locally available materials, climatization using energy derived from the local natural environment, and an arrangement of living and working spaces in consonance with their social requirements. This has been accomplished within the context of an architecture that has reached a very high degree of artistic expression. At all costs, I have always wanted to avoid the attitude too often adopted by professional architects and planners: that the community has nothing worth the professionals' consideration, that all its problems can be solved by the importation of the sophisticated urban approach to building. If possible, I want to bridge the gulf that separates folk architecture from architect's architecture. I always wanted to provide some solid and visible link between these two architectures in the shape of features, common to both, in which the people could find a familiar point of reference from which to enlarge their understanding of the new, and which the architect could use to test the truth of his work in relation to the people and the place.
An architect is in a unique position to revive people's faith in their own culture. If, as an authoritative critic, he shows what is admirable in local forms, and even goes so far as to use them himself, then the people at once begin to look on their own products with pride. What was formerly ignored or even despised becomes suddenly something to be proud of. It is important that this pride involves products

BASEhabitat
2008 HOMEmade

Model Houses in Rudrapur: local building methods and growing needs for space and new demands in terms of comfort. (A. Heringer, Khondaker Hasibul Kabir, Paul Tigga)

and techniques of which the local people have full knowledge and mastery. Thus the village craftsman is stimulated to use and develop the traditional local forms, simply because he sees them respected by a professional architect, while the ordinary person, the client, is once more in a position to understand and appreciate the craftsman's work.

In spite of this, we are witnessing a change that is now forcing a complete rupture with the past; every concept and every value has been reversed. For house design in the Middle East, the introverted plan wherein family life looked into the courtyard was changed to a plan with family life looking out upon the street. The cool, clean air, the serenity and reverence of the courtyard were shed, and the street was embraced with its heat, dust, and noise. Also, the qa'a [a central, high-ceilinged upper-story room for receiving guests, constructed so as to provide natural light and ensure ventilation] was supplanted by the ordinary salon, and all such delights as the fountain, the salsabil [a fountain or a basin of still water designed to increase air humidity], and the malqaf [wind catch] were discarded in the name of progress and modernity.

It may seem that, from the functional point of view, mechanical air-conditioning was made possible by modern technology; but we must recognize that such technologies also have a cultural role. In fact, this role may be even more important than the function it serves, considering the special place occupied by the decorative arts in many cultures.

Thus when the modern architect replaced these decorative elements with air-conditioning equipment, he created a large vacuum in his culture. He has become like a football player playing football with a cannon. If the purpose of the game is scoring goals, then assuredly he can score a goal with every shot. But the game itself will disappear, and so will any diversion for the spectators, except perhaps in the killing of the goalkeeper.

Every advance in technology has been directed toward man's mastery of his environment. Until very recently, however, man always maintained a certain balance between his bodily and spiritual being and the external world. Disruption of this balance may have a detrimental effect on man, genetically, physiologically, or psychologically. And however fast technology advances, however radically the economy changes, all change must be related to the rate of change of man himself. The

Photography: B.K.S. Inan, Katharina Doblinger, Naquib Hossain

BASEhabitat
2008 DESI school

The complex of the Vocational School for Electrical Engineering in Rudrapur/Bangladesh, combines both low-tech and high-tech building methods. The concern here is to

abstractions of the technologist and the economist must be continually pulled down to Earth by the gravitational force of human nature.
Unhappily, the modern architect of the Third World, suddenly released from this gravity, and unable to resist temptation, accepts every facility offered to him by modern technology, with no thought of its effect on the complex web of his culture. Unaware that civilization is measured by what one contributes to culture, not by what one takes from others, he continues to draw upon the works of Western architects in Europe and North America, without assessing the value of his own heritage.
In order to assess the value of our heritage in architecture and to judge the changes that it has undergone, there is a need to analyze scientifically the various concepts of design, and to clarify the meaning of many terms that the modern architect uses freely in his professional jargon, such as “contemporaneity.” The role architecture and town planning play in the progress of civilization and culture must be grasped. While change is a condition of life, it is not ethically neutral. Change that is not for the better is change for the worse, and we must continually judge its direction. Architecture concerns not technology alone but man and technology, and planning concerns man, society, and technology.
In architectural criticism, the concepts of past, present, and future are used capriciously, and the present is extended to mean the whole modern epoch. To avoid being arbitrary, we must establish some standards of reference that involve the concept of contemporaneity.
The word “contemporary” is defined as meaning “existing, living, occurring at the same time as.” The word implies a comparison between at least two things, and it conveys no hint of approval or disapproval. But as used by many architects, the word does carry a value judgment. It means something like “relevant to its time” and hence to be approved, while “anachronistic” means “irrelevant to its time” and is a term of disapproval. This raises the two questions of what we mean by time and what we mean by relevance, and to what.
Now, if we are to reconcile chronological time with the artist’s definition of contemporaneity, we may say that to be relevant to its time, to be contemporary, a work of architecture must be part of the bustle and turmoil, the ebb and flow of everyday

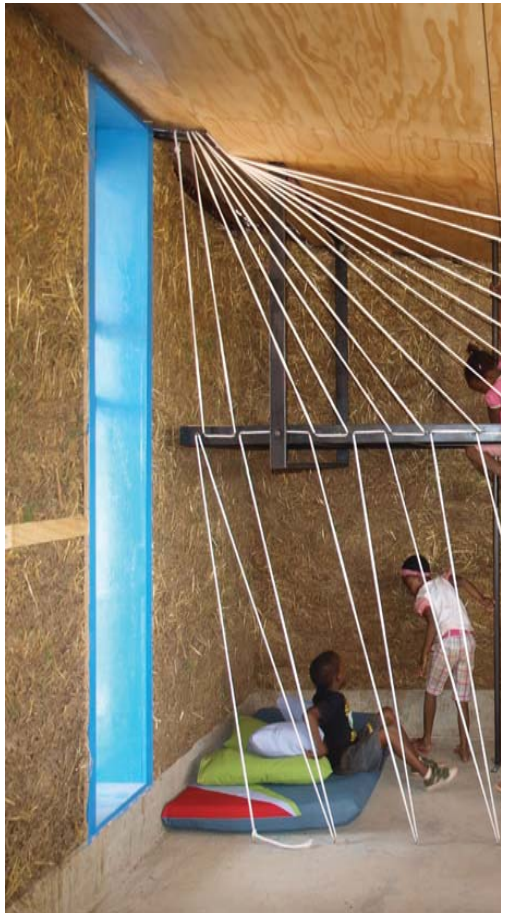
Photography: B.K.S. Inan, Katharina Doblinger, Naquib Hossain

BASEhabitat
2008 DESI school

achieve an intelligent synthesis and a balanced combination of traditional and new techniques. (Design by Anna Heringer)

life; it must relate harmoniously to the rhythm of the universe, and it must be consonant with man's current stage of knowledge in the human and the mechanical sciences, and in their inseparable relationship within planning and architectural design.
To judge the criterion of contemporaneity, we must sense the forces that are working for change, and must not passively follow them but rather control and direct them where we think they should aim. Physical and aerodynamic analysis has shown that many of the concepts embodied in the design of houses of the past remain as valid today as they were yesterday and that, judged by the same standards, much of what is called modern is in fact anachronistic. We must determine what is basic and constant and thus worth keeping, and what is ephemeral and transient and can be discarded.
Looking to the future, we see that the situation at any given time largely determines the coming stage in development and change. Thus there would be no problem were the present situation of architecture normal, that is to say, truly contemporary. The future would then take care of itself. But unfortunately that is not the case, and it is the responsibility of the modern architect to find a remedy. He must renew architecture from the moment when it was abandoned; and he must try to bridge the existing gap in its development by analyzing the elements of change, applying modern techniques to modify the valid methods established by our ancestors, and then developing new solutions that satisfy modern needs.

BASEhabitat
2010 IPHIKO school



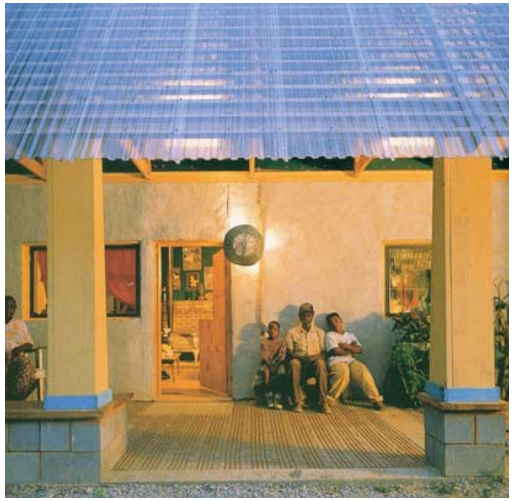
Photography: Leon Krige, Patricia Porsch, Sebastian Vilanek

Large roofed outdoor areas offer shelter against the heavy rainfall and intensive sunshine in Magagula Heights, South Africa, and can be used for outdoor lessons and breaks.

"The dilemma for every architect is how to advance our profession and our community with our talents rather than our talents being used to compromise them." *Samuel Mockbee*

Photography: Danny Wicke

"Architect Samuel Mockbee was convinced that *everyone, rich or poor, deserves a shelter for the soul* and that architects should lead in procuring social and environmental change"



Mason's Bend is neither a town nor even a village. It is a community of four extended families. Mockbee says it is "a pocket of poverty".

RURAL STUDIO
1994–97 Houses

Warm, Dry, And Noble

Excerpted from
RURAL STUDIO: Samuel Mockee and an Architecture of Decency
by Andrea Oppenheimer Dean and Timothy Hursley.

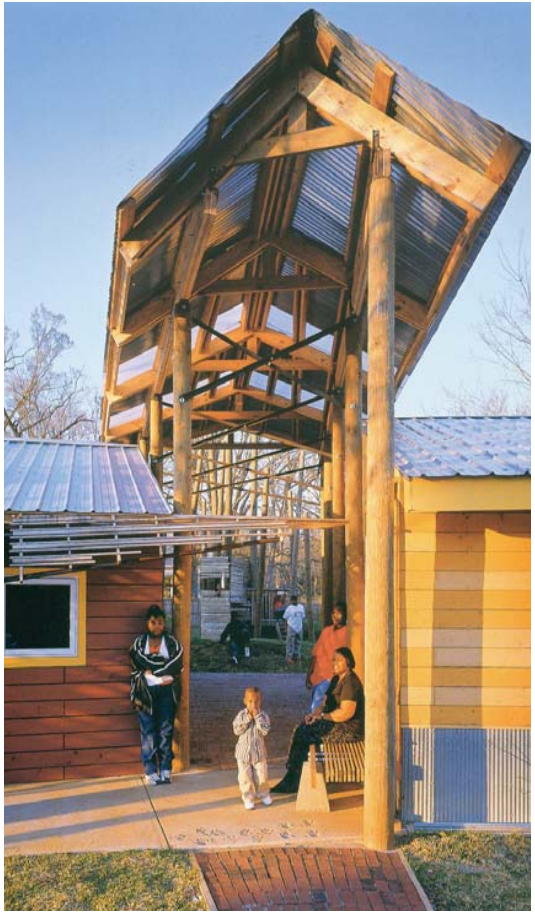
by Andrea Oppenheimer Dean
Jun 30, 2002

In HALE COUNTY, ALABAMA, you see ghost buildings: abandoned barns, tumbledown shanties, and rusted trailers—fragile remnants of a more prosperous agrarian past. You see old people sitting quietly on sagging porches and scruffy chicken hens noisily pecking and wandering on hard dirt yards. Hale is a left-behind place. But it is also a land of dense piney woods, fragrant crop furrows, and hypnotic rolling hills. In Hale County the architect Samuel Mockbee found "an almost supernatural beauty," and mainly for that reason he decided to locate his Rural Studio there. When Mockbee founded the Rural Studio in the early 1990s, American architecture had retreated from social and civic engagement to a preoccupation with matters of style. The architectural stars, swept up in the new global economy and entranced by new technologies, were designing increasingly audacious buildings for affluent clients worldwide. Mockbee instead was digging in at home in the Deep South, focusing on the design and construction of modest, innovative houses for poor people.

Naive as it may sound, Mockbee, a MacArthur "genius grant" recipient in 2000, is battling for convictions. One is that the architectural profession has an ethical responsibility to help improve living conditions for the poor. Another is that the profession should "challenge the status quo into making responsible environmental and social changes." Hence his belief that architectural education should expand its curriculum from "paper architecture" to the creation of real buildings and to sowing "a moral sense of service to the commu-

"The best way to make real architecture is by letting a building evolve out of the culture and place. These small projects remind us what it means to have an American architecture without pretense"

Photography: Timothy Hursley



Community Buildings in Mason's Bend, Newbern, Sawyerville and Greensboro; Glass Chapel, Rural Studio Campus, Yancey Chapel, Hero Children's Center

RURAL STUDIO
1995-'01Various Buildings

nity." Architecture students are typically middle-class youngsters working on theoretical designs. But those at Auburn University's Rural Studio are engaged in hands-on design and construction and in nose-to-nose negotiations with impoverished clients. You will find Mockbee there bucking his profession's prevailing emphasis on fashion, frantic speed, and superstardom to devote himself to the patient work of getting inexpensive but striking structures shaped and built by students while teaching them the fundamentals, not only of design and construction, but also of decency and fairness.

