

JOELHO

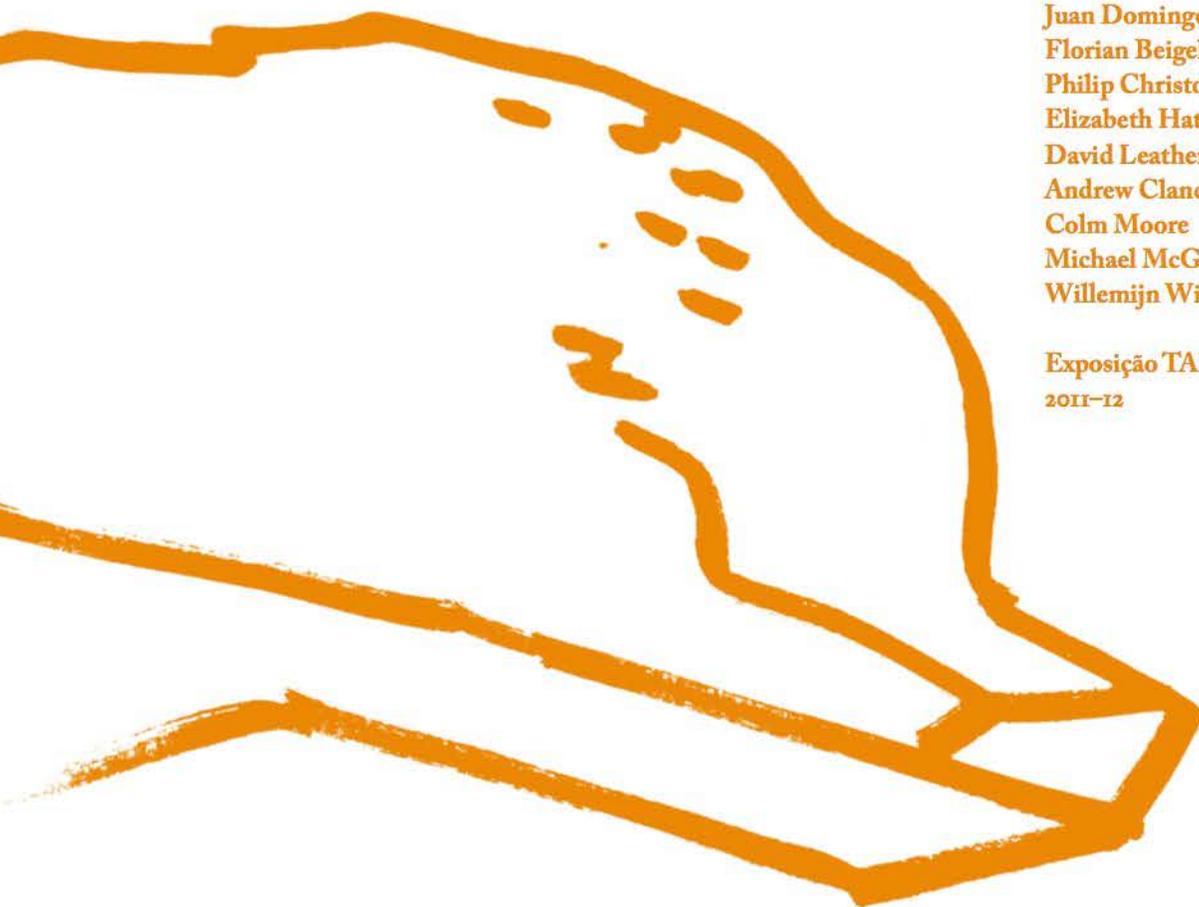
04

ENSINAR PELO PROJETO TEACHING THROUGH DESIGN

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Coordenação:
Paulo Providência
Gonçalo Canto Moniz

Alexandre Alves Costa
Juan Domingo Santos
Florian Beigel
Philip Christou
Elizabeth Hatz
David Leatherbarrow
Andrew Clancy
Colm Moore
Michael McGarry
Willemijn Wilms Floet

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Elizabeth B. Hatz
Synthesis.
**Speculative making as
architectural thinking**



Introduction

Think of making architecture – and you may think of *Kykeon* – the famous Greek drink, taken at the peak of the Eleusinian mysteries. The word means to mix, blend, fuse...(fig.15)

The act of transforming water, barley, herbs, honey, wine and goats cheese into a drink, required from the beginning probably both speculations, tests, observations and unpredictable discoveries.

