

Case 4: Reviewing Making-Visible
The Anxious Prop
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Stattbad Wedding
Gerichtstr. 65, 13347 Berlin

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Boris Kajmak, Anna Kostreva, Miodrag Kuc, Fotini
Lazaridou-Hatzigoga, Pia Marais, The MIT Museum,
Olivia Plender, The Product, Hans-Jörg Rheinberger,
Carrie Roseland, Salottobuono, Gabi Schillig,
and George Stiny.

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Front cover: Paul Klee's Palm-Leaf Umbrella, from
Shape: Talking about Seing and Doing by George Stiny,
MIT Press 2006

Back cover: Illustration of Generative Specification, from
Shape Grammars and Generative Specification of Paint-
ing and Sculpture by George Stiny & James Gips

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*This feuilleton is both a sporadic publication and a loose collective operating under the aegis of
The Anxious Prop. That which is common is the desire to work with two looping, yet sequential
parameters: 1. We are into the labor of producing forms, shapes, and figures as a method to explore
collective knowledge by challenging the discourse of digital fabrication; 2. These forms, shapes,
and figures emerge with the disposition to be activated, triggered by their conditioning as theatrical
objects and their consequent instrumental or anthropological role in the world.*

editorial addendum: We would like to extend our sincere apologies to Bjarke Ingels for our
lapse in not crediting his contribution in the masthead of our previous Case 3: The Black Swan
Issue. BIG provided not only continuous inspiration, but also the image ‘*Found in Translation*’
which was central to the topic of the Black Swan. Corrections to this lapse will occur on the
website, digital download, and any other further editions of Case 3.

Caitlin Berrigan is an artist who works in sculpture, video, and participatory actions to open a space of potential for confronting uncertainties within the context of social issues. She holds a Master's in visual art from MIT and a B.A. in art history and production from Hampshire College. She was an Agnes Gund fellow at the Skowhegan School of Painting & Sculpture and artist in residence at PROGRAM in Berlin. Her work has shown at the Whitney Museum, Storefront for Art & Architecture, among others.

Luis Berríos-Negrón focuses on visual arts, material economies, and mass customization through the lens of architecture. He has received various awards, including the Parsons-Michael Kalil Award for Smart Design and the Massachusetts Institute of Technology-Schnitzer Award for the Visual Arts. He lives and works in Berlin.

Jan Bovelet is an architect and philosopher; he studied architecture and philosophy in Kassel, Cologne and at the Technical University, Berlin. In 2009 he completed his studies in architecture (Dipl.-Ing.) and philosophy (Mag.). Bovelet was a scientific contributor to the Shrinking Cities project and at the Stiftung Bauhaus Dessau. He is currently working with urbikon in Berlin and is thinking about his dissertation.

Rick Buckley is an artist and curator born in Essex in the United Kingdom. He lives and works in Berlin.

Eric Ellingsen Versions of Eric's bio can be found at: www.speciesofspace.com and www.raumexperimente.net. As a bio-space alternative, a biopoem: This is how you will go. On the sidewalk, in a park, beside the flowers you could never name, in the hotel room with the tv on, in the restaurant restroom, on the highway in the passenger's seat, taxiing on the runway. This is how you will go: using the flutter-kick, sink-holing a few thoughts as kick-stand props, mirroring to make what is visible seen, modeling a meter stick for longing. You will go knowing whispers also travel at the speed of sound, that water is always one-to-one scale. Don't go slipping-up when toe-tipping

over memories banana peel floor. Ditching the philosophy of been there done that before is recommended. This is how you will go into the thin-air dance of hereness, learning how a wheel rolls with it when slipping away.

Tim Gough leads the third year Design Studio 2 at Kingston University School of Architecture and Landscape, and lectures in the history and theory of architecture. He is partner in Robertson Gough, an artist-architect collaborative based in London. His recent research interests include phenomenology, the work of Gilles Deleuze, and the Roman baroque. Published papers include *Cura*, an essay in *Curating Architecture and the City* (2009); *Let us Take Architecture* (publication and symposium at the Wordsworth Trust with artist Lucy Gunning, May 2007); *Non-origin of Species – Deleuze, Derrida, Darwin*, essay in the journal *Culture and Organisation*, Issue 4 December 2006.

Mendel Heit is a product designer living and working in Berlin. He primarily works on research projects, as well as co-designing and cooperating with other agencies. His works go towards interaction, 3D printing, new (generative) shapes, innovative concepts, intelligent and sustainable solutions, hardware hacking as well as DIY/open-source ways of thinking and making. He has worked with Coordination Berlin, ITD Braunschweig, and ART+COM. And also worked at the Jerszy Seymour Design Workshop on several products, exhibitions, and art shows.

Alexandra Hopf is an artist based in Berlin. She studied at the Kunstakademie Düsseldorf. Her field of research, among others, deals with the reconstruction of lost objects that were once shown in modernist exhibitions. Various media are involved to re-enact the visions of former avant-garde movements. Using fiction and facts she examines how historical layers are still active underneath the soil from where our contemporary visions arise. Selected exhibitions include *Magic Show*, Hayward Touring Exhibition, UK, *Scorpio's Garden*, Temporäre Kunsthalle Berlin, International Biennale of Contemporary Art (IBCA), Prague.

Boris Kajmak is an interdisciplinary artist whose works explore social realms through material, play and language. He treats value systems as if they are found objects. His conceptual approach has generated sculpture, design and architectural pieces that have been exhibited internationally since 1999. After graduating in printmaking at the Academy of Fine Arts, University of Mostar (BIH) in 2004, he obtained a Masters in Fine Art at Central Saint Martins College of Art and Design in 2005, London (UK). He currently lives and works in Berlin.