Slowly, the Rural Studio is inscribing its mark on Hale County. Into the community of Mason's Bend and the towns of Newbern, Sawyerville, Greensboro, Thomaston, and Akron, the studio has inserted simple but inventive structures made of inexpensive, mostly salvaged or donated, often curious materials beat-up railroad ties, old bricks, donated lumber, hay bales, baled corrugated cardboard, rubber tires worn thin, license plates, and road signs. The studio's esthetic vocabulary is modern, but its buildings, with their protective roofs and roomy porches, shedlike forms and quirky improvisations, look right at home here. In Mockbee's view, "The best way to make real architecture is by letting a building evolve out of the culture and place. These small projects designed by students at the studio remind us what it means to have an American architecture without pretense."

From living quarters in Newbern, Akron, and Hale's county seat of Greensboro, students fan out each day to work on construction sites, attend city council meetings, confer with the county Department of Human Resources (which provides lists of needy clients from which students make selections), meet with the nonprofit HERO (Hale Empowerment and Revitalization Organization), and attend community catfish fries. For many students, this "classroom of the community," as Mockbee calls it, is the first intimate experience with "the smell and feel of poverty."

Bruce Lanier, who graduated in 2000 and then went to work with a statewide rural poverty agency in Alabama, recalls, "I'd only driven through that kind of poverty on my way to private school. At the studio I learned that economic poverty is not

"The Bryant House shows the Rural Studio's hallmark use of ingenious building techniques and donated, salvaged, and recycled materials, the inevitable result of meager budgets"

Photography: Danny Wicke

The 20K House seeks to provide a well-built, affordable housing. The homes are designed to be built for $20,000 where around $12,000 is allocated for materials and the remaining

RURAL STUDIO
2005 The 20K House

a poverty of values but a fact of birth. You come to realize it's the luck of the draw that you don't end up poor. You learn poor people are like you and me. You get to know them and respect them."

Although he did not take an active part in the civil rights struggle, Mockbee began in the 1980s to look for ways to help redress the wrongs perpetrated by his kin against "a whole army of people who've been excluded and ignored forever, people who are left over from Reconstruction." He concludes that addressing problems and trying to correct them is "the role an artist or architect should play."

By the early 1980s, the architectural practice that Mockbee had started in 1977 and later shared with Coleman Coker was thriving, but more and more, Mockbee says, he found himself thinking about the Renaissance architect Leon Battista Alberti's injunction that an architect must "choose between fortune and virtue."

Shepard and Alberta Bryant were the Rural Studio's first new-house clients. In 1993, when the studio began work for them, the Bryants, both in their 70s, were rearing three grandchildren in a shanty without plumbing or heating. As the students worked on the Bryants' new house, they developed the studio's lasting methodology. Each house takes about a year to finish. Fifteen second-year students interview the clients to determine their needs. They work up several designs, have the clients select the best one, and begin construction.

The Bryant House shows the Rural Studio's hallmark use of ingenious building techniques and donated, salvaged, and recycled materials, the inevitable result of meager budgets. Recovered materials give the buildings "a feeling they've been rained on; they look durable," says D.K. Ruth, chair of Auburn's architecture department. Students examined several low-tech solutions for creating a well-insulated, inexpensive dwelling before deciding to use 80-pound hay bales for the core of the exterior walls of the Bryants' 850-square-foot house and covering the bales with wire and stucco.

The studio's characteristic modern esthetic was from the start nudged and reshaped by typically southern rural forms and idioms: sheds, barns, and trailers. The Bryant

"(Mockbee) I pay attention to my region; I keep my eyes open. Then I see how I can take that and reinterpret it, using modern technology. We try to be authentic."

Photography: Danny Wicke

$8,000 would cover labor costs and contractor profit. Unlike other projects, we believe the last three homes (Dave's House, Mac's House, Joanne's House) to be viable models.

RURAL STUDIO
2005 The 20K House

House, for example, is all porch and roof, a steeply raked acrylic structure supported by slender yellow columns. In explaining the esthetic, Mockbee says, "I pay attention to my region; I keep my eyes open. Then I see how I can take that and reinterpret it, using modern technology. We don't try to be southern, we just end up that way because we try to be authentic. When you start to use historic references in a theatrical way, that's when I'm out of here."

Almost all studio-designed buildings have exaggerated, protective roofs that appear to float over sturdy walls. Mockbee explains that the region's annual average rainfall is almost 60 inches, "so flat roofs just aren't going to do it." The challenge is different from that of, say, designers in the arid American West who can concentrate more on sculptural forms. Turning a limitation of climate into an opportunity, Mockbee overstates his roofs. He cants them steeply and makes them look almost airborne, as with the Harris House, sometimes called the "Butterfly House" for its wing-spread roof.

Like Mockbee's buildings for private clients, the Rural Studio's work is usually asymmetric and idiosyncratic, qualities that reinforce the quirkiness that attends Mockbee's and the Rural Studio's jumbo roofs. The exterior materials, too, can be as unconventional as the shapes of the buildings. But even the most futuristic constructions look anchored in their neighborhood, because their scale fits and their shapes spring from the local vernacular.

More than 350 second-year students and 80 thesis students have now participated in the Rural Studio. So why have other architecture schools not spawned similar programs? Mockbee, who has lectured at architecture schools nationwide, says almost all have similar curricula and risk-averse faculty. "Most of them dress all in black; they all seem to say the same things. It's become very stale, very unimaginative."

If architecture is going to "nudge, cajole, and inspire a community or challenge the status quo into making responsible environmental and social structural changes," he says, "it will take the subversive leadership of academics and practitioners who keep reminding students of the profession's responsibil-

"The Rural Studio, he says, takes education out of the theoretical realm, makes it real, and shows students the power of architecture to change lives."

Photography: Auburn University Rural Studio

Eating, building and living are intended as parallel symbiotic systems driven by the same holistic ethic: challenging ourselves to use the land creatively as a precious resource.

RURAL STUDIO
2010 Rural Studio Farm

ities." No one, says Mockbee, loves to draw and make models more than he, but model-making and drawings are not architecture. The Rural Studio, he says, takes education out of the theoretical realm, makes it real, and shows students the power of architecture to change lives. "Through their own efforts and imagination," Mockbee says, "students create something wonderful—architecturally, socially, politically, environmentally, esthetically. That's the mission of the Rural Studio. And once they've tasted that, it's forever there. It may go dormant for a while, but at least they've experienced and created something that they're not going to forget."

Talking about the legacy he hopes to leave, Mockbee singles out "something that's going to have power and live long after my living personality is gone. I'm getting close but I'm not there. I've got to keep cultivating and pushing so that what I leave is as significant as I can make it." That is what makes the Rural Studio transcendent.

"In order to design I need three kinds of freedom; the freedom the client grants, the freedom the authorities allow and the freedom I give myself ."

Three Kinds of Freedom

by Fabrizio Caròla

In order to design I need three kinds of freedom; the freedom the client grants, the freedom the authorities allow and the freedom I give myself .
The first is directly proportional to how much the client trusts me. The second is inversely proportional to the norms and regulations that influence the building design. The third depends on how much I can break away from pre-packaged images linked to my own culture.

Working in Africa I had an opportunity to benefit from these three liberties to the utmost and be fully responsible (for better or worse) for my projects.

Another indispensable component is respect, respect for the structure's end users. Respect prevents me from abusing freedom.
For me architecture is a synthesis of all the correlated data regarding the project at hand; the number and specific functions of the spaces and how they interrelate, the location and available budget imposed by the client at the start of the project and the necessities dictated by the site: climatic conditions, type of soil, available materials and their costs, the caliber and cost of labour.
In addition to this objective data there are more subjective considerations which include respect for the landscape, the economic, social and cultural context, and the optimal use of local resources. The choice of material, structures and form is derived from the evaluation of all the data.
In the towns of the Sahel region where most of my work was done, the work force is plentiful and cheap although little used. Modern materials (cement and iron) are imported and therefore expensive and entail spending precious funds, while the use of wood contributes to desertification. What's left, if available nearby, is earth and stone.
Earth, an abundant and low cost material, is the cheapest and most used, usually in the form of bricks, both unfired and fired. Brick or stone roofing, instead of wood,

FABRIZIO CAROLA
1981-'10 Various Buildings

Photography: courtesy Fabrizio Carola

There are more subjective considerations which include respect for the landscape, the economic, social and cultural context, and the optimal use of local resources.

iron or cement, makes it necessary to design using compressive structures: vaults, arches and domes. When I experimented with these structures I noted various advantages; they are economic, fast and easy in terms of execution (even with a poorly qualified workforce) and perform better than reinforced concrete under severe climate conditions.

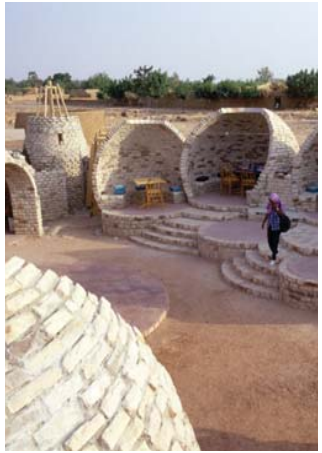
The low cost is mostly due to the fact that the always difficult problem of roofing can be resolved with a single material using an inexpensive technology. In fact the same worker, in one operation, builds the entire structure, from the foundations to the final touches and with seamless continuity between walls and roofing.

This is a much simpler operation than awe inspiring domed structures might lead one to suppose. With the help of a guiding compass the builder proceeds in total confidence, without the possibility of making mistakes and without any special preparation or particular competence. All it takes, and without needing to use a plumb line or a builder’s square to align the bricks, is positioning each brick according to the indications given by the compass.

The system is so easy that after only a few hours of training I was able to build dozens of domes of different shapes, sizes and materials with untrained workers and inexperienced bricklayers. The layout can be either orthogonal (square or rectangle) or circular (or a combination of circles). The circular layout, first in theory and then in practice, proved more economic in terms of time and material and more suitable to the abilities of the available work force.

Architecture and Culture

It is well known that the formation of a culture is neither unmotivated nor due to chance but the result of the gradual adaptation of a people to their environment in harmony with their requirements, necessities, desires, and their level and type of knowhow. It is important to take these factors into consideration when transposing an object from



FABRIZIO CAROLA
1981-’10 Various Buildings

Photography: courtesy Fabrizio Carola

these structures are economic, fast and easy in terms of execution and perform better than reinforced concrete under severe climate conditions.

one culture to another if the object is to be coherently and harmoniously inserted into that culture. Otherwise the structure remains a thing apart, causing malfunction instead of the aimed for development.

Instead of transferring finished objects conceived elsewhere, which will remain alien and only superficially understood, it would be more opportune to transfer the knowledge that allowed the objects to be devised. This changes the "level and type of knowhow", a variable factor which can directly or indirectly influence all other variable factors, triggering a real development process. It must be noted that this transfer of knowhow should be reciprocal, for knowledge is not found only in one place. There are kinds of expertise that still escape western rationality but which are a crucial component of African peoples' cultural patrimony and therefore also part of the world's cultural heritage.

In the field of architecture the transfer of design models is particularly unthinkable; dislocated architecture, built in a place completely different from where it originated, becomes non-architecture. Culturally and functionally the structure no longer responds as it should. Architecture is not the fruit of an architect's caprice but the synthesis of a process aimed at satisfying all circumstances relevant to the proposal under consideration. If data is ignored, especially vital data, nothing adds up. Relocating a design model to a completely different location is akin to ignoring a greater part of the data that most characterizes an architectural structure: the type of client, the natural setting, the materials economically available, and of course the human social environment. This is what happened in Africa through the efforts of western benefactors during the process later defined as neocolonialism.

African architecture, the fruit of centuries of adapting to local conditions, was ignored or set aside and substituted by an ugly copy of the architecture and styles of industrialized countries with temperate climates. It's true that many things have changed and continue to change in Africa but certainly not the constant factors of

Photography: courtesy Fabrizio Carola

FABRIZIO CAROLA
1981-'84 Hospital in Kaedi

The hospital's overall plan was inspired by the desire to allow patients to be taken care of by their families. Close contact with relatives helped in recovery

climate and nature. The variable factors however cannot necessarily be understood in the Western manner or context of time. When data changes, architectural plans should be modified or a new kind of architecture should be created which responds better to the new requirements, and of course this needs to happen in complete respect for local realities.

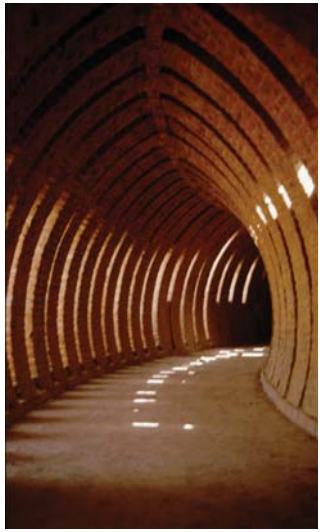
One Hundred Bed Regional Hospital in Kaedi, Mauritania (1981-1984)

The hospital's overall plan was inspired by the desire to allow patients to be taken care of by their families. Spending time in the old hospital I had frequently noticed how close contact with relatives improved the spirit of the ill and helped in recovery (I referred to it as family therapy). So the building was designed to allow family members to be close to the hospital rooms; each room has two entrances, one leading to the operations hall reserved for doctors and nurses, and the other to a garden for use by relatives, for whom cooking and sleeping facilities have also been provided.

The main constraint I had to deal with in Mauritania was to design and build the proposed hospital without using either wood (as the country is threatened by desertification) or reinforced concrete (which is expensive, imported and poorly adapted to the climate). Rejecting these building materials left the local materials of stone and earth.

We started in December 1981, first setting up a brick factory with ten rice husk ovens, forty workers and no machinery. Over three years the factory produced more than two and a half million bricks, two thousand five hundred square meters of pavement, and any number of special pieces used to complete construction.