The act itself gave name to the drink; it was the blending, the physical experience of fusing the ingredients together by mixing that created the wonder, *Kykeon*.

Austrian professor of philosophy Allan Janik investigated reflection as a theory of knowledge in his study *The Silence of Cordelia*. A specialist on Wittgenstein, Janik argues from a series of tests that what he calls silent knowledge constitutes a realm of knowledge that can better be accessed through the synthesising complexity of arts than via calculating sciences. Certain complex things and skills simply seem to have to be acquired by physical experience and exchange, rather than only by words.

For an art as physical as Architecture, there would be no surprise if an equivalent of Janik's silent knowledge would constitute a major element in producing and acquiring new creative knowledge.

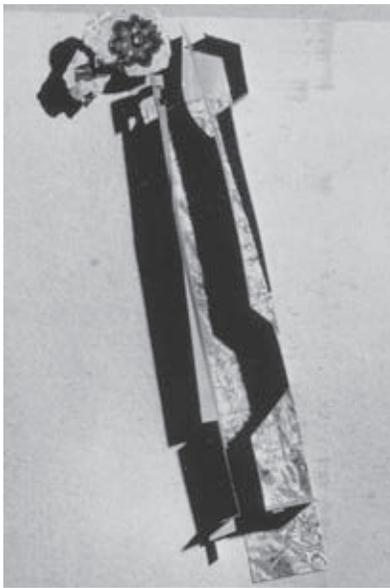
The Swedish Government initiated some 10 years ago a special funding program for research to be developed in art education, so called artistic research. Along with music, dance and visual arts, architecture was able to benefit from this rather bold initiative. For Architecture, it seems to me, this was finally an acknowledgment of the fact that teaching architecture and researching architecture has to be approached also through the means of the making of architecture. A chance to directly test and challenge some of the processes involved in this making. With the other two schools of architecture in Sweden we started AKAD, Academy of Research in Architecture and Design (www.akad.se).

With a few examples from my own programs at KTH and UL Ireland, both in education and research, I would like to propose a discussion around the processes involved in the formation of Architectural Research by Design – and how design teaching may prepare the ground for creative (re)search.

Re-Constructing Space – a teaching program focussed on investigative re-construction of precedents. By a slow and thorough dismantling in drawing and in model – of important works of architecture – or parts of them – possible paths are traced of the complex creative selection processes and design methods involved in the original formation of the work. This type of process is a kind of creative critique through drawing and model.

Inhabiting Infrastructure – the theme of the ground (in the wider sense) as space and primary condition for architectural observation and speculation. It involves ways of addressing site, ground and context. It also involves an active use of the important *in situ* encounter, the deep primary physical experience of architecture and the sensuous

15. Landscape furniture by student D. Holland, placed on Inis Meáin. September 2012.



1. Speculative model study by E. Hatz. Paper, card, wall-paper, old map.



2. Kodak Head Quarters, Gothenburg. Project Architect E. Hatz.

observation of how it is occupied. By re-reading ground as fundamental predicament for design, the process oscillates back and forth between the place of infrastructure and its projection in drawing and model.

Power of the artefact – a search into and use of the architectural object as engine in the design process. This search is both speculative and intuitive. It is a type of discovering by making – to start working before you have a plan – but it is charged with informed curiosity and engaged intuition. As method it may use transformation, diversion, re-reading, juxtaposition/collage, intuitive sketching, craft skills and so on.