Anna Kostreva is an architect and urban researcher living and working in Berlin. She studied architecture at The Cooper Union in New York City, where she became interested in the forces that move cities. After graduating, she received a Fulbright grant to investigate how youth navigate and produce post-apartheid urban space in Johannesburg, South Africa. She is currently doing research on the multiple Berlin walls and how they have been the generators for urban forms.

Miodrag Kuc is an interdisciplinary artist and urban theorist trained as architect/urban planner in various cultural settings. His work explores role of ephemeral structures in uncertain conditions and spatial appropriations of marginal social groups. Using an array of communication tools to facilitate participation and micro-politics of informal social groups, Miodrag Kuc investigates potentials of temporary use in integrative urban development. He is the founder of the movement ParaArtFormations. He is currently working on his PhD at Bauhaus University in Weimar (Department of Urban Studies and Social Research), observing innovative nature of informality in Berlin.

Fotini Lazaridou-Hatzigoga is an architect and researcher. She studied architecture at the Aristotle University of Thessaloniki, Greece, and at Harvard University on a Fulbright Scholarship. In 2006 she moved to Berlin and co-founded PROGRAM – initiative for art and architecture collaborations, a project aimed at diversifying the ways we understand and

make architecture through exhibitions, research projects, workshops, lectures and residencies. Alongside PROGRAM, Lazaridou-Hatzigoga is engaged in collaborative projects that explore the ways we relate to each other and our surroundings.

Pia Marais grew up in South Africa, Sweden, and Spain. She studied sculpture and photography in London, Amsterdam, and Düsseldorf before going on to study film at the German Film & Television Academy (dfbb) in Berlin. She made several shorts, including *Loop* (1996), *Deranged* (1998), *Tricky People* (1999), and *17* (2003). After several engagements in the film business as a casting director and assistant director, she made her feature debut with *The Unpolished* (*Die Unerzogenen*, 2007), which screened at many international film festivals and won various prizes, including the Tiger Award in 2007 in Rotterdam. Her second feature film *At Ellen's Age* (*Im Alter von Ellen*, 2010) was developed in the *Résidence du Festival de Cannes*.

The MIT Museum web.mit.edu/museum/

Olivia Plender is an artist based in Berlin. Her research based practise interrogates the ideological framework around the narration of history and more recently changing attitudes to education and value in the contemporary knowledge economy. In an installation for *Altermodern: Tate Triennial 2009*, Tate Britain she focussed on the Kibbo Kift Kindred; a British youth movement existing between 1920-1951, who were radicalised during the economic crisis of the 1930s into a nationalist monetary reform movement. Meanwhile a touring curatorial project *There is No Alternative* (TINA) last shown at Konsthall C, Stockholm explores the effects of the financial system on the realm of representation in the format of a group exhibition and an upcoming publication.

The Product is a Berlin-based spatial and media related design studio. Over the last years the studio has focused on interactive installations, augmented objects, physical interfaces, and generative systems. The

designs are located at the interface between the virtual and the physical world. More than just an investment in digital media itself, the studio is interested in its intrinsic properties: the responsive, the interactive, the procedural, the volatile, the many, the precise, the playful, the narrative... iThe studio strongly believes that technology can be transformed, by sharp thinking, technological competence, and formal sensibility, into a meaningful, warm and emotional something.

Hans-Jörg Rheinberger's research lies in the history and epistemology of experimentation in the life sciences. By bridging the gap between the study of history and contemporary cutting-edge sciences, such as molecular biology, his work represents an example of transdisciplinarity as emerging in the present knowledge-based society. The Swiss-born scientist studied philosophy and biology in Tübingen and Berlin, Germany. He received his M.A. in philosophy in 1973, his Ph.D. in biology in 1982, and his habilitation in molecular biology in 1987. Since 1997, he has been a Scientific Member of the Max Planck Society and Director at the Max Planck Institute for the History of Science in Berlin.

Carrie Roseland is an artist working in diverse media. Since 2006, she has been increasingly involved in collective strategies of production and action, particularly experimenting with approaches to collectivity made possible by new technologies for digital communication and re/production. She has worked in the groups BULL and Piratbyran and initiated a series of video viewing events in Berlin called Video Club 1115. [BULL (Best Use of Limited Liability) was a performance and video collective which formed in 2006 around the project "Mascot for Soft Soul". Members were Virginia Preston, Vladimir Miller, Philip Radek Muniak and Carrie Roseland.]

Gabi Schillig studied Architecture at the University of Applied Sciences Coburg and completed her postgraduate studies in Conceptual Design with distinction at the Städelschule in Frankfurt (Class of Prof. Ben van Berkel). She worked for several

architectural studios in Berlin, Sydney, Frankfurt and Coburg before establishing her own research and artistic practice in Berlin. Since 2007 she is teaching at the Berlin University of the Arts at the Institute for Transmedia Design and has lectured and taught internationally. Currently she is preparing her dissertation at the UdK Berlin, Institute for Art History and Cultural Studies / Prof. Dr. Susanne Hauser. Gabi received numerous fellowships and prizes - amongst others, a resident fellowship at the Akademie Schloss Solitude Stuttgart, the New York Prize Fellowship 2008-09 by Van Alen Institute New York. In 2011 she will be a Resident Fellow at the KHOJ Artists ' Association in New Delhi.

Salottobuono was born in 2005 as a collector of research experiences and design production. It investigates the urban space, codifying cognitive devices and triggering transformation strategies. Topics, challenges and programs are occasions for diagrammatic analyses and elaboration of paradoxical visions. Critical nodes, discontinuities and weak points are exasperated through the formulation of visionary objects and performative practices based on non-authorial concepts and minimal rationality. Salottobuono is grounded in intellectual exchange and relational attitude built around a stable work group.