Aside from the brick factory, two ceramic artists from Rome helped set up a ceramics school and a workshop to promote traditional earthenware handicrafts. We even introduced the use of a potter's wheel put together with recycled truck parts. Students made things that were needed for building and then during their free time made vases, ash trays and other items they could sell at the local market.



FABRIZIO CAROLA
1981-'84 Hospital in Kaedi

The exclusive use of bricks required a building technology that used compressive structural elements; arches, vaults and domes

“With my young assistant Birahim Niang we found a way of modifying the Nubian compass to design an ogival dome.”

The exclusive use of bricks required a building technology that used compressive structural elements; arches, vaults and domes. This choice provoked an important shift in my professional life: a move from orthogonal geometry to polar geometry. Essentially I rediscovered the dome, an ancient structure now nearly abandoned by modern architects and engineers. The instrument of this change was an ancient Nubian building tool for the construction of brick domes without using a centering rediscovered by the Egyptian architect Hassan Fathy. Moving on a central axis the instrument’s arm points to the exact position for each brick, ring after ring, from the base to the top.

I first heard about this tool in 1980 working for ADAUA in Mauritania under the guidance of Jak Vauthrin. I saw it being used, and then I made some changes.

The Nubian compass used by ADAUA only makes spherical domes but I wanted more headroom, more space for air to move, providing greater relief from the heat in countries with hot climates. With my young Senegalese assistant Birahim Niang we found a way of modifying the compass to design an ogival dome. From that moment on a new world based on polar geometry opened up: the construction of space and form, of three dimentional shapes which all start from a central pole and which can be adapted to various design requirements.

I should add that the dome as a type of roofing has attracted and fascinated me since I first thought about becoming an architect as a young boy. When I ask myself why I felt this attraction I find more than one answer, none exhaustive, but perhaps all valid because when considered together they provide at least a sufficient, if not complete, answer. First and foremost, the dome belongs to the world of curves. Flat surfaces, squared or folded in right angles with sharp edges - although I don’t disdain them - don’t satisfy me. I find curving and connected surfaces closer to natural forms and therefore more suited to enclosing and accompanying the life of Man. In Africa I was able to fully satisfy this predilection.

As I went ahead with the project and adopted the polar system to the technical and operational needs of the hospital, I

Photography: courtesy Fabrizio Carola

FABRIZIO CAROLA
Brick factory and Compass

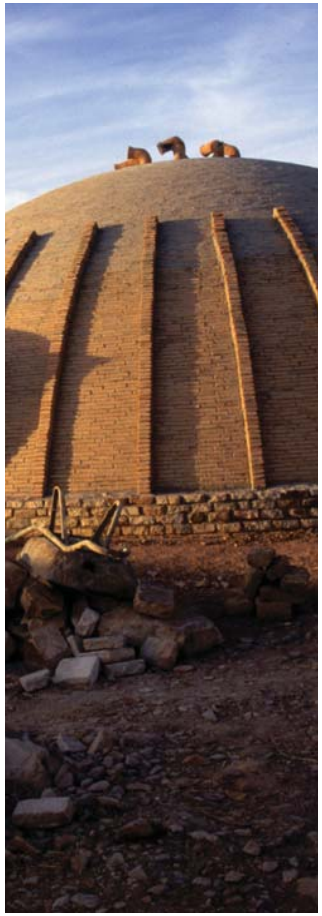
...the construction of space and form, of three dimentional shapes which all start from a central pole and which can be adapted to various design requirements.

"Analysis and respect for data dictated the hospital's particular shape, which although unusual, responded to the logic of the time and place where it was designed."

invented new forms and spatial possibilities that gratified my profound sense of creative freedom. This wasn't the simple spherical dome inherited from the ancient Nubians, but an ogival dome, a drop dome, a lemon dome, a croissant dome, a pumpkin dome and not least, and maybe not last, a spiral dome. Added to these are domes for covering any polygonal base, made just by following the compass; if it's set up right, the instrument does it all.

Analysis and respect for data dictated the hospital's particular shape, which although unusual, responded to the logic of the time and place where it was designed. With the exception of the technical equipment and vehicles, everything was made on site, with close attention paid to matching the needs of the construction site and the hospital to the means available.

This strategy resulted in seventy percent of the budget being spent in Kaedì itself; paid out to artisans, workers and various personnel, merchants, wagon drivers, and so on. One of the most interesting results of the project is the way it totally turned upside down the usual relationship between development aid and the Third World. Allocated aid funds mostly return to the West - used to import industrial machinery, equipment and European personnel - leaving only thirty percent to be spent on site. This was a very challenging experience for me and an extraordinarily rich one. For three years, I was completely responsible for the project, deciding on all phases of construction from the production of the material itself to the completion of the building. Without anyone local having the necessary expertise, I had to assume all the roles myself: architect, designer, industrialist, businessman and construction manager. Excellent young technicians, three from Senegal and one from Mauritania, worked with me as we grappled with a technique that none of us had ever used and which led us to constantly experiment, invent and learn.



FABRIZIO CAROLA
1981-'10 Various Buildings

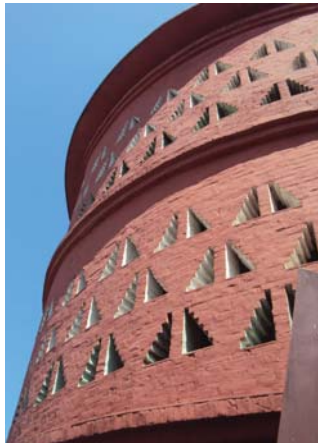
Photography: courtesy Fabrizio Carola

The same worker, in one operation, builds the entire structure, from the foundations to the final touches and with seamless continuity between walls and roofing.

"Low-cost techniques should not be considered only for the poor, our aim should be to design only the simplest of buildings for all."

Photography: http://arkistudentscorner.blogspot.it

The entire building is conceived as a continuous spiral ramp, with a central circular service core and with dining spaces provided on the outer side.



LAURIE BAKER
Indian Coffee House

Alternative Building Materials: Timeless Mud

Excerpted from :Architectural Writing, by Laurie Baker.
Form the web site "http://lauriebaker.net/"

by Laurie Baker

In 1944 I discovered that there was an international organization looking for an architect, engineer or builder to come to India because they had ninety-odd homes or asylums for leprosy patients, which had to be converted into something modern and new. I took on this job. Although I had passed my examinations several years before this, because of the War, I had not had the opportunity to practice very much as an architect. And here I was a starry-eyed, young associate of the Royal Institute of British Architects, with the whole of India to go at!

So I set off on my travels around India to see all these buildings that I had to convert, and to my horror, I discovered they were miles away from anywhere, and most of the materials with which these buildings were built were totally unknown to me. I had brought my textbooks along and thought I knew everything, for after all, I was an associate of the Royal Institute of British Architects! But here I was confronted with new materials like laterite, and construction techniques like Madras terracing. I found very primitive materials being used everywhere! I had a difficult first year, just trying to find out how to go about things and what to do. I found the answers slowly and steadily and strangely enough, not from my own profession but from the people themselves and from the ordinary craftsmen.

Mud all the way

The thing that hit me in the eye, right from the beginning, was that an enormous amount of use was made of mud! I knew a little about mud, but not very much. The first thing I discovered was that mud is one thing in one place and a different thing in another. It is used for different purposes and is used in different ways! There are different techniques of sticking it together and making it into a wall or whatever.

"mud is one thing in one place and a different thing in another! There are different techniques of sticking it together and making it into a wall or whatever"

Photography: http://arkistudentscorner.blogspot.it

On the outer side abutting the external jaali wall, there are continuous horizontal platforms incrementally rising in height along with the slope of the spiral.

LAURIE BAKER
Indian Coffee House

This varied considerably, even sometimes in a matter of a few miles, from one district to another. I began to move around to find out how it had lasted so well, because many of these buildings that I saw were as much as or more than a hundred years old. How was this possible with a climate like India with its intense heat, cold and the very long monsoon periods? I discovered there were many materials that were mixed with mud; very rarely was it pure mud straight eat of the ground. It was mixed with grass, straw, leaves and bhusa (chaff) I also found a very wide range of liquids being used with mud to make it stick together to prevent cracks. I had quite alarming experiences at times (and will continue to have them), throughout the forty-five years that I have been practicing here! I saw that these additional materials were changing as well. Nothing was static about this whole business of using simple materials. I was very impressed with the mud-work in a particular district that I used to travel through regularly, and as usual I tried to find out why it was so good. There were no cracks although the buildings were very old New ones were also being constructed in the same manner and all of them were very well kept. But these people would not tell me what it was they were mixing with the mannal to make it strong and stable. I thought it was some sort of professional jealousy. They didn't want me to find out the tricks of their trade! But after several years of persistence, I discovered that pig urine was being mixed. This hesitancy in telling me about it was just sheer embarrassment! But why pig's and why not cow's urine? We got hold of pig's urine and on testing it in laboratories found that the urea content is very much higher than in any other form of urine including cows' and goats' and human beings' urine. Urea is a binder and this is why they used it to make sure that the mud available (which was of a slightly sandy sort) held together very well and it performed all the functions that were required.

Empirical basis

I belong to the generation which didn't know what high technology was. Even reinforced concrete was in its infancy when I was a student and if anything new was

"Mud it's used for walls, floors, foundations and even for roofing even doors, wall plastering over cane and bamboo and mat material. It was used extensively as a fire retardant."

Buildings follow the site with curved walls. Often, when trees are obstructing the building, Baker simply moulds his walls around the trees so as not to disturb it.

LAURIE BAKER
1971 Centre Studies

being done in the area we would go about 200-300 miles to see it because it was such a remarkable affair! The other thing I found about mud was that it's used for all sorts of things ; walls, floors, foundations and even for roofing even doors, wall plastering over cane and bamboo and mat material. It was used extensively as a fire retardant. Though the CBRI (Central Building Research Institute, Roorkee, India) has worked for the last twenty years on fire retardants for thatch, in actual fact, this was already in use by people using mud. In Africa and in several other areas, apparently they build their round mud walls for their murals and before putting on the conical wood or bamboo or grass or whatever form of roof, they pile grass stalks and leaves inside and around and set it on fire and produce a mild form of ceramic building.(...)

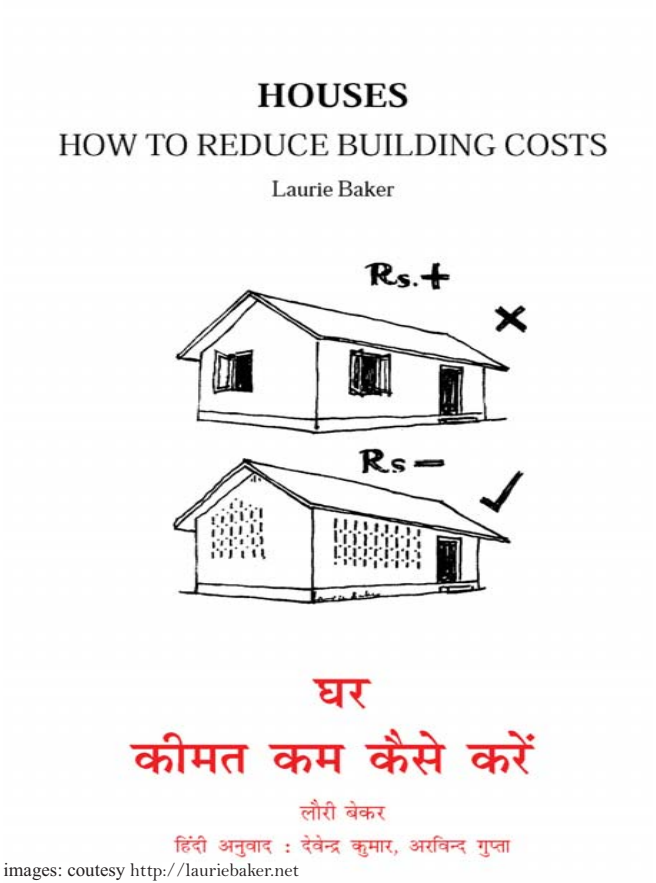
Before we came along with our high technologies and our science, people over thousands of years were doing what we are now pleased to call research and development. Anywhere you go in India, any village, any rural area, there is this, `rural' design that is steadily going on, and this research is not something that was thought out suddenly. They did not have research institutes. It was a system of trial and error, an empirical form of development. People have used what is actually underneath them and around them: the earth, the things that they can pull out of the earth and so on.

They used simple materials to protect themselves from the rain, sun, animals, insects and other human beings. They had very primitive forms of transport, and there was never any thought of importing materials, all of which has resulted in this very distinctive architecture. I insist on calling these 'rural indigenous designs' for building. I think they're very fine examples of pure architecture because they use materials honestly and straightforwardly in an enormous variety of ways, and find solutions to all the problems we human beings have, living in a somewhat hostile world.(…)

The challenge of shelter

We have between 20-30 million families who have next to nothing to live under, no form of shelter at all. We have another 50-70 million families living in conditions that are very deprived into so-called huts or houses which are unlikely to last

"People have used what is actually underneath them and around them: the earth, the things that they can pull out of the earth and so on."