Recycling Space – in this state funded Research by Design project, several of the methods are at work in synthesis. Site reading + energy of object = gives attentive transformations of the existing. Existing sites are used as test beds for developing alternative design paths that could hardly be developed within normal architecture practice. Here Research by Design acts in-between and as a type of synthesis of teaching, research and practice, but a synthesis other than the combination of the three – rather a realm of methods in its own terms, drawing experience from the three areas.

In 1999 I became professor at KTH, not through a PHD but through my merits as a practicing architect and my pedagogic experience. This is the same way Peter Celsing and Sven-Ivar Lind got their professorships, hence a long tradition in Sweden. As a start I had a quite experimental education at the AA and from there I moved practically directly to building – and I was dying to build – the first project being for 11000sqm of head offices and laboratories for Kodak and I was a project designer aged 26. I largely developed this scheme in models and sketches. (fig.1, 2)

As a lucky student to the late Robin Evans, I came across his excellent article *Translations from Drawing to Building*. He talks about the early works by James Turrell, Afro Proto from the late 1960's, where you enter rooms that by means of light create visual spaces within them. These spaces, as Evans points out – have not been formed through the drawings – they are as exciting as a plumber manual, just directions for how to build – no, they have developed from continuing and persistent observations of space. The remaining of the article is on the other hand precisely about how architecture may be created through the drawing, as it often is.

The persistent and fluid mental – and physical – transportation between building and drawing is one of the most difficult but also one of the most potent methods of evolving design competence. We experience space – yes, but how is it made?

Re-constructing Space – speculative observations

Re-Constructing Space – is a teaching program focussed on investigative re-construction of precedents, a slow project that requires persistence as well as speculation. By a slow and thorough dismantling in drawing and in model – of important works of architecture – or parts of them –

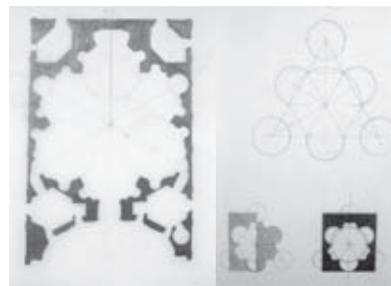
possible paths are traced of the complex creative selection processes and design methods involved in the original formation of the work. This type of process is a kind of creative critique through drawing and model. Here a student has looked at Sant'Ivo della Sapienza by Borromini and analysed the geometries at work in the sophisticated play of volumetric dynamics where triangles meet circles. (fig.3, 4)

How is the intersection between these two elements? After analysis she discovers the point where the circle is not reduced to niche, nor cut off as enclave – but precisely enters in a type of active, wrestling relationship with the triangular intersection. This is what creates the dynamic choreography of the spatial composition.

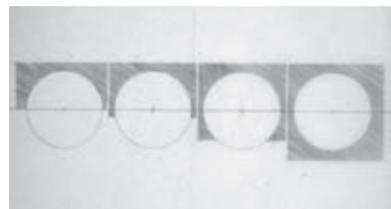
Later this student uses her discoveries of precision, measure, play of mass and nuance when she designs a chapel for Riddarholmen Church in Stockholm (fig.5, 6); how thin or large need the slots be, in order to make this space both feel enclosed and half dissolving through its light gaps? The same building may be studied over and over again; the way Borromini has the same surface transform itself from concave to convex in the cupola, how the vertical layers are seamlessly stacked, and so on.

Also without first seeing the space, the study may anticipate spatial awareness and formulate architectural criteria through design. The study of Egyptian architecture by a student from The Royal Academy in Copenhagen in a similar program for my colleague Anders Munch, lead to a fascination of two parallel architectural themes ...the unique, singular element, as in the pyramid, and the effect of sequential space. By careful drawing, a *haptic* understanding of these parallel an almost opposite themes, brought the student to developing an architectural artefact that contained and combined the two in one – a series of diminishing boxes in wood, like a Russian doll, that could be pulled out to a sequence. This search is actually already pregnant with architecture somehow. Another search stayed on the contrary very long in the observation, insisting on drawing only what could really be seen from a crucial point in the breakfast room in Sir John Soane's museum in Lincolns Inn Fields in London... By reducing the drawing to what could be mastered by the eye another awareness of surface, plane and visual fields developed slowly. But also, the question arouse about the impact of that which could not be seen by the eye. Only the drawing could have the power to bring forth these blanks where the intelligent interrogation can begin. Students are individuals and only if education contains an element of research – which also means depth, can one hope to unleash unpredictable discoveries.