George Stiny is a theorist of design and computation at The Massachusetts Institute of Technology. He joined the Department of Architecture in 1996 after fifteen years on the faculty of the University of California at Los Angeles. Educated at MIT and at UCLA, where he received a PhD in Engineering, Stiny has also taught at the University of Sydney, the Royal College of Art (London), and the Open University. Stiny's particular contribution to the field has been in the invention and refinement of the idea of shape grammars, and his work stands as a critique of the vast majority of existing computer-aided design systems. He is currently working on a book on shape to be published by the Cambridge University Press and is the author of Pictorial and Formal Aspects of Shape and Shape Grammars, and of Algorithmic Aesthetics: Computer Models for Criticism and Design in the Arts with J. Gips.



Fukushima makes visible: a compilation of visualizations

by Jan Bovelet

Except for the images concerned with the incident in Fukushima, all images including their captions are taken from Rheinberger, Hans-Jörg. "Making Visible. Visualizations in the Sciences - and in Exhibitions?", MPG Preprint 399 (2010): 9-23. [Download: <http://www.mpiwg-berlin.mpg.de/Preprints/P399.PDF>]

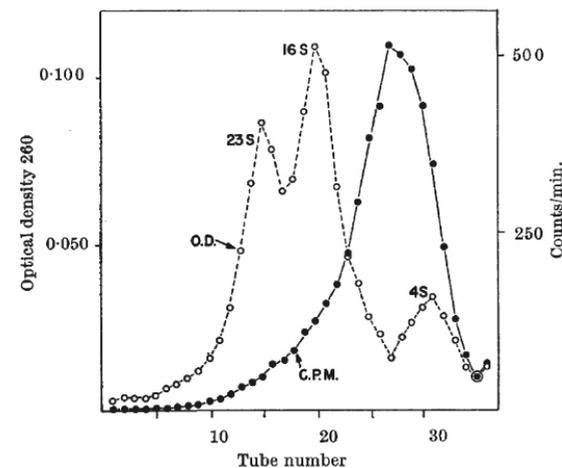
Data visualization is not identical to making-visible: the former operates in consolidated and publicly shared spaces of knowledge, whereas the latter is involved in the generation and constitution of these operational spaces. The representation of mathematical data by means of a curve for example is well established in today's scientific paradigms, but at the time when the Cartesian coordinates were introduced as a scientific method and instrument, they opened up a new space of representation and allowed for new ways of analytical thinking by their specific mode of making-visible. Modes of making visible are - to borrow a term from the political realm - epistemic regimes in that they predetermine our knowledge economies and rule our exchange of arguments.

As Hans-Jörg Rheinberger has remarked, it "is probably not too far-fetched to postulate that making visible something that does not manifest itself directly and therefore is not immediately evident - that is, does not lie before our eyes - is the foundation and at the same time the foundational gesture of the modern sciences. Thereby, the procedures of visualization are always already connected with various forms of intervention into that which is to be represented and of manipulation of its parts. It is exactly for this reason that such a tight connection has existed among knowledge, forms of knowing, and technology throughout the history of modern scientific knowledge production. One could even speak, in this context, of a technological constitution of natural scientific knowledge production. That is to say, there resides, in the innermost of the scientific forms of knowledge acquisition, a technological momentum. It manifests itself, insofar as it is the product of an instrumental intervention, as a visible trace that is left by this very intervention.

It is this concept of trace, or primary graphism, that we can take here as a starting point. The trace is a form of manifestation that has not yet become either writing or picture in their traditional forms. The trace precedes both of them." [Making Visible, p.9]

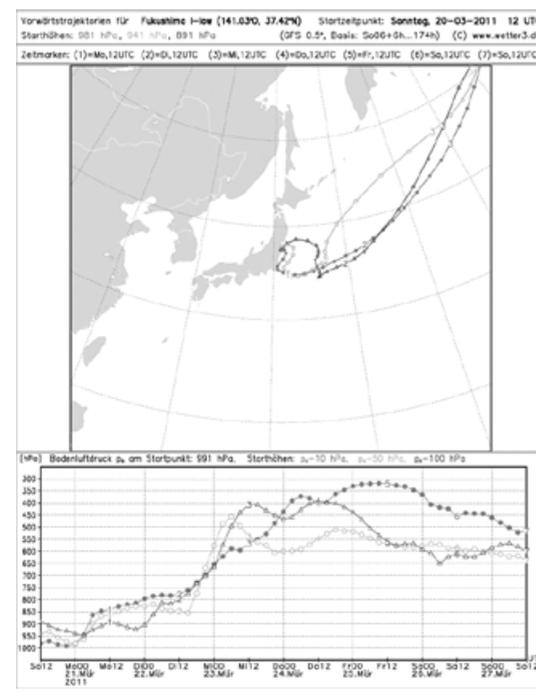
Exploring the modes of making-visible in biology from an epistemological point of view, Rheinberger has suggested a tentative "typology of scientific visualization": "First, there are what I would like to call procedures of compression and of dilatation - we can also bring these together under the notion of activities of configuration. Second, there are procedures of what can conveniently be called enhancement. And finally, there are procedures of schematization." [Ibid., p.9] He leaves open the question whether "three-dimensional computer modeling" [Ibid. p.13] has to be counted as a forth genuine mode of making-visible.

Currently we are confronted with a continuous stream of images which are aiming at making visible the events in Fukushima and its consequences. Understanding how they function is crucial for the judgment of the political actions they induce. Taking a few images from Rheinberger's article as a point of methodological reference, a few arbitrarily selected images out of the Fukushima media coverage are shown to emphasize the importance of understanding their notational mechanics in order to judge their political implications. They are no 'objective' illustration of facts; quite the contrary: they make-visible issues in the first place and need to be politically negotiated, as for example the definition of the harmful dose rate of radiation determines its subsequent appearance in e.g. maps and thus generates facts.