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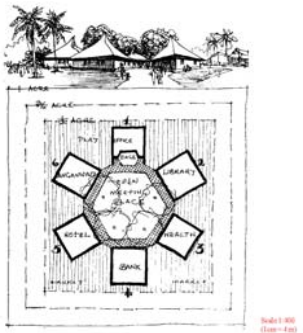

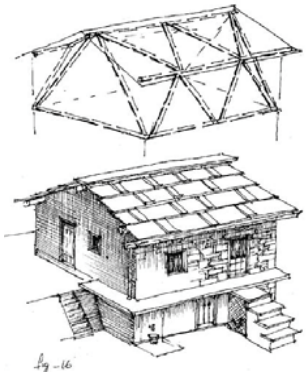

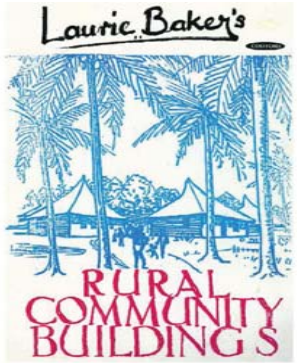

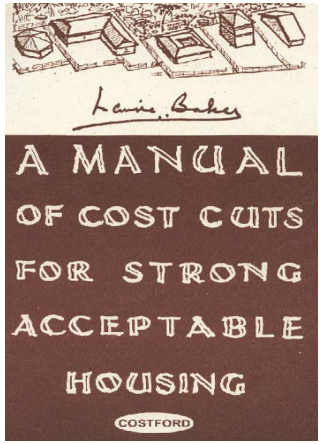

very long. The questions which arise are: Why don't they use all these simple techniques? Why don't they use the mud? The number of architects, engineers, or contractors who build and design buildings in the country are altogether less than one per cent of the number of buildings that go up in the country. Who's doing all the rest of them? (…) What is an architect? Is he just there to design this 0.1 per cent of the buildings, these high-rise buildings? I'm not suggesting that there is no place for high-rise buildings and dams and five-star hotels which cost a lot of money. The fact remains that they are a very small percentage of the actual houses or building needs of the country. We can go looking for high technologies as much as we can, but meanwhile, we have to get these 20 million families under some sort of reasonable shelter. Do we know how to do it? (…)

Viable alternatives to wonderful brick

As regards alternative building materials in the country, we do have those alternatives in practice. We have mud and it's used in a hundred different ways over the country. Those are the alternatives. We think mud is primitive. We want reinforced concrete or something prefabricated or prestressed or whatever it is. And we're continually working for substitutes, not alternatives. All these materials had something in common. They were all almost totally energy-free, other than the human energy of picking them up, mixing them, cutting and chopping them, etc. Can there be anything more important than this understanding of energy? I think brick is one of the most wonderful building materials that has ever been invented. There are very good reasons that a brick is a brick , its size, its shape... it's the amount of mud you can pick up, the amount of mud you can pat into a little square, the amount of material you can catch in your hand when you are working up on that wall and the workers throw up a brick to you. You can just catch it like a cricket ball! You can hold it in this, hand while you put your mortar on the wall that you're already building and then put it in place. You can't do that with a concrete block or a hollow block or any of the other blocks that we have devised. You have got to put your trough down. You've got to get down, lift the thing up,

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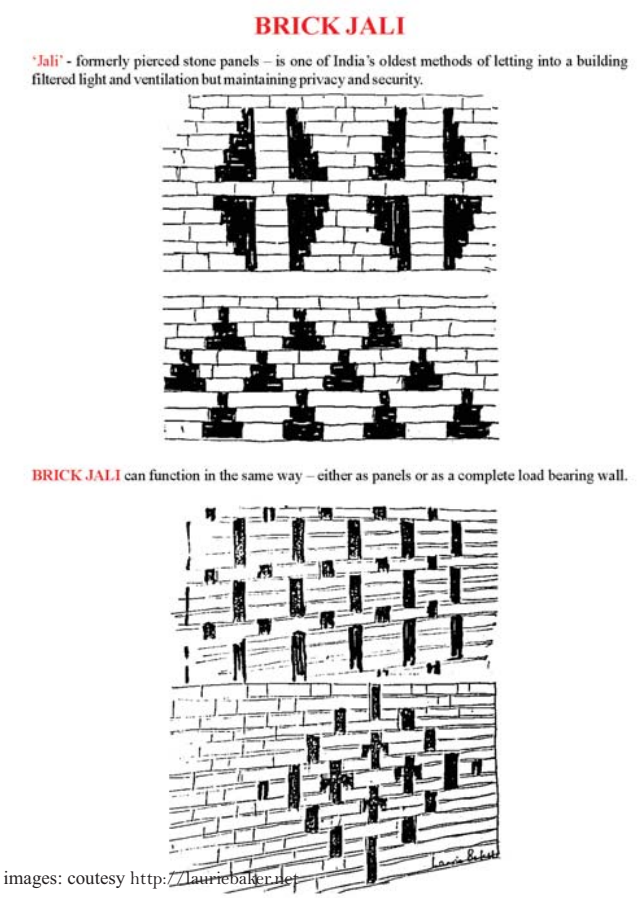
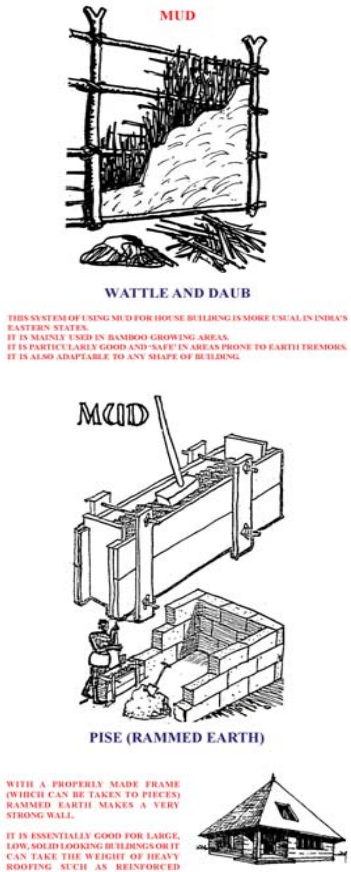
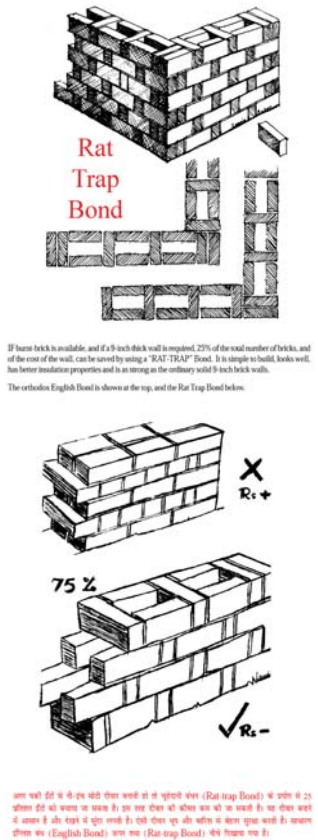
Costford attempts to use some of Baker's construction systems such as Rat Trap Bond

“Not only are they energy-free, but they are also dug out, prepared, manufactured, added or subtracted to on the spot, meaning a matter of a few kilometers.”







images: coutesy http://laurierbaker.net

walls, Filler Slab roofing, Brick jaali wall. Costford is supported by The Department of Science and Technology, Govt. of India; the Dep. of Rural Development Govt. of India

get it on, and put it into position especially when you’re working at a height in the second storey or the third storey. The block is a very difficult thing to use, but a brick? No! And you can use it for foundations, for walls, for roofs. I think the only thing I have not used a brick for is the door and I’m determined to do it before I die!(...)

In Kerala, all bricks are burnt by wood; we don’t get coal. It’s too far away and transport is too difficult, so I have had to lay off wood. What are my alternatives to things that bricks normally do? One of them is stone, another of them is mud. The biggest problem that I have in using mud is not with the mud itself, but it is the client: “We don’t want mud”, or “Mud? You mean to say I should build my house with mud?”(...) I’m not saying that mud is the only possibility, but it is there. We have done an enormous amount of research in the last ten years and even our organizations are pushing the use of mud. But the prejudice against mud is there. Any client that I suggest mud to ”Well, it’s a very nice idea Mr. Baker, very romantic, but no, I think we’ll stick to something more solid!” and the thing is brushed aside. (...) The usual question that is asked of me is, “It’s all very well for this rural India that you are so romantically inclined about, but what about Delhi, Bombay, Bangalore?” I think it’s still relevant there. I’m repeatedly asked, “You don’t have mud on the spot in the middle of Bombay or Delhi, etc.” But then neither do you have cement or steel on the spot. And that is another thing that all these traditional materials have in common. Not only are they energy-free, but they are also transport-free, or virtually so. They are dug out, prepared, manufactured, added or subtracted to on the spot, meaning a matter of a few kilometers over which you could carry them, either head-loaded or by bullock cart. This is one of the very big inputs into the whole of our building materials system these days, transportation.

We shouldn’t forget our cultural heritage in architecture. We should not abandon the use of traditional materials. It’s wonderful stuff. A lot of it does look decrepit; it gets worse and worse. But, on the other hand, you have got the answers to practically every problem of shelter we have in the country, in this indigenous architecture.

Conversation avec Anne Lacaton et Jean-Philippe Vassal

Ce texte est la transcription du deuxième entretien d’Anne Lacaton et Jean-Philippe Vassal avec Patrice Goulet
Cet entretien a été publié en anglais et en espagnol, en 2006, dans le 2G Libros/Books édités par Gustavo Gili, éditeur à Barcelone (Le premier a été publié également en anglais et en espagnol, en 2002, dans le numéro spécial 21 Lacaton & Vassal de la revue 2G.

by Patrice Goulet

(...) *7. Où il sera question de projets où la question urbaine a pris une grande importance, de Mulhouse et de l’intérêt du système du loft et du plan libre.*

Anne Lacaton : Quand le numéro de la revue 2G est sorti, nous étions en train de terminer deux ou trois projets mais aucun chantier n’allait commencer. Nous devions donc enchaîner les projets, publics et privés, en France et à l’étranger. Et, pour tous, la question urbaine avait une grande importance.
Jean-Philippe Vassal : Nous étions confrontés à une plus grande dimension, passant d’habitations privées à des territoires et des programmes beaucoup plus importants liés à des situations urbaines plus complexes. Et ce qui a été agréable c’est que ce changement d’échelle s’est fait facilement ce qui était plutôt réconfortant.
AL : Nous n’avions pas l’impression d’avoir à changer notre façon de réfléchir, ni d’ailleurs d’objectifs ni d’ambitions. Passer d’une maison à une tour de 50 étages n’a pas été difficile.
JPV : La construction des 14 logements de Mulhouse s’achevait et on y retrouvait la même idée de l’habiter, du confort et du nomadisme que j’avais découvert en Afrique. C’est-à-dire que s’y lisait la même volonté de donner la possibilité de changer, de bouger, de laisser les espaces les plus libres possible dans leur affectation.

LACATON & VASSAL
2005 Mulhouse housing

The aim is to produce quality houses that are, for the same price, considerably larger than the standardized housing usually met with.

“Nous savions que seules les serres allaient nous permettre d’arriver à construire un volume très grand ayant les qualités d’espace et de climat que nous désirions.”

Mulhouse fait suite à la maison Latapie et à celle de Coutras. Les qualités de ces deux maisons y sont simplement extrapolées à un plus grand nombre de logements. En réponse à la demande du maître d’ouvrage qui voulait que nous inventions de nouvelles formes d’habitat social, nous avons réagi en refusant d’entrer dans le système habituel de la gestion du minimum où on s’efforce de gagner un demi mètre carré dans l’entrée pour le réaffecter au séjour. Nous voulions au contraire partir du système du loft où on installe son mobilier dans un espace qui n’a pas été prévu pour cela. Pourquoi une telle liberté ne pourrait-elle pas être le fondement du logement social ?
D’où l’idée de fabriquer en premier un loft, un loft idéal, c’est-à-dire l’enveloppe la plus grande possible. Nous nous sommes presque interdits de penser alors habitation pour ne travailler que sur la réalisation de ce qui aurait pu tout aussi bien être un atelier ou une usine. Ensuite seulement, nous nous sommes préoccupés d’intégrer dans cet espace 14 logements avec l’objectif qu’ils profitent des qualités de cette structure.
AL : Nous savions que seules les serres allaient nous permettre d’arriver à construire un volume très grand ayant les qualités d’espace et de climat que nous désirions. En fait, nous avons reconsidéré nos premiers projets, la première version de la maison Latapie de 1991 où nous avions déjà installé une serre au premier étage et la maison de Coutras. Ce que ces projets avaient rendu clair pour nous c’était que ces serres, il fallait les prendre telles quelles. Mais comme nous connaissions leurs limites en hauteur et en fragilité, il nous a semblé évident qu’il fallait les poser sur un socle en béton. Cela déterminait deux niveaux très différents. Le rez-de-chaussée serait un grand espace presque sans poteaux, et, au-dessus, sur la dalle, serait posée une construction légère qui serait ainsi dans une situation privilégiée.
JPV : À Coutras, nous étions en plein champs, sans limitation de place et donc sans raison d’ajouter un étage. Dans un contexte urbain où la question de la densité se pose, si l’on veut agrandir l’espace habité, il faut créer du sol supplémentaire donc ajouter des étages.
Cela me ramène à l’Afrique. À quoi peut bien servir un architecte quand tous les habitants réalisent leurs maisons en auto construction? La solution est bien sûr qu’il peut produire du sol. Quand on est en ville et qu’il est nécessaire d’avoir une forte

Photography: Philippe Ruault

LACATON & VASSAL
2005 Mulhouse housing

On the ground floor a post/beam structure in concrete supports a platform at a height of 3 m, upon which horticultural greenhouses are fixed.

densité, il suffit de multiplier le sol disponible, une, deux ou trois fois. Ensuite, les gens peuvent venir y construire leurs logements en auto construction et là, leur savoir est mille fois plus efficace que tout ce que nous pourrions imaginer. À Mulhouse aussi, il fallait créer du sol supplémentaire et un climat confortable.