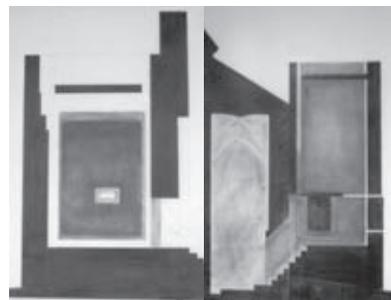
Even to discover that simple old window profiles, apart from being read as figurative and decorative, in reality have a decisive effect on reflecting and modulating the light, can only be done if enough time and focus is allowed to observe this and *feel it* with your eyes. The alternating study of space or object and drawing is key in this process. It cannot be made from books and images alone.



3. Study of Sant'Ivo della Sapienza of Borromini by student A. Rhedin. E. Hatz program *Ultima Casa* at KTH.



4. Study of Sant'Ivo della Sapienza of Borromini by student A. Rhedin.



5. / 6. Project for a chapel at Riddarholmen church by student A. Rhedin. E. Hatz program *Ultima Casa* at KTH.

Inhabiting Infrastructure – investigations of ground works

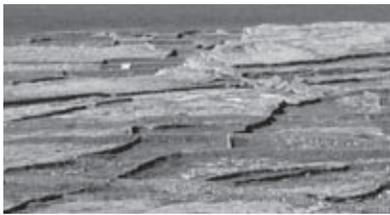
The next investigative field I would like to present is our work on the Infrastructure of LAND at UL, Limerick. This is a way of bringing ourselves to design, before we even think building, into the place itself, its conditions, its characters, its structures and its secrets. The Nasca Indians designed in the land, structures that could not be seen from land and could not be mastered by the eye. The work of the land is more than just creating our way to live; it is to place us in this world as beings. The long and persistent presence of human constructions on the Irish ground has heralded the contemporary condition of blurring the boundary between “city” and “landscape”, between town and country. Slightly incisively, one could argue that rather than “Cities” in Ireland – there are just more or less dense urban landscapes. It is an urbanized island with rural cities. (fig.7, 8)

Instead we may find the idea of *civitas* lying embedded in a fort on a cliff side, in the myriad of stonewalls enclosing an arid plain in quarters. Hence the anachronistic term *townland* to designate territorial frameworks in the Gaelic environment. The bails, “townships” were units of land often linked to lineage, sustaining a self-contained economy. The huge expansion of urban developments has created a double myth; a romanticized idea of landscape and a striving towards absolute separation of the idea of landscape from the idea of the urban.

In Ireland this myth is particularly odd as there is practically no wilderness present. The Aran Islands present a compact figure of man-made landscape (fig.9). This forms a powerful construct where the Labour for survival, defence and struggle for social dignity laid the foundation of this built architectural phenomenon. Geology is the prerequisite. Culture and language are the context. Contemporary life and economy are the challenges. To investigate this deeper, a parallel search was orchestrated whereby we both in traditional research groups would investigate areas like agriculture, and nature resources, building patterns, walls and field patterns, infrastructure and services and so on – and at the same time study these areas through speculative investigative models. (fig.10)

The many layers of architectural interventions became apparent, as did the interaction between these different realms of actions. The studies of precedents helped in gaining a comparative investigation of the constructions that form the nature of this particular place. The process motivates a synthesising way of managing place, as land structure, as situation, as ground condition with its climatic possibilities, as layers of inhabitation cultures.