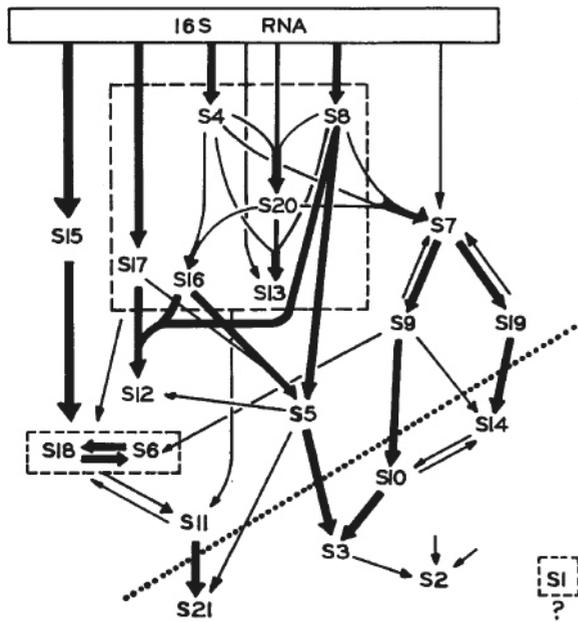


Sedimentation of unstable RNA of *Escherichia coli* pulse-labeled with radioactive uracil. The RNA was centrifuged through a sucrose gradient for 10 hours at 25,000 rpm and then fractionated. O.D.: optical density; 23S: RNA of the large ribosomal subunit; 16S: RNA of the small ribosomal subunit; 4S: transfer RNA; C.P.M.: counts per minute.

Gros, François, H. Hiatt, Walter Gilbert, Chuck G. Kurland, R. W. Risebrough und James D. Watson, »Unstable ribonucleic acid revealed by pulse labelling of *E. coli*«, Fig. 8, in: *Nature* 190, 1961, pp. 581-585.

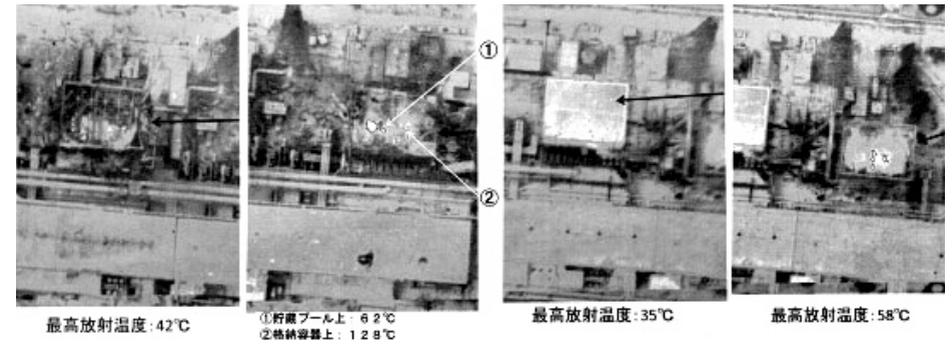


Projection of wind trajectories for particles at different heights from 21st to 27th of March 2011. [www.wetter3.de, 20.03.2011, http://www2.wetter3.de/traj_spezial.html]



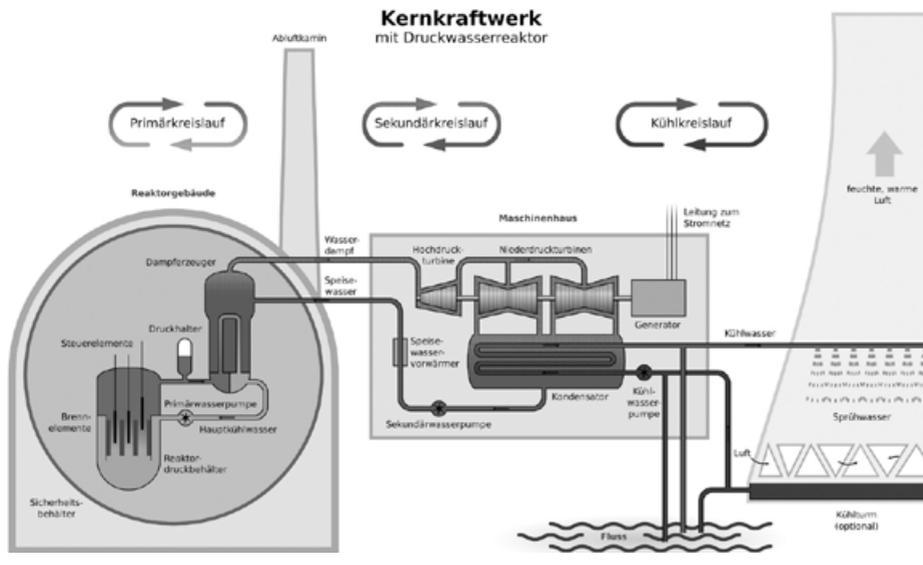
Assembly map of the small ribosomal subunit of *Escherichia coli*. The arrows between the proteins represent the different influences of one protein on the binding of another.

Nomura, Masayasu und William A. Held, »Reconstitution of ribosomes: studies of ribosome structure, function and assembly«, Fig. 1, in: *Ribosomes*, ed. by Masayasu Nomura, Alfred Tissières und Pierre Lengyel, New York: Cold Spring Harbor 1974, pp. 193-223.