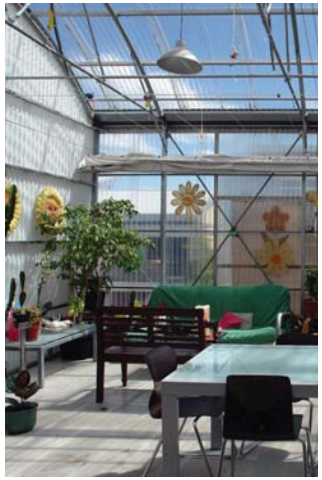
AL : Le terrain était petit et pour que les 12 maisons que nous devions y implanter soient deux fois plus grandes que d'habitude, il était évident qu'il fallait ajouter un niveau.

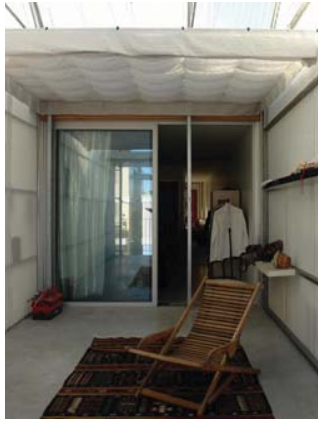
JPV : Une fois, la caisse faite, il fallait la prendre comme elle était, or les qualités des deux niveaux étaient aussi intéressantes qu'opposées. Comment en faire profiter tous les logements sachant que nous voulions que les séjours s'ouvrent le plus largement possible en façade? Si on divisait systématiquement la longueur du bâtiment, l'équivalence des façades des séjours et des chambres n'était pas intéressante. Il fallait donc décaler les cloisonnements. Si on reliait les deux niveaux par des escaliers hélicoïdaux, il n'était pas nécessaire de superposer les deux niveaux d'un logement.

AL : Et les deux systèmes constructifs n'avaient pas à être traités de la même façon. En bas, la liberté est totale d'autant plus que la façade est désolidarisée de la trame des poteaux. Ce qui n'est pas le cas des serres où la trame est beaucoup plus contraignante. Ce qui veut dire qu'en haut, le cloisonnement devait être cohérent avec cette trame. La difficulté résidait donc dans la mise en concordance des deux niveaux (on l'a un peu oublié aujourd'hui). ***On voulait que les séjours aient de 5 à 7 mètres de large et les chambre 3 mètres et il fallait combiner le haut et le bas pour y parvenir. Les murs en biais viennent de là.***

JPV : C'était un travail assez mathématique, une sorte de challenge. Il fallait que chaque logement soit traversant et que chaque séjour ait au minimum 7 mètres de façade. À cause des distances ainsi créées et des deux niveaux, on a vite compris qu'un certain nombre de cloisons était inutile et cela d'autant que les appartements étaient grands.

AL : Bien qu'ils soient occupés depuis 8 mois, il n'y a pratiquement pas eu de cloisons ajoutées. Ce sera intéressant de voir plus tard. Le maître d'ouvrage nous a demandé de venir tous les six mois rencontrer les habitants. Nous y avons déjà été deux fois. Ils nous surprennent chaque fois. Il n'y a aucun logement pareil. On ne sait pas comment ils ont été attribués mais apparemment les gens sont contents que leur séjour soit en bas ou en haut. J'ai l'impression que ceux du bas sont en fait plus





LACATON & VASSAL
2005 Mulhouse housing

"Il fallait donc décaler les cloisonnements. Si on reliait les deux niveaux par des escaliers hélicoïdaux, il n'était pas nécessaire de superposer les deux niveaux d'un logement."

Later on, the volume was divided into 14 dwellings, set crosswise in duplex form, which profit from all the different qualities offered by the diversity of the spaces.

traditionnels que ceux d’en haut.
JPV : Certains regrettent qu’on ait asphalté l’espace entre la rue et les logements mais cela nous embêtait de mettre une pelouse de 5 mètres de large. On est en ville et on l’assume. Si l’on veut, on peut enlever le bitume ou mettre des pots dessus. On leur a montré des photos prises à Tokyo par David Pradel. Ils nous ont dit qu’ils comprenaient mieux pourquoi on avait choisi cette solution. Je suis sûr que dans 2 ans ce sera extraordinaire.
AL : Ils peuvent aussi préférer y mettre leur voiture pour transformer leur garage en pièce supplémentaire.

8. Où il sera question de l’école d’architecture de Nantes, de l’intérêt de démultiplier le sol et d’enchaîner les niveaux par une rampe, de donner une plus grande profondeur au bâtiment pour donner plus de liberté d’usage.

JPV : En 2003, nous avons gagné le concours pour l’école d’architecture de Nantes. Le terrain est assez incroyable, en plein centre ville, au bord de la Loire, donc bénéficiant d’une vue très ouverte. Évidemment cela veut dire aussi que qu’il s’agit d’un terrain rare et donc cher. Notre idée fut tout de suite de démultiplier ce sol en faisant en sorte que les trois niveaux ajoutés ainsi que le toit terrasse apparaissent et fonctionnent comme une extension de ce sol, qu’ils aient donc les mêmes qualités que le rez-de-chaussée, c’est-à-dire une grande facilité et une totale liberté d’usage. Pour renforcer cette idée et affirmer leur continuité, nous avons créé une grande rampe, large de 7 mètres, qui relie les différents niveaux jusqu’au toit avec une pente de 7%. Cette rampe n’est pas très différente d’une route de montagne qui serpente pour desservir les maisons d’un village. Une fois ce nouveau sol constitué il suffisait d’y installer une école d’architecture. Donc au départ, nous sommes partis d’un terrain de 5 000 m2 que nous avons exploité au maximum en le multipliant par 5 pour arriver à 25 000 m2. Mieux, comme la hauteur disponible entre plancher est de 7m, on peut encore ajouter des sols intermédiaires.
AL : Parce que c’était une école d’architecture, il était intéressant d’aller aussi loin que possible dans cette radicalité. En fait, ce n’est pas sans rapport avec le Palais de Tokyo. Là aussi les différents niveaux sont en fait des rez-de-chaussée.

LACATON & VASSAL
1993 Latapie House

The inhabitable part of the house can vary according to the seasons, from the smallest (living room,bedrooms) to the largest area, by integrating the entire garden in summer.

JPV : L’idée de la rampe est venue très vite. J’ai toujours été intéressé par les constructions commerciales où il n’y a aucune marche. J’aime cette idée qu’on peut y circuler partout en skate, en vélo, en rollers ou avec un caddie. Cette suppression des marches me paraît essentielle. C’est pourquoi je trouve intéressant que, dans l’école d’architecture de Nantes, on puisse circuler partout en skate ou en vélo.

C’est vrai que durant ces quatre dernières années, nous avons fait trois ou quatre projets qui s’organisent autour d’une rampe. Au bassin de la Villette, la rampe est très douce. Comme ce bâtiment fait 30 x 60 mètres, on monte exactement d’un niveau à chaque tour, autrement dit, la totalité du bâtiment n’est qu’une rampe habitable.

Cette école c’est aussi une maison Latapie multiplié par 100 ou 200. Elle fonctionne sur le même système, une extension maximale des sols, qui apporte une liberté d’usage maximale dans un espace cependant contrôlé, ici, adapté au climat de Nantes. Ce n’est pas un récipient étanche, on peut moduler son climat intérieur comme on le veut grâce à un système d’ouvertures et de cloisons mobiles que les usagers peuvent manipuler.

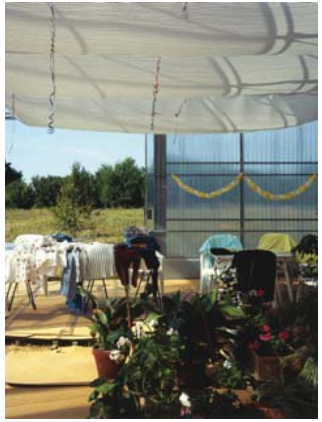
Le climat intérieur d’un tel bâtiment, on s’en aperçoit maintenant, est essentiellement déterminée par les gens qui y vivent et tous les calculs théoriques que l’on fait s’avèrent toujours faux parce qu’ils ne prennent pas en compte les singularités de chacun, les uns ouvrant leur porte pour mieux accueillir ses visiteurs, les autres laissant leurs fenêtres ouvertes pour pouvoir fumer… Il faut donc mieux laisser à chacun la faculté d’adapter son environnement à ses goûts.

AL : Un des points communs de la maison Latapie, des logements de Mulhouse et de l’école de Nantes, est qu’il y a à peu près autant de surface demandée par le programme que de surfaces supplémentaires non attribuées, libres pour des usages non prévus. Ce n’est pas une réserve mais une nécessité.

JPV : On espère que l’école sera plus qu’une école d’architecture, qu’elle pourra accueillir du public, que les Nantais pourront profiter de la bibliothèque, qu’ils pourront venir y voir des expositions…

AL : On voulait qu’on n’y soit pas gêné aux entournures. On l’a constaté dans nos maisons, c’est dans les espaces supplémentaires que les gens trouvent les moyens de personnaliser, de s’approprier leurs maisons.

JPV : À Grenoble, nous avions voulu que les couloirs aient 8 mètres de large (le pro-



LACATON & VASSAL
2000 Coutras House

Photography: Philippe Ruault

The greenhouse option has enabled us to construct bigger spaces at a low cost, while offering numerous possibilities for their utilization and adaptation

gramme ne demandait qu’un mètre). Aujourd’hui, plus de dix ans après, l’association des étudiants a compris les potentialités de ces couloirs et y organisent des expositions (il s’agit une université d’art et de sciences humaines).

AL : À Grenoble, nous avions aussi construit des planchers supportant 800kg au m2, ce qui permettra de déplacer la bibliothèque si c’est devenu nécessaire.

JPV : Ce qui nous intéresse beaucoup dans le projet de l’école d’architecture, c’est également, comme à Mulhouse, de sortir de l’idée qu’il faudrait une profondeur standard qui serait dépendante de la lumière extérieure, qu’au-delà ce serait inacceptable. Le loft prouve le contraire. Nous sommes allés chez des amis à New York, leur appartement faisait 50 mètres de long sur 5 mètres de large et 5 mètres de haut. C’était très agréable. Il s’y passait plein de choses et de part et d’autres, il y avait ces grands carrés de lumière. Avoir 100% d’éclairage en façade avec des hauteurs entre planchers de 6 à 7 mètres et en même temps une profondeur de 60 à 80 mètres, c’est vraiment bien. Quand on est au centre, on voit les façades en contre-jour et on ressent vraiment la présence du sol et un vrai paysage se crée, un paysage intérieur. C’est ce qui m’a impressionné à la bibliothèque de Berlin d’Hans Scharoun. Quand on y pénètre, on découvre un nouveau paysage, on imagine des collines…

AL : À Mulhouse, les habitants ont bien compris l’intérêt de cette profondeur. Elle leur offre plus de possibilités. Des visiteurs ont dit : au centre, il n’y a pas de lumière. Mais c’est pareil dans un appartement standard ou plutôt c’est habituellement pire.

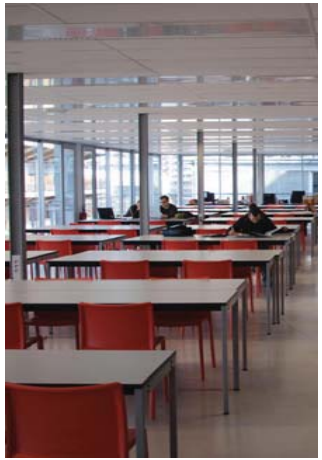
JPV : On peut mettre un fauteuil, son lit ou une table plus ou moins près de la façade suivant qu’on est en été ou en hiver;

AL : Cette idée du loft permet de sortir des normes, des règles, des contraintes, cela ouvre complètement le champ des usages. On n’est plus enfermé dans un univers d’idées préconçues.

JPV : C’est donner plus de liberté… et plus de plaisir !

9. Où il sera question du contexte, des défauts de la table rase et de la transformation positive des tours et des barres (…)

JPV : Ce qui préexiste au projet est toujours essentiel. Pour la maison du Cap-Ferret, l’existant, c’est 80% du projet. Ce qui pouvaient apparaître comme des contraintes,



LACATON & VASSAL
2009 école d’Architecture

Three decks served by a gentle sloping external ramp, progressively put the ground surface of the city in touch with the sky overhead.

“Ce qui préexiste au projet est toujours essentiel. Pour la maison du Cap-Ferret, l’existant, c’est 80% du projet. Ce qui pouvaient apparaître comme des contraintes, en fait peuvent être récupéré, utilisé.”

les arbres, la dune, le sable, parce qu’on pouvait s’interroger sur le fait d’y construire une maison, en fait peuvent être récupéré, utilisé, optimisé. Et du coup, la maison ce n’est que 20% de matériaux qu’on ajoute pour rendre le site plus habitable. Nous nous apercevons que plus la situation est complexe comme en pleine ville, plus il y a de problèmes qui semblent insolubles, plus il y a matière à des choses intéressantes. Il ne faut surtout pas éliminer. Il faut récupérer et retourner les situations. Plus celles-ci sont difficiles, plus est grande la possibilité de les transformer d’une manière radicale. C’est-à-dire qu’on peut vraiment passer de ce qu’on juge très mauvais à ce qui peut être vraiment extraordinaire, sinon miraculeux.