What is present is of some extraordinary nature; delicate and extreme at the same time. Tourism with its levelling tendencies may have to reinvent itself in such environments. Diminishing agricultures and fishing economies have to be rediscovered, reconfigured or left to history. The poetic of the essential and the culture of the ordinary, stand side by side with harsh climate and acute infrastructural conditions.



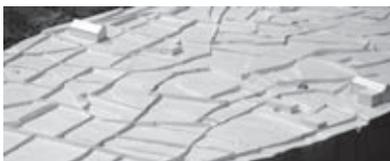
7. Inis Meáin walls, Aran Islands, Ireland.



8. Ballyvaughan Tower House, Galway, Ireland.



9. Inis Meáin walls, Aran Islands, Ireland.



10. Interpretative model by student E. Kelley, Saul — Landworks 2010.

Nothing is obvious except the uniqueness of the place and its vulnerable position. Architecture can take its beginnings in such works.

Here the students were presented a double task:

To design a piece of Landscape Furniture that would respond to an identified ordinary need in the local life and to define its location. The aim was to cast one or two of these in concrete and have them placed on the island, with the help of Ducon Concrete in Cork, the islanders and Galway County Council. And to propose a site and a brief that would address one or some of the issues facing the island and its survival in a contemporary society, respecting its unique qualities. The physical resistance of the material in the model search brings in a dual discipline, that of attentive negotiation and that of focussed speculation. We used metal work, plaster, card and wood. (fig.11, 12)

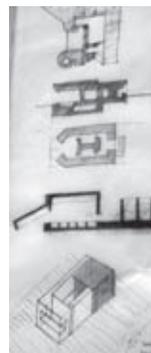
To anchor the design work in the technical conditions of making architecture, the theme of concrete as building material ran through the whole year, with lecture series, workshops and studies. The choice of concrete was logical to the underlying theme of infrastructure as architecture and architecture as infrastructure. A material used in virtually all buildings in Ireland. Cooperation with professionals in this area has been decisive for the results. The process was closely linked to design work and precedent studies. (fig.13, 14)

Three tables with benches designed by one of the students, chosen by the islanders, will be placed in crucial locations and here is the first one installed this summer (fig.15). It is a process that enhances the close reading of the existing in its complex synthesis of use, character, structure, and space. The land works theme is at the foundation of it all, the discipline that ties all to a field of research. But the process is *haptic* as well as intellectual, this is important. The subject traces the perishable and temporary, almost feather light architectural interventions... set against the more permanent encroachments on this land.

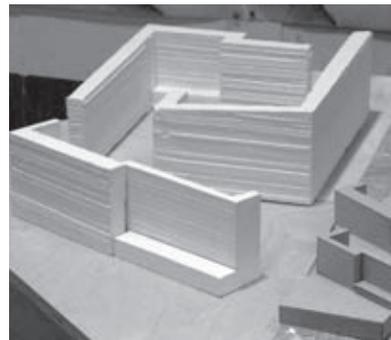
Inhabiting Infrastructure – is the theme of the ground (in the wider sense) as space and primary condition for architectural observation and speculation. It involves ways of addressing site, ground and context. It also involves an active use of the important *in situ* encounter, the deep primary physical experience of architecture and the sensuous observation of how it is occupied. By re-reading ground as fundamental predicament for design, the process oscillates back and forth between the place of infrastructure and its projection in drawing and model. The idea is to encourage the developments of methods that constitute a way of expanding and challenging architectural practice beyond its own traditional limits, which we find is one way of defining research.