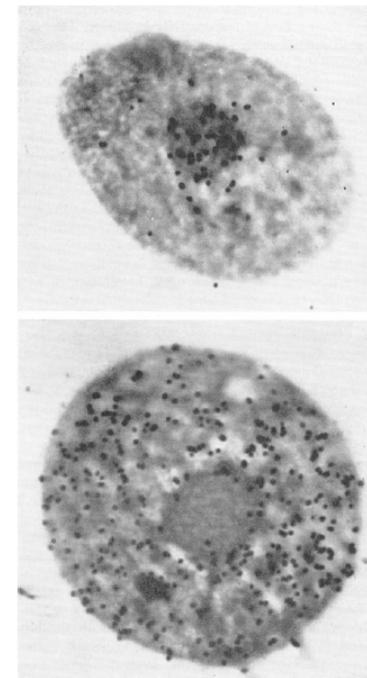
Heat image of Fukushima nuclear power plant.

[FAZ, 21.03. 2001, <http://www.faz.net/s/RubB08CD9E6B08746679EDCF370F87A4512/Doc~EBFCC A200BBE742728DE1743393096EFF~ATpl~Ecommon~Spezial.html>]



Schemata of a nuclear power plant.

[Wikimedia commons, Authors San Jose and Niabot, https://secure.wikimedia.org/wikipedia/de/w/index.php?title=Datei:Kernkraftwerk_mit_Druckwasserreaktor.png&filetimestamp=20090701213617]



(A) Autoradiogram of a cell (*Tetrahymena*), exposed for 15 minutes to tritium-labeled cytidine. The photograph represents a thin cut of the cell exposed to a photographic plate that was subsequently developed.

(B) Autoradiogram of a comparable cell, exposed for 12 minutes to tritium-labeled cytidine and then incubated for another 88 minutes in the presence of unlabeled cytidine. Prescott, David M., »Cellular sites of RNA synthesis progress«, Fig. 1, in: *Progress in Nucleic Acid Research and Molecular Biology*, Volume 3, ed. by J. N. Davidson und Waldo Cohn, New York and London: Academic Press 1964, pp. 33-57. Copyright permission: Elsevier.

OpenStreetMap as empowering tool for collective visualizations

by Miodrag Kuc

For a long time now, neither the architectural visualization mantra “elevation-section-plan”, nor the “land-use-plan”(better known in the urban planning circles), have been suitable for making-visible all the vast complexities of the built environment. This is mainly because of the absence of any dynamism, partly due to the fact that drawings in architecture and urbanism are, in most cases, attempts to put things under control, i.e. they are not meant to be perceptible nor accessible to anyone.

What kind of visual representation better corresponds to nowadays cities that are in constant flux, having in mind the liberated, open-source tools in that have emerged through dense social-media traffic and dialogue?

Let us briefly look at the disciplines that have already cultivated an epistemological perspective to find some working examples, particularly in the life sciences, where Hans-Jörg Rheinberger as has sketched a tentative “typology of scientific visualization” [Rheinberger, Hans-Jörg. “Making Visible. Visualizations in the Sciences - and in Exhibitions?”, MPG Preprint 399 (2010): 9-23, p. 9]. Recent attempts at the Oslo School of Architecture to present Wi-Fi networks using light as an indicator of an invisible landscape, similar to the well-known radioactive labeling in molecular biology, can be understood as an innovative way of making-visible in which “the contrasting substance becomes itself a part of that which is represented” [Making Visible, p.13]. Light painting (through sensors and long-exposure photos) as a method of “enhancement” [Making Visible, p. 13] not just makes visible stunning and undiscovered landscapes of everyday life but could also serve as an empowerment tool. Using low-tech strategies to access the fully-controlled immaterial world of codes and signals opens-up possibilities for spatial appropriations and (cultural) hacking.

Another tool that is underestimated and mostly used for the personalization of mapping processes is OpenStreetMap [OSM]. Its potentials lay in the capability to extract singular layers from the deep-maps and use them as an argument and alternative to the traditional aspiration of planners to “improve” urban environment through the optimization of traffic or the compartmentalization and densification of the urban fabric. Particularly exciting is the possibility to combine singular layers to arrive at new meanings and a new understanding of the social make-up of a place. As H.-J. Rheinberger claims, “compression of structural data” [Making Visible, p. 11] could be seen as an assembly map (in our case a set of required socio-political events that form the spatial configuration) which represents not only structural relations between the components but also “temporal dynamics” [Making Visible, p. 12].

This observation helps us to recognize the limitations of the Schwarzplan* as a widespread making-visible mode in architecture, open to ambiguous interpretations due to the different understandings of urban density and urban morphology in general. The Schwarzplan also serves for the articulation of public space and urban scale typology in a strictly formalistic manner, which lets, for instance, infrastructure dominate over other ordering principles. Recent movements such as New Urbanism, which argues for the compact metropolis by densifying central urban areas (contrary to suburbanization), could be seen as a prolongation of retrograde planning principles rooted in real-estate development logic and the idea of the compact city. The belief that physical density increases social interaction seems to be outdated in the contemporary context of information and network compression, where the digital habitat plays a principal role in the hegemonic class that commands today’s production of space.

In that sense, OSM may exemplify such an interface for advanced participation models and

instruments for making-visible, going beyond conglomerates of singular buildings without any dynamic relation. OSM could also increase the interconnectivity of micro-activisms by building new relations between urban entities based on programmatic similarity or compatibility. This relational approach within which connectivity becomes more important than the linked objects themselves stresses OSM’s proactive role as a planning instrument in contrast to its use as a mere passive, illustrative tool.

Can you imagine a map that is not simply a top-down provided, GPS-driven route-planner, but rather a set of sequences generated by various actors, as for example your hairdresser, local vegetable-shop, night club, and/or cultural institution?