AL : Ce qui ne veut pas dire que, pour le logement, nous soyons heureux de nous retrouver face aux pires des situations…

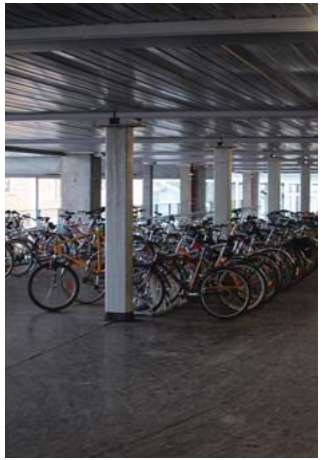
JPV : l’important c’est pourtant, dans tous les cas, de rester optimistes.

AL : Quand on s’est préoccupé des tours et des barres, on a vite découvert que beaucoup de ces constructions auraient permis de faire des lofts (sauf, évidemment quelques-uns qui étaient terriblement contraintes structurellement).

JPV : Si nous nous sommes intéressés à ces constructions, c’est qu’en France, la situation a été politiquement exacerbée, entraînant la décision radicale d’en détruire un grand nombre. Ne sachant pas traiter les problèmes sociaux dont elles sont le théâtre, on a imaginé les faire disparaître en les démolissant. Pourtant, dés qu’on y réfléchit, dès qu’on examine les détails de la situation et de l’état d’une tour ou d’une barre, on s’aperçoit qu’il y a toujours une solution, une porte de sortie permettant d’améliorer les choses à partir de l’existant et cela économiquement parce que conserver partiellement c’est tout de même beaucoup moins onéreux que de tout casser et de tout reconstruire.

AL : Déjà en 2001, nous avions été choqué par la démolition de la Cite lumineuse, qui se trouvait à la périphérie de Bordeaux. Elle apparaissait surtout idéologique. Frédéric Druot, avec qui nous travaillons aujourd’hui sur ces problèmes, venait juste d’étudier comment la transformer et nous savions donc que c’était possible.

JPV : Quand on compare des tours ou des barres à des zones pavillonnaires une différence saute aux yeux. Les pavillons se transforment. C’est étonnant de voir la faculté qu’ont les habitants pour transformer et agrandir leurs maisons. Ils ajoutent



Photography: Philippe Ruault

LACATON & VASSAL
2009 école d’Architecture

At any one moment the adaptation of the school to new interventions and its reconversion are possible.

une pièce, puis une seconde, puis un abri dans le jardin. C’est totalement interdit dans les tours et les barres et de toute façon, la plupart du temps, il n’y a même pas de balcon. Juste une fenêtre pas très large et des espaces resserrés sans aucune possibilité d’extension. J’en reviens à ce que je disais sur l’Afrique : en tant qu’architecte, ce que je dois proposer c’est qu’au 10ème étage, on ait la faculté d’agrandir son logement ce qui permettrait d’améliorer sa relation avec l’extérieur et d’échapper ainsi aux murs et au béton, ce qui changerait radicalement la qualité de la vie des habitants.

AL : La diversité des interventions est toujours positive. À Mulhouse, chacun a multiplié ses rideaux. Il y avait ceux que nous avions installés pour occulter le soleil dans les serres. Ils en ont rajouté au gré de leurs besoins. J’aime ces séparations fines, douces et légères qu’on peut mettre ou enlever, tirer ou repousser. Pour cela, il faut donner des espaces sur lesquels les habitants peuvent intervenir.

(...)

JPV : C’est ce que nous avons essayé de faire à Saint-Nazaire. Il y avait un quartier magnifiquement situé, à l’embouchure de la Loire, face à l’océan, un quartier qui est là depuis une cinquantaine d’année et qui est habité par les ouvriers des chantiers navals. Un quartier hors du temps. Et le maître d’ouvrage qui semblait très attaché à cette population devait pourtant le densifier pour le mettre en concordance avec le « Plan de renouvellement urbain ». Il y avait 35 logements repartis en maisons R+1, R+2 et quelques petits immeubles de R+3 et R+4.

Il fallait qu’il en ait 60 et pour lui la seule solution semblait être de tout casser pour tout refaire.

AL : Il était aussi poussé par les urbanistes qui envisageaient une reconfiguration lourde.

JPV : Le quartier était calme, les logements en assez bon état, on pouvait intervenir en faisant très attention à chaque logement, à chaque rosier, à chaque arbre, un peu comme on l’avait fait pour la maison du Cap-Ferret. On pouvait transformer les logements existants et ajouter quelques constructions nouvelles en préservant le charme du quartier tout en apportant des dimensions et une qualité de vie inatteignable autrement. Il faut toujours travailler par addition. Un logement existe, on peut lui accoler une nouvelle construction de façon autonome de telle sorte qu’à la fin, il suffise de transformer une fenêtre en porte pour avoir un appartement agrandi de 50m2 plus ouvert sur le paysage, avec un grand balcon.

Photography: Philippe Ruault

LACATON & VASSAL
2009 école d’Architecture

The project design comes up with a scheme capable of creating a set of rich and diverse situations of interest to the School of architecture, the city and the landscape.

“Faire table rase, c’est une maladie et une supercherie car on te demande de conserver les qualités d’un lieu et en même temps de tout détruire. Ce n’est souvent finalement qu’une question d’image.”

AL : *Et, dans la plupart des cas, on pouvait faire les transformations tandis que les gens restaient sur place. Ce quartier avait l’air d’avoir été fait pour cela.*

Faire table rase, c’est une maladie et une supercherie car on te demande de conserver les qualités d’un lieu et en même temps de tout détruire. Ce n’est souvent finalement qu’une question d’image. Pour un politique, pour un urbaniste, pour un architecte parfois (ce n’est pas notre cas), c’est plus valorisant de faire quelque chose de nouveau, de changer l’image d’un lieu. Pour les tours et les barres, finalement, on prend prétexte souvent de problèmes sociaux pour, en fait, éradiquer une architecture qui n’a pas bonne réputation.

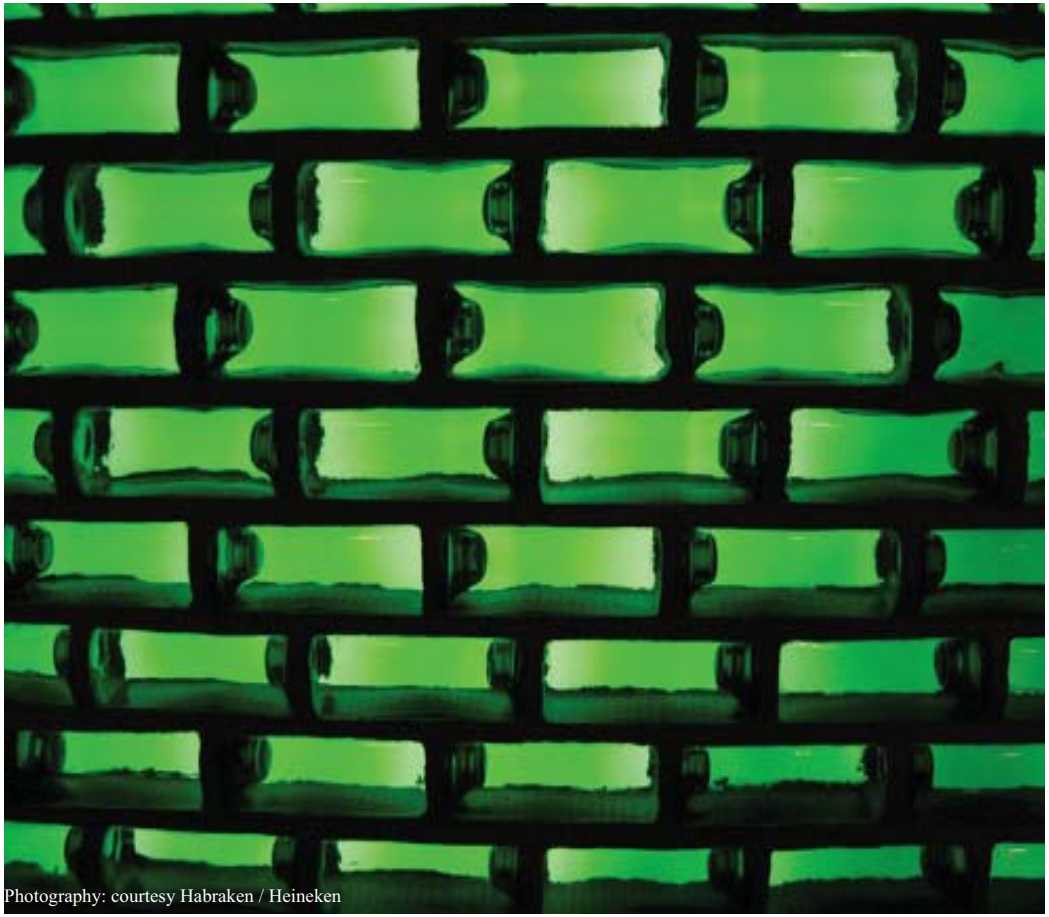
JPV : Et pourtant, c’est très simple : on prend un plan traditionnel très cloisonné, on lui ajoute 10 m2 tout autour et on a un plan libre !(…)

Photography: Philippe Ruault

LACATON & VASSAL
1998 Cap Ferret House

The pine trees are preserved, including those situated within the four walls of the building itself. These trees traverse the house in special designed holders.

“Heineken decidió producir un recipiente para la cerveza que pudiera servir como ladrillo una vez vacía, contribuyendo así a resolver los problemas de habitabilidad en dichos países”



Photography: courtesy Habraken / Heineken

Large and small versions of Heineken’s WOBO (World Bottle), designed by John Habraken

HABRAKEN
1963 WOrld BOttle

La botella WOBO

Arquitectos 186 2009

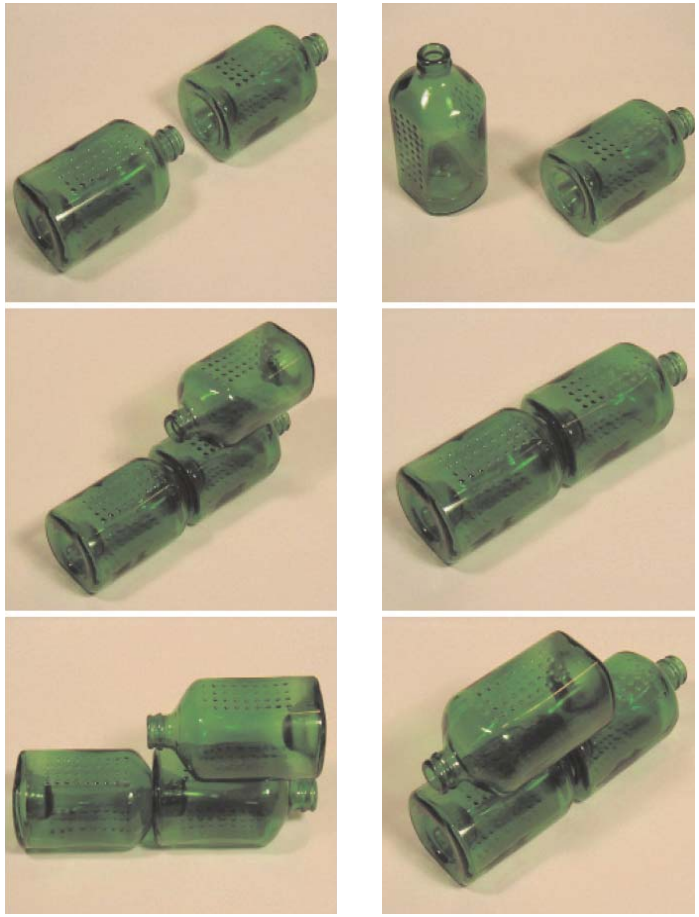
by John Habraken

A principios de los Años 60, Alfred Heineken, propietario de la fábrica de cerveza Heineken, observó en sus viajes a países africanos y latinoamericanos grandes pilas de botellas vacías. Era política de empresa llevar a cabo la totalidad de la producción de cerveza en los Países Bajos, a fin de controlarla de manera más exhaustiva. Mientras que en Holanda una botella podía ser reutilizada hasta treinta veces, aquéllas exportadas a países trasatlánticos no eran recicladas. Analizando el gasto que esto suponía, Heineken decidió producir un recipiente para la cerveza que pudiera servir como ladrillo una vez vacía, contribuyendo así a resolver los problemas de habitabilidad en dichos países. En 1963, me pidió que diseñara la botella WOBO (WOrld BOttle) y, tras varios intentos fallidos, llegamos a un modelo a partir del cual se producirían unas sesenta mil unidades en la Royal Glass Works en Leerdam, Holanda, de donde salían la mayor parte de las botella spara Heineken. La WOBOse produjo en dos versiones: una con capacidad para 33 cl y otra para 50 cl. La WOBO tenía dos caras planas y rugosas para garantizar uniones sencillas mediante juntas de mortero. Las botellas se disponían horizontalmente, al igual que los ladrillos convencionales, de manera que los cuellos de las mismas encajaran en las bases huecas de las adyacentes. El hecho de que una botella no fuese tan fácil de cortar como un ladrillo supuso un desafío para el diseño: así pues, debía ser posible realizar un hueco o rematar una esquina sin necesidad de dividir las botellas por la mitad, manteniendo el llagueado vertical al tresbolillo para asegurar uniones eficaces. El problema se resolvió alternando el sentido de las hiladas (esquema). Finalmente, se erigió un pequeño cobertizo con muros de botellas verdes en el patio trasero de la residencia privada de Heineken en Noordwijk, Holanda. La

"Martin Pawley, publicó un libro titulado Garbage Housing, el cual dedicaba un capítulo entero "WOBO: un nuevo tipo de mensaje dentro de una botella"a la abortada iniciativa de Heineken."

Photography: courtesy Habraken / Heineken

Habraken explained that one of the construction challenges "was to find a way in which corners and openings could be made without cutting bottles."