Power of the Artefact – Recycling Space and the architectural object as search engine

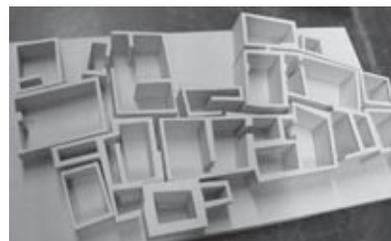
There is a last point that I want to make here, which is about the power of the artefact – as a search into and use of the architectural object as engine in the design process. This search is both speculative and



11. Sketches for landscape furniture by student B. Moriarty, Saul — Landworks 2010.



12. Models for landscape furniture by student B. Moriarty, Saul — Landworks 2010.



13. Model of Chatal Hüyük by student M. Deneen, Saul — Landworks 2010.



14. Models for landscape furniture and landworks by student D. Holland, Saul — Landworks 2010.



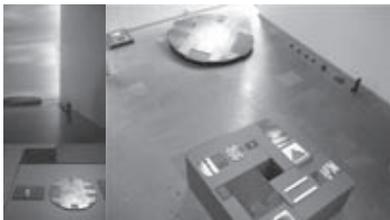
15. Landscape furniture by student D. Holland, placed on Inis Meáin. September 2012.



16. Views of Edinburgh.



17. Views of Edinburgh.



18. / 19. *Permanence Project II*, E. Hatz. Lund Art Hall, *Recycling Space*, Lund 2006.

intuitive. It is a type of discovering by making – to start working before you have a plan – but it is charged with informed curiosity and engaged intuition. As method it may use transformation, diversion, re-reading, juxtaposition/collage, intuitive sketching, craft skills and so on.

In architecture we are sometimes surprised by the way a single building or even a part of a building manages to change completely its surrounding space – through its power as singular (*fig.16, 17*). The projects I have been involved in have gradually led me into my own research theme *Permanence*, which is in a way a provocation. The theme of permanence highlights a dilemma in art in general and in architecture in particular, namely the dichotomy between architecture as object/artefact and architecture as event/process. This theme is one of four in a research project team named *Recycling Space*, funded by Swedish Government as so called artistic research. The project was presented at Lund art hall with a field case-study based on the recently abandoned military campus P10 in Strängnäs, Sweden.

Klas Ruin's study, *A tougher complexity*, is an exploration and dismantling of the Autonomous Complex – on a general level the over-ruling structure studied as a pattern ordering space. This is superimposed by other cultural and contextural orders with the aim of challenging our notions on how the space may be viewed, occupied and transformed.

Roger Spetz saw that formally, the campus buildings might be represented as caricatures, as types and individuals. These caricature portraits unravel candid properties and conditions, that otherwise risk overshadowing by conventional institutional interpretations.

Pål Røjgård carried out a basic analysis of the borders and juxtapositions of the campus, through studies of spatial extensions and limits. The Figure or the Treasure contains a resistance that is tested against the expansion of the structure or the borderline between organism and system.

In my own part, by focussing *infrastructure* – as embracing and more permanent entity with its individual transitive details – the vast ground plane of the area was explored as built mass. What normally is seen as void, service or communication space was dealt with as built solid. By identifying bindings that tie the area into one whole, utilities are investigated as active formal space-agents and the level of permanence in infrastructure is tested. (*fig.18, 19*)

A dominating task ahead are alterations and completions in this complex existing environment which, comprising the half – old, half-new, merely escapes evaluation and classification. This field has long-term influence economically, environmentally, socially – and architecturally. In focus are the form – related notions possible in this task and how, in this field, unveil and create new spatial relations in dialogue with a wider cultural environment. Our processes are both similar and different in the way they use artefact versus text. In the case of the *Permanence* part which here investigates the architectural

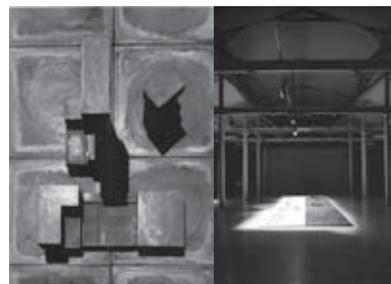
potentials in the infrastructural level of the campus, the artefact is primary to the investigative process. The ground is explored as physical artefact first and drives the analysis, rather than the other way around. This method was developed in studio work and this is why the relation between studio and research can very well develop in a quite open relationship. Research as critique of practice is a natural ingredient in any architectural teaching anyway.