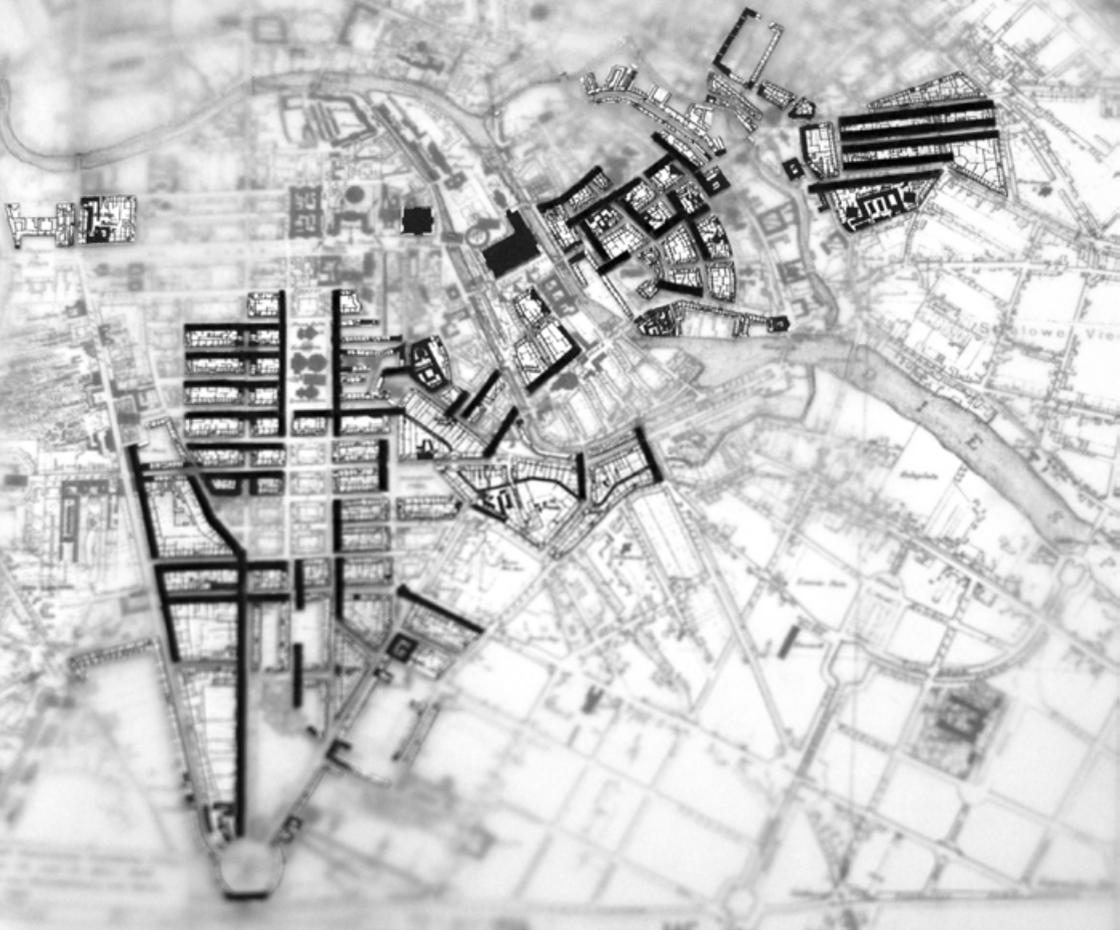
The possibility that open-source becomes a form of monitoring or surveillance of the cultural development (in the name of security) is not the big news. The question is how can we make these systems we invent elusive to the power structures we are trying to infiltrate? Having in mind a prototypical user in the digital habitat, embedded in price-performance rationality of the product consumption, is potentially one method to stimulate the precarious social class to take part in disturbance of control. Constant Nieuwenhuys and his New Babylon seems to be good example how utopian ideas (in form of activist drawing) can both serve as inspiration and as a powerful tool as for the critique of urban commoditycommodification. By suggesting alternative life experiences and neglecting ideas of work, family and civic responsibility, Constant draws a city as megastructure of homo-ludens, a place of play and experiment. These great drawings and models, part of the wider concept known as Unitary Urbanism (further developed by the Situationists), demonstrate the importance of drawing (collectively or not) an idea and argument open for reinterpretation and re-appropriation. By keeping the experimental and critical nature in redrawing OSM and using them for spatial intervention and awareness campaigning, we leave traditional spatial control systems based on data accumulation behind.

Scaling down into architectural scale, how can we incorporate future users in the creation of, for instance, museum buildings, without asking them which functions they would like to address? Can we use OSM as an interface that turns a museum from an iconic-masterpiece into a chain-like spatial composition consisted of underused parks, abandoned socialist housing blocks, roofs of supermarkets, or a temporary structure at the parking lot?

In light of this, and given the domain of architectural design is strictly reserved for hierarchically organized “qualified professionals”, the idea of collective authorship demands to be introduced. That means dismantling conventional participation in into a set of interlinked events generated by the users itself, beyond site preconditions or the current socio-economical setting. Blending the line between building and city, usually understood as physical barrier or administrative border, future users become part of the object itself from the very beginning, generating content not as predicted functions but as a self-formed constitution. It is here where experimentation again plays a crucial role, leaving aesthetical and technical doubts for the later phases of design. All this strengthens collective visualization in the form of time-based OSM, representing here yet another potential for collective knowledge.

*figure-ground diagram that shows build-unbuilt relation





Analysis of the barricades during the “Berliner Märzrevolution” 18. and 19. March, 1848

After news of The February Revolution in Paris reached Berlin, tensions in the city grew, eventually leading to fighting on Schlossplatz. Shortly thereafter, forty planned barricades were put up around the city, with more to come in the following hours. Berlin’s closed blocks turned into support structures for the revolutionary walls, and the city was transformed into a strategic labyrinth. This map marks out the barricades that used the urban row houses to extend the revolution’s territorial advantage.