HABRAKEN
1963 WOrld BOttle

botella nunca sirvió como recipiente comercial, pues Heineken fue incapaz de convencer a los directores de marketing de sus ventajas. Estaban convencidos de que arruinaría la imagen de la firma. Además, existía la preocupación de que aquellos países a los cuales se enviara la WOBO pudieran considerar la alternativa paternalista y menospreciativa. Alguien sugirió que el proyecto funcionaría si, previamente, Marilyn Monroe habitara una vivienda de muros de WOBO. Diez años más tarde, en 1975, Martin Pawley, reconocido escritory crítico de arquitectura, publicó un libro titulado Garbage Housing, el cual dedicaba un capítulo entero –"WOBO: un nuevo tipo de mensajedentro de una botella"– a la abortada iniciativa de Heineken. Le envié una copia del libro a Heineken, el cual me llamó por teléfono para decirme que quizá había llegado el momento de llevar a cabo otro intento. ¿Qué podría hacer con las sesenta mil botellas que todavía reposaban en uno de los almacenes de la fábrica?Por aquel entonces, mi oficina de investigación se encontraba enuna construcción efímera situada en el Campus de la Universidad Técnica de Eindhoven, donde era profesor del Departamento de Arquitectura. Esta edificación fue inicialmente concebida para alojarla oficina de los arquitectos que diseñaron el Campus. Junto con Rinus van den Berg, un joven y muy talentoso diseñador industrial, propuse un edificio para nuestro grupo de investigación construido en su totalidad con materiales reciclados. Los pilares estaban hechos de toneles de petróleo apilados y la cubierta, de capotas Volkswagen, mientras que las fachadas y las particiones eran confec-cionadas con las WOBO. A Heineken le satisfizo la idea, y se puso a trabajar enérgicamente para hacer la idea posible. Consiguió que el señor Pon, el mayor distribuidor de Volkswagen en los Países Bajos, accediera a donar las capotas necesarias para realizar la cubierta. El señor van Leer, propietario de la compañía internacional homónima que se dedicaba a la fabricación de barriles de petróleo, también se mostró dispuesto a cooperar. El señor Philips, director de Philips Electronics, con sede central en Eindhoven, también fue contactado, y accedió a costear parte de los fondos para la construcción del edificio y a apoyar la causa de cara a la Universidad para obtener el permiso necesario para poder desarrollar el edificio en su Campus. A quel verano vi-

“En la actualidad, se puede contemplar un muro de botellas WOBO en el Museo Heineken de Ámsterdam. El cobertizo del patio trasero de Heineken desapareció mucho antes de que éste muriera”

Photography: courtesy Habraken / Heineken

Fifteen years after the inception of the WOBO project, the “brick that holds beer” will at last used in a building, also built with Oil Drums,VW Roofs and other re-used object.

RINUS VAN DER BERG
1975 WOBO office

ajé al MIT para desempeñar el cargo de Directordel Departamento de Arquitectura. Cuando todo parecía marchar porel buen camino, recibí una llamada de Heineken, en la que me explicaba que también solicitaría a la Universidad que corriera con parte de los gastos de la construcción del edificio. Le desaconsejé que lo hiciera, convencido de que no sólo resultaría en largos retrasos propiciados por evasiones administrativas, sino en que, además, el dinero nuncallegaría. Aún así, Heineken insistió, y envió una petición formal. A quello que tanto temía acabó sucediendo: el proyecto nunca fue construido. A fin de cuentas, nadie en el Departamento de Arquitectura de la Universidad Técnica de Eindhoven veía ninguna razón para sufragar una aventura iniciada por un antiguo miembro de la facultad. Si no hubiera abandonado Eindhoven, quizá hubiera podido conciliar a las diferentes partes y, así, haber llevado a cabo el proyecto. Pero la insistencia de Heineken en que la Universidad debía costear parte de la operación propició el fracaso de la misma. Las botellas almacenadas en los silos de la fábrica fueron retiradas. En la actualidad, se puede contemplar un muro de botellas WOBO en el Museo Heineken de Ámsterdam. El cobertizo del patio trasero de Heineken desapareció mucho antes de que éste muriera. Es una pena que no pueda presenciar el actual interés mundial por su prematura iniciativa.

"Spontaneous vegetable or decorative gardens do not belong in any specific category and do not have a recognized structural or aesthetic status."

Vernacular Gardens in Manhattan. An History of Guerrilla Gardens

Excerpted from : Loisaida NYC Community Gardens, by Michela Pasquali, ed. 2006 A+M Bookstore, Linaria.

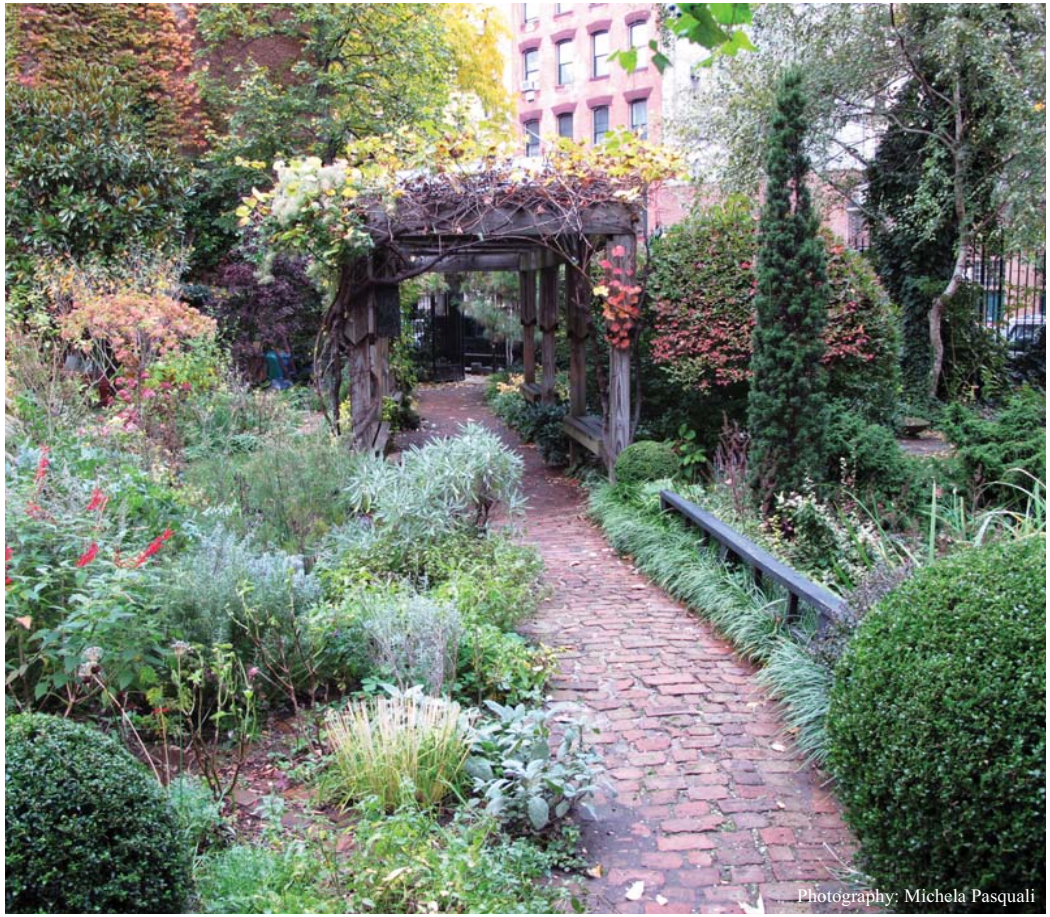
by Michela Pasquali

Nondescript or highly individual, indigenous and local as well as folksy, ethnic, exotic. This could be a definition of the gardens that are created from the spontaneous initiative of an individual or group of individuals whose intentions are to liven up city neighborhoods overlooked for more important immediate interests and left in a state of abandon. However, vernacular, is the term that best describes the domestic, at-home, daily life that is so typical of those minor, non institutional green gardened patches that have always existed alongside historical gardens, public parks, botanical gardens. Spontaneous vegetable or decorative gardens – the dividing line is most often quite difficult to draw – do not belong in any specific category and do not have a recognized structural or aesthetic status.

One case in particular, with the same vocation for spontaneousness and instinct, the gardens in a little neighborhood in Manhattan called Loisaida, stands out as one of the most interesting of these original hidden green urban spaces for the typological variety, diversity of creative solutions and expressive complexity.

The name Loisaida is of Hispanic-English origin, and comes from the Lower East Side, an area on Manhattan bordering on the Financial District and made up of Little Italy, Chinatown and, of course, Loisaida. This little neighborhood, also called Alphabet City, is delimited on the north by 14th Street, on the south by East Houston Street, on the west by Bowery Street and on the east by the East River. The broad Avenues that run from north to south divide it into a series of vertical 'segments' that, as one moves east, gradually show more and more signs of poverty and deterioration. In fact, the typical scenario of Avenues C and D is lots of dilapidated

GUERRILLA GARDENS
NYC Community Gardens



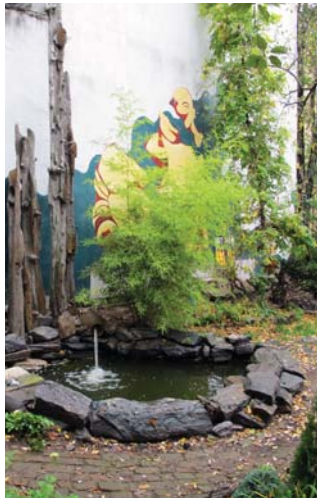
Photography: Michela Pasquali

The gardens in a little neighborhood in Manhattan called Loisaida, stands out as one of the most interesting of these original hidden green urban spaces.

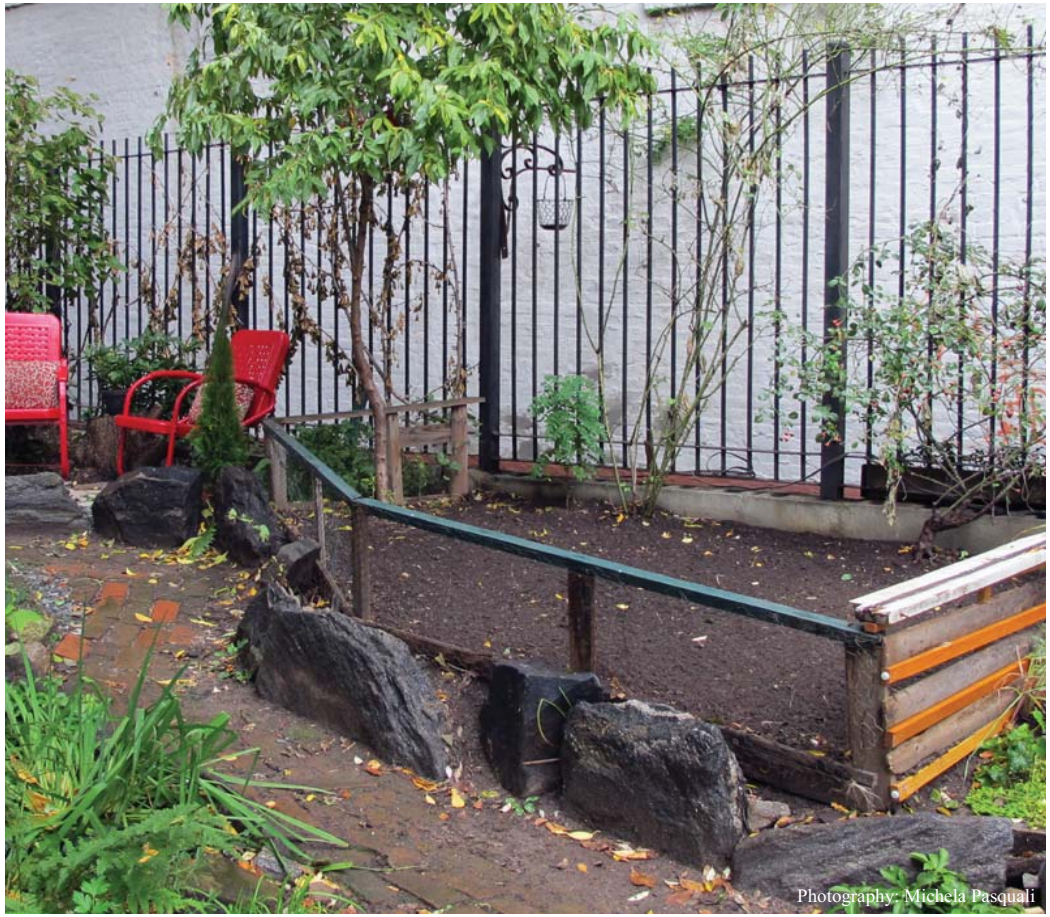
buildings, a testimonial to the arson and disinvestment that, starting from the end of the 1960s, have led to the destruction of this neighborhood. Here, with respect to the ‘holes’ that periodically interrupt the fabric of constructions between Avenues A and B, a desolate sequence of vacant lots cluttered with rubble is the background to the buildings that have survived. Even further east, beyond Avenue D, are the imposing red-brick towers called The Projects, built in 1950 as low-income housing and mainly inhabited by Hispanics.