The first time this was tested by us at KTH was in the first seminar on the Permanence project, entitled, "endlessness, movement, permanence" with three different projects commented by professor Carsten Juel Chrisitansen from Copenhagen, philosopher Fredrika Spindler from Paris and writer and cultural attaché Aris Fioretos, then based in Berlin. The scene was the new platform for art and architecture in Stockholm, Fargfabriken. (fig.20, 21)

The theme of permanence was explored departing from studies of the mastaba, as one of humanities earliest ground structures, combined with simple, archetypal architectural elements as the door/ the table, the floor/bed/bench, the wall/throne/chair. The resistance of the material, cast iron, forced a speculative and anticipating process of work, as handling permanence through the sheer weight of matter. And here we had better quote writer Aris Fioretos as he comments the work at our symposium at The Paint Factory/Fargfabriken:

Our concept of permanence is linked to a notion of resistance. What is permanent defies the destructiveness of time, endures the changing circumstances of our existence, survives the various vicissitudes of life. Our concept of a sketch, in contrast, includes an idea of something unfinished, passing, unstable. Whereas the former concept tends to emphasise the importance of space and to ignore that of time, the latter has a tendency to put its emphasis on time and overlook space. What happens if one imagines assembling permanence and the sketch in the very field where these concepts have perhaps their most obvious applicability – that of architecture?

Elizabeth Hatz's project "Permanence: Object as figure and form – double exposure, fusion and transversal reading of architectural layers" suggests one possible answer. With its origin in prehistoric and ancient cultures, in which rites and symbolic objects were transposed into an architecture with claims on permanent durability, she explores the double function of permanence: immortalising an object or building as well as making explicit an intention. Converted to a model the iron suggests a 'heavy' but nameless architecture, stamped by previous usage and, so to say, 'pregnant' with future potential. In such a way, Hatz's project becomes



20. / 21. Permanence Project I, E. Hatz. Fargfabriken, Endlessness, Movement, Permanence, Stockholm 2004.



22. *Tracing Paper Mastaba*, E. Hatz, ev+a 2010 — Matters, Limerick 2010.



23. *House 40*, Nobel Industries, Stockholm, Designing, Project Architect E. Hatz.



24. *Kodak Head Quarters*, Gothenburg, Designing Project Architect E. Hatz.

Photo credits

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20, 21 — by G. Smoliansky;
2, 24 — by Arx foto.

an example of potential architecture. Embracing previous waste materials as well as future applications, it explores the potential of social space. The fact that the history of architecture is anything but innocent is a prerequisite for this investigation – architecture, in other words, is a tradition and activity from which previous practices cannot be excluded. Her project therefore is not naïve. It may strive towards a new – or perhaps second – beginning, based not on innocence but on experience. Still in the state of conception, this permits the sketch to seem provocative and the provocation to appear permanent (...)

Point of departure for a parallel process is one of numerous left over anonymous spaces of the industrial era, a place where the original intention is lost or over-run by time. Yet it is physically present and the very loss of intention may indicate coming applications, if explored through the permanence of its characteristics. A passageway between two buildings, a concession to a flaw, and running obliquely both vertically and horizontally, is explored in the geometry of its three light axis – this gives a new artefact, pregnant with its own solidity. It is nameless, and has no use but is the distillation of architectural potentials. It evokes memories, spaces, uses, possible social spaces, and is yet beyond program and definition.

The *mastaba* follows through, also explored in tracing paper found in an abandoned engineers office, here as a joker given from the curator to the ev+a exhibition 2010 *Matters*. (fig.22)

To end it needs to be said that it is in the work with my own buildings that most of this has emanated. One of them is *House 40* in Stockholm for Nobel Industries, an odd project transforming a 1940's factory into a laboratory through expansion of a language of permanent resistance. And another is *Kodak Head Quarters* with laboratories outside Gothenburg, both designed with Berg Architects. (fig.23, 24)

So, practice of architecture, teaching and research are here different elements of the same search ...at the best they may provoke, stimulate and challenge each other to deeper levels of understanding, experiencing and production.

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