Anna Kostreva
March, 2011

About the class at The Public School Berlin

by Carrie Roseland

In preparation for Case 4 of The Anxious Prop, a meeting was called in a place called the Public School Berlin. The theme was making-visible and the goal was to make a publication and conference. Some texts were proposed for discussion, and it was open to anyone interested. This openness appealed to me, as well as the idea of planning a publication and conference based on a discussion surrounding a few carefully selected texts.

The class was well-attended, and a lively discussion developed in which about half of the participants took part. Many of the most active participants seemed to have previously worked with The Anxious Prop - but some newcomers also joined in. Jan and Luis led segments on texts about making-visible and abstract machines, respectively, and various ideas, possible extensions and questions came up in response. Kuc showed a series of images related to the text Jan presented on making-visible. At the end, there was some talk and many questions about the planned publication and conference. The meeting didn’t really come to much of any concrete conclusions, but that clearly wasn’t the intent.

At the close of the meeting, everyone was invited to contribute to the publication and attend further meetings in preparation for Case 4. I left the class feeling enthusiastic, although unsure if I would manage a contribution for the publication in time for the deadline and unsure what this idea of a conference would turn into and how I might be able to participate in that. But at further meetings with the group, their engagement with the publication and lively interaction and debate with one another, in addition to their openness to new input made all of this uncertainty a non-issue.

What happened here?

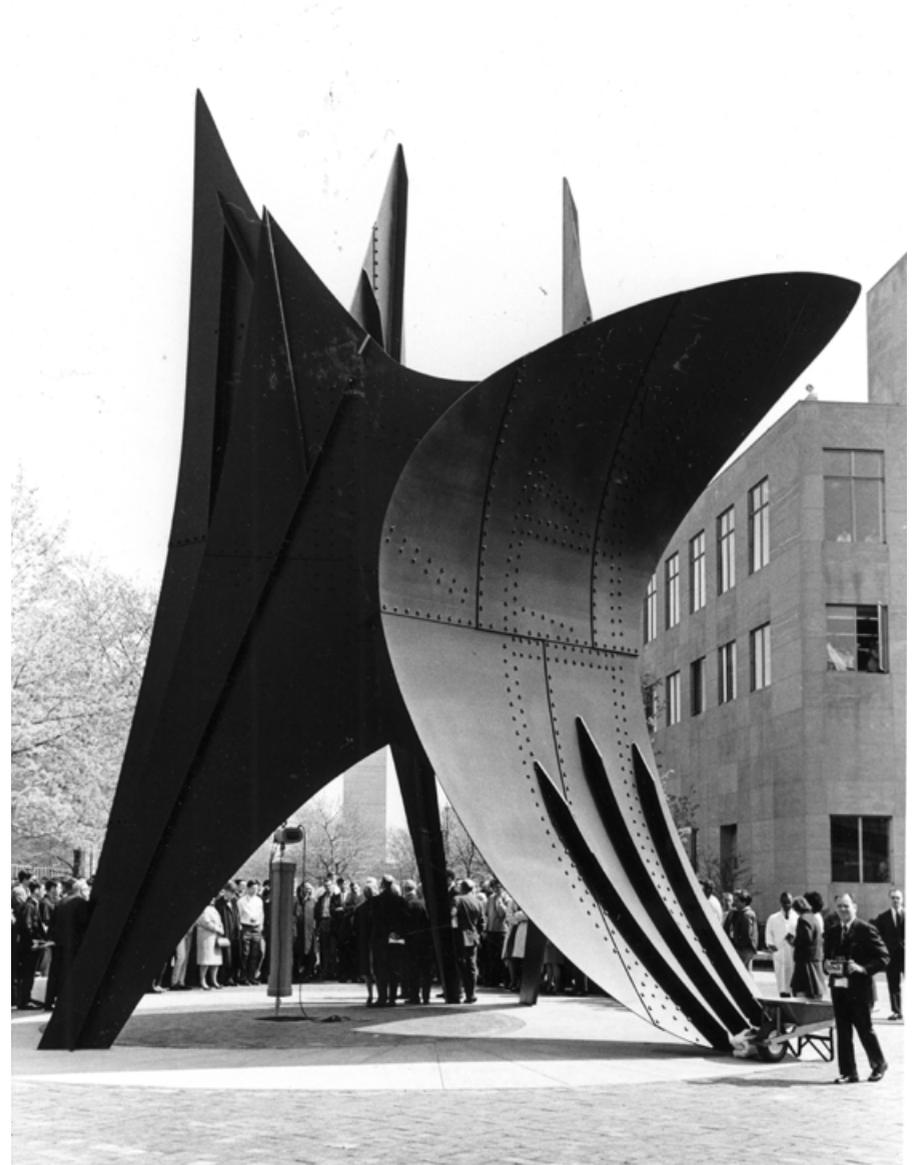
Can it be said that I came from the outside into the group?

I hesitate on this point. Is the group around The Anxious Prop the sort of collective with a clear inside and a clear outside? No doubt such groups exist. They absorb one within their walls, thereby offering a certain sense of security - but in exchange for flexibility. I see this collective more as a group of bodies, loosely arranged around the publication, using each Case to focus on a new (if, at the outset, rather vaguely defined) issue, or gather around a new problem. Yet, this sort of working style doesn’t particularly aim at the simultaneous arrival at a predetermined goal or the production of one specific solution. Rather the result is a series of propositions, which may also take the form of questions and can be interpreted at one’s leisure or rearranged according to one’s desire. Perhaps a movement is made in the direction of better defining the issue, perhaps it turns out that the problem is simply displaced. Engaging oneself with the Case means opening oneself to a virtually infinite set of possibilities.

It is a fragile, precarious sort of arrangement, relying on the momentary will of each member of the collective to engage. Without the walls and security, it relinquishes the interior and has no exterior. Just as one is never really outside such a collective, one is also never really inside.