At the beginning of the 1970s, in the wake of the environmentalist movement and thanks to the impulse of the political activism of the previous decade, the last and most important urban community gardens movement began, and affected the entire United States. Unlike what had happened in the past, the initiative had its roots at the bottom, with the citizens, who took the place of a far-away government that was indifferent to the environmental and social emergency that is still threatening the health and safety of many marginalized neighborhoods in the big cities. Since the food crisis was over, what made young and old, rich and poor, students and professionals, inmates, and even the sick and handicapped take part in the conversion of vacant lots into vegetable and flower gardens was the common necessity and desire to make the city more livable by improving the conditions of urban blight in the poorest neighborhoods through the creation of clean, safe green areas. Involved in the construction and maintenance of gardens, heterogeneous groups were formed, comprised of men and women who, according to their needs, improvise as planners, gardeners and social animators. Together, they take care of their little Edens and use them as headquarters for educational and cultural promotion, while gardening and different organizational activities become occasions for socialization and integration in the local community.

In the course of the 1970s, the City considered them as a way to use worthless land productively, and, if they were kept up well and served as headquarters of social activities, they were excluded from the sale or demolition of land, with the exception of certain special cases, like for the construction of a hospital or a hospice. The situation changed at the beginning of the following decade, when the great request for housing and growing gentrification forced the public ad-



GUERRILLA GARDENS
NYC Community Gardens



Young and old, rich and poor, students and professionals, take part in the conversion of vacant lots into vegetable and flower gardens.

“none of the gardens were even marked as such on the cadastral map of the city, where there is no distinction between the many still vacant lots and those that were transformed into gardens.”

ministration to start a program of building speculation for the construction of new buildings, part of which was to be earmarked for the free real estate market and another part for the construction of homes for low-income families, thus permitting the zoning also of the spaces occupied by the community gardens. It is significant that none of the gardens were even marked as such on the cadastral map of the city, where there is no distinction between the many still vacant lots and those that were transformed into gardens.

Since then, the gardens have been the center of a battle that divides Loisaida and the city of New York. Many risk seeing thirty years of patient, passionate work wiped out in a few minutes by a bulldozer, together with the invaluable social, cultural and environmental value that has become rooted there in the course of their long life in the neighborhood.

The ones most at risk are of course the biggest gardens. In order to save them, entire neighborhoods have mobilized, as they did in the past, supported by the associations that promoted their creation, including the Green Guerillas, Earth Celebration and the Trust of Public Land. In order to try to plan new real estate investments in the areas which were still free without using lands already occupied by gardens, the Green Guerillas also founded the Lower East Side Garden Preservation. At the same time, against the decisions of the Department of Housing Preservation to sell public property lands, and in an attempt to find a definitive solution to save the gardens by integrating them in the new building plan, the New York City Garden Preservation Coalition was also created.

Social changes, together with urban and architectural renewal have obviously had a determining influence on the nature and rhythms of the evolution of the gardens. Their numbers vary from year to year. Some have been demolished to make way for new buildings, very few are abandoned, but what mainly happens is that there is a growing number of vacant lots that are cleared and transformed into gardens. Others are expanded until they occupy all of the abandoned space, as happened with the 9th&C Community Garden, which gradually expanded until it covered all of the vast area that is at the corner of Avenue C and 9th Street, or the La Plaza Cultural Garden, which also includes an open-air theater.

The major changes concern those gardens that, founded by the Puerto Rican com-

GUERRILLA GARDENS
NYC Community Gardens

Photography: Michela Pasquali

Gardening and different organizational activities become occasions for socialization and integration in the local community.

"Although always changing, they have remained faithful to the original character of the garden (...) with re-used object, spontaneously and surprisingly re-arranged"

munity, have changed hands and have been passed on to a new generation of gardeners and the landscape shows this passage quite clearly. With the passing of time they tend to take on an increasingly traditional appearance, while structures like gazebos, pergolas and fences, initially constructed with recycled materials, are substituted with more common garden fittings. Everyday objects like sinks and plastic toys disappear in order to leave space for small cement sculptures or other more conventional elements. In the same way, the choice of plants, too, is being carried out with greater 'premeditation', thinking of the blooming seasons during the spring and summer, the juxtaposition of colors and experimentation with exotic species.

(...)One of the aspects that most contributes to the special charm of the gardens in Loisaida is the plenitude of the vegetation, resulting from the maze of plants clinging to each other in overflowing ensembles. Harmony and equilibrium are not the exclusive result of the study and targeted choices of the landscape gardener, but they can also spring from the mixture of species planted according to an informal, almost anarchical scheme that on the whole, successfully creates a very pleasant pictorial, scenographic effect with lively chromatic juxtapositions and intriguing combinations of texture.

Enclosed in by high wire fencing, squeezed in between the walls of surrounding buildings, from the street it is almost impossible to see any gardens, while bushes and trees that have sprung up spontaneously isolate them from the surrounding environment. But it is enough to cross the threshold and the almost imperceptible barrier that protects them from the outside becomes the clear sign of the boundary that defines this microcosm, where the singular proportion between the parts, the variety of the dimensions and viewpoints, the novelty of putting objects and plants together created an effect of the unexpected and of surprise. Straight lines, hard geometrical forms, clear and precise limits, clean-cut fences, imposing order on the vegetation – all of these criteria have been abolished in order to leave space for fanciful forms of flowerbeds bursting with all kinds of flowers. Rosebushes, raspberries, currants and lilac trees have been scattered without order or symmetry.

GUERRILLA GARDENS
NYC Community Gardens

Photography: Michela Pasquali

The signs of physical and symbolical appropriation are identified with the arrangement of plants and flowers or the choice and locations of objects, statues, etc

“In a desolate panorama of decrepit buildings and streets full of traffic, these isolated fragments of nature afford a moment of peace and escape.”

In a desolate panorama of decrepit buildings and streets full of traffic, these isolated fragments of nature afford a moment of peace and escape. At just one step from the tyrannical geometry of the city is an entrance into an ‘imaginary natural world’ with its exuberant, changeable forms in opposition to the inflexible grids of urban schemes. Paradise lost is already promised in evocative, exotic names like El Sol Brillante, Brisas del Caribe, El Jardín de Tranquilidad, Miracle Garden, Green Oasis and Jardín de la Esperanza.

Fundamental places for the very idea of the garden, and full of symbolic meaning, the community gardens of Loisaida are today an important occasion for reflecting on a new and different conception of nature and green urban spaces.

The gardens of Loisaida renew the tradition of the vital, protected enclosure, while they powerfully express the desire for an open space that goes beyond the narrowness of urban boundaries. The further one penetrates, the more they are perceived as ‘places of conservation’ of a nature that is no longer dangerous, but in danger, and the necessity emerges that they in turn have to be defended and protected in order to continue to carry out their task.

While the fence also marks community borders and satisfies the desire for safety, it encloses a universe in every sense of the word, and, like a reliquary, a metropolitan tèmenos consecrated to the goddess Nature, tries to shelter it from a civilization that continually tries to destroy it.

Among the grids of the city, these vital little Edens try to make room for themselves, not simply green areas, but gardens to all intents and purposes. For their “beauty, utility and health”, in the dramatic environmental conflict in which they attempt to survive, they are a valuable asset that deserves all the care and attention possible.

GUERRILLA GARDENS
NYC Community Gardens

Photography: Michela Pasquali

The community gardens of Loisaida are today an important occasion for reflecting on a new and different conception of nature and green urban spaces.

“new and refreshing local identity can be achieved by exploiting the immediate and the readily available”

Paul Finch

Photography: Fabrizio Carola

Bold Approaches, Measured Architecture

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4. Term applied from 1915 to a commonplace prefabricated object isolated from its functional context and elevated to the status of art by the mere act of an artist’s selection. Unlike most types of Objet Trouvé, of which it can be considered a sub-category, it is generally a product of modern mass production, and it tends to be presented on its own without mediation. In its strictest sense it is applied exclusively to works produced by Marcel Duchamp, who borrowed the term from the clothing industry while living in New York, and especially to works dating from 1913 to 1921. Duchamp envisaged the ready-made as the product of an aesthetically provocative act, one that denied the importance of taste and which questioned the meaning of art itself. (Matthew Gale) From Grove Art Online © 2009 Oxford University Press - http://www.moma.org/collection/theme.php?theme_id=10468
5. Term applied in the 20th century to existing objects, manufactured or of natural origin, used in, or as, works of art. With the exception of the Ready-made, in which a manufactured object is generally presented on its own without mediation, the objet trouvé is most often used as raw material in an Assemblage, with juxtaposition as a guiding principle. Prior to the 20th century unusual objects were collected in cabinets of curiosities, but it was only in the early 20th century that found objects came to be appreciated as works of art in their own right. (Matthew Gale) - From Grove Art Online © 2009 Oxford University Press - http://www.moma.org/collection/theme.php?theme_id=10135
6 Germano Celant, Arte povera: appunti per una guerriglia “Flash Art”, n. 5, November-December 1967
7. Frank Gehry’s Cheapscape are one of the possible expressions of made in situ projects in industrialized nations, where the materials available on site are often found in backyards. In any case a de-contextualization, but more by way of Objet trouvé assemblages than a ready made process.

by Dario Aureli.
PhD, architect, Dario Aureli lives and works in Rome where he combines professional practise and research. Co-founder of the “4 Cantoni” research group, he got results and awards in various design competitions as partner of Anselmi Attiani architects firms. In 2007 he began collaborating with the University of Roma Tre, contributing to some of their publications. In 2011 he published the volume “Lo spazio pubblico nella città multietnica” with Aracne Editore.

The Technological Choice as an outlook on the world

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by Javier Mozas Lérida
Architect and Urbanist, Co-founder of the magazine Tecnología y Arquitectura, published by the Basque Government Board of Architecture, Dirección de Arquitectura del Gobierno Vasco. Currently edits a+t magazine of architecture and technology. Co-author of Guide to Architecture Vitoria-Gasteiz, and of various other publications on architecture. He is founder of the a+t research group.

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by Anthony Akubue
Professor of Environmental and Technological Studies at St. Cloud State University in St. Cloud, Minnesota.

Natural Energy and Vernacular Architecture

Excerpted from:
Natural Energy and Vernacular Architecture. Principles and examples with reference to hot arid climates, by Hassan Fathy, edited by Walter Shearer and Abd-el-rahman Ahmed Sultan, and published by Chicago for The United Nations University in 1986

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by Hassan Fathy

Egyptian architect and poet, environmentalist and planner, died on November 30th, 1989. His book Construire avec le peuple, 1972 , published in 1973 as Architecture For The Poor, title given by University of Chicago Press, triggered a world following. It revealed in poignant prose, in philosophical terms and pecuniary detail how he focussed his experience and vision on championing the human right to decent housing for all. Fathy's commitment was to his "ideal clients: the economic untouchables," who live outside the cash economy and to "the billions throughout the world condemned to a premature death for lack of adequate shelter." (Simone Swan, New York 1990)

Warm, Dry, And Noble
by Andrea Oppenheimer Dean
Freelance writer and editor in architecture, design, and related fields. Now is contributing editor at Architectural Record.
Timothy Hursley
Architectural photographer who regularly contributes to the international press.

Three Kinds of Freedom
by Fabrizio Caròla
Born in Naples, he moved to Belgium in 1956 and he graduated at the Ecole Nationale Supérieure d'Architecture in Brussels. Since the sixties he began his experience as a designer in Africa and particularly in Morocco, Mali and Mauritania. He now lives across italy and africa and he focuses on the traditional african's architecture, re-inventing it according to the contemporary needs and to the traditional customs of local people.

Alternative Building Materials: Timless Mud
by Laurence Wilfred Baker (Laurie Baker)
British-born Indian architect. Died on 1 April 2007, at the age of 90 years. After a meeting with Gandhiji he was convinced to come to India, initially as the chief architect of the Mission to Lepers building leper homes throughout India. He has since lived in Pithoragarh in the foothills of the Himalayas building hospitals and schools and in the tribal areas of Vagamon in Kerala before finally settling down in the city of Trivandrum. Had Published by the Centre of Science & Technology for Rural Development (COSTFORD) various Booklets and Writings on low- cost buildings and a Cost-Reduction Manual.

Conversation avec Anne Lacaton et Jean-Philippe Vassal
by Patrice Goulet
Diplômé en architecture en 1978, a travaillé pour les revues Aujourd'hui, Architecture Intérieur Créé, L'Architecture d'Aujourd'hui, Jardin des Modes. Il est l'auteur de monographies sur Jean Nouvel, Jacques Hondelatte, Massimiliano Fuksas… De 1990 à 1999, il a dirigé le département Création-Diffusion de l'Institut Français d'Architecture pour lequel il a réalisé de nombreux expositions et édité un grand nombre de catalogues.

experiences

La botella WOBO
by N. John Habraken
Architect, Director of SAR (Foundation for Architects Research) in the Netherlands, from1965 to 1975, research into and development of methods for the design and construction of adaptable housing. Appointed professor at Eindhoven Technical University, 1967, to set up its new Department of Architecture and serve as its first chairperson. Appointed Head of the Department of Architecture at MIT, Cambridge, MA. 1975-1981. Taught at MIT till his retirement in 1989. Remains occupied with Methods and theory of architectural and urban design. Lectured on these topics worldwide and is the author of a number of books, research reports, and many articles. He is the author of Supports, an alternative Tomass Housing (1962-1972), The structure of the Ordinary (2000), Palladio's Children (2005).

Vernacular Gardens In Manhattan. An History Of Guerrilla Gardens
by Michela Pasquali
Landscape architect, has designed gardens in Italy, Switzerland and the United States. For several years she devoted herself to the study of spontaneous, marginal gardens created in the vacant lots in degraded urban environments. She lived four years in New York, where she studied and photographed the Lower East Side community gardens. She published in 2006 Loisaida NYC community gardens, and from 2008 she edited for the italian publisher Bollati Boringhieri the book series "Oltre il giardino" about gardens and landscape, in which she published the volume "I giardini di Manhattan. Storie di guerrilla gardens".