The lost model of La Grande Voile for wind shear tests at the MIT Wright Bros. Wind Tunnel, by Alexander Calder, ca. 1965, courtesy of the MIT Museum.



La Grande Voile by Alexander Calder at McDermott Court, 1965, courtesy of the MIT Museum.

The model, its object and architecture's correlation

by Tim Gough

One constantly gets the feeling reading Badiou that he is echoing Kuhn. Badiou's concept of "model" derives from a persistent Kuhnism. By Kuhnism I mean that the heart of Badiou's philosophy, which is a sort of philosophy of history, or significant moments in history, seems to be an extension of *Structure of Scientific Revolutions*, the structure of which is applied more generally to what he terms the truth-procedures of art, science, love and politics.

Granted, this is a gross simplification; but then the reduction of the multiple to the One, and more specifically, the reduction of a thinker's position to a succinct goblet of information, a short entry in the encyclopaedia, is itself a habit of Badiou – both a strength and weakness of his method. We might therefore be forgiven for turning that habit onto its author.

What happens at the moment of revolution of these truth-procedures? According to Badiou's first book, the model is created. The model is the moment of the intersection of the specific time and place with the universal. It is thus Platonic, he says, in the sense of *metaxu* (or *metaxy*) – the participation of the idea (the universal) with its sensible embodiment; and the way, for Badiou, that the model allows the universal, or the idea, is in its setting-out to constitute a *possibility of formalization*.

In the interview in *The Concept of Model*, Badiou provides Picasso's cubism of c.1913 as an example of the creation of a possibility of formalization within a specific painting, or series of paintings, which open up a space previously inaccessible and unrealisable within the pre-existing world. Other favoured examples of models are Schoenberg's splitting open of the possibilities of music with the 12 tone technique, or the moment of revolution in politics. According to Badiou, these models possess the nature of events, and there is for him the question of a *fidelity* to these truth-events, asking - to what extent do subsequent artists, politicians, composers, or subjects respond adequately to the demand that this new possibility of formalization places upon them?

For instance, in architecture, it would be easy to show how the work and manifestos of Le Corbusier in the period of 1915 through to 1930 would represent one such model, a new possibility of formalization present within specific works which therefore participate (*metaxu*) in the universal... concerns all made explicit in his writings of that time, from the Purist manifesto to the five points and *Vers une Architecture*.

The question of fidelity of the response to this architectural possibility still resonates 100 years later, and could be interpreted via the tripartite typology of fidelity to the event/model which Badiou gives at the beginning of *Logic of Worlds*, true to the event, reactionary to it, or merely indifferent.

To situate this with respect to the specifics of this milieu:

1
one could say that the model, in finding the gaps in the encyclopaedia of the world, as Badiou puts it in *Being and Event*, and presenting something that has no sense in relation to that pre-existing world, *makes visible* something which was only previously latent within the situation. Badiou puts it in terms of set theory; such a thing is unrepresented in the situation – it does not *belong* to the set, but is *included* in the set;

2
this concept of model is specific to Badiou. It does not relate, on the same structural level, to the concept of model succinctly outlined by Rheinberger in, for instance, his essay *Making Visible*. Rheinberger's concept of model is more conventional; and all the better for being so as he, in contrast to Badiou, deliberately limits the displacement of common terms.

Rheinberger's *schematizing mechanism* visualises some "thing" in a different medium to that thing. The other medium may be a graphical one, a mechanical one, or as he nicely puts it, *in silico*. His concept of models does not, in the manner of Badiou, explain the history of scientific and other revolutions; rather, they are part and parcel of the day-to-day method of science itself. Yes, they do make visible something which was not previously presented within the situation, (prior to the model, or, to put it another way, was not available within the pre-existing encyclopaedia), but the situation here is not, as it was for Badiou, the history of science, or other truth-procedures, but rather science itself in its internal work. Badiou's model is operating at a meta-level of discourse. Rheinberger's is not, although of course his essay is;

3
Rheinberger's model is one type of epistemic object, as he names it. It sits alongside other epistemic objects – such as preparations, which have the character of the *enhancement* of a "thing" within the same material as that thing (eg. by staining a material or changing its visual contrast) rather than the model's *schematism* using a different medium. The characteristic of epistemic objects is *participation* and *mediation*. But, again, by way of contrast with Badiou, what Rheinberger is invoking here is not a Platonic *metaxy* of the idea with its specific realisation/revelation, the conjunction of the universal and a particular, but rather the mediation between the knower and the known - in so far as the epistemic object is not given as such and does not fall *one and nude**, ready-made from the sky, but rather, in some way, has to be constructed by someone.

This foregrounding of the relation between the knowing and the known, characteristic of epistemic objects, in general, and of Rheinberger's notion of model in particular, sets him clearly against any sort of scientific positivism, and places his work firmly within what Badiou's disciple (a term Badiou defines rather carefully) Quentin Meillassoux will call "correlationism." For Rheinberger, it is the correlation between the knower and the known which is of interest in the study of the history and philosophy of science: to deny the primacy of this correlation in the name of a belief in the facts (or the laws) *per se* is naïve. This is in contrast to Meillassoux in his book *After Finitude*, where in the name of supposed non-epistemic "arche-fossil" objects of science (i.e. objects of knowledge which definitively pre-exist the knower, such as the big bang) he calls into question correlationism; albeit that elsewhere he acknowledges it is only *through* correlationism that the autonomous, non-correlated Real (the "arche-fossil") can be found.

This perambulation leads me to the following brief questions and remarks with respect to "architecture":

When we speak of "architecture", to what are we referring? Are we, in the manner of Badiou, engaging in a meta-discussion of the history of architecture, of movements, revolutions or styles in architecture? In which case, the notion of model will refer to something like Le Corbusier's Villa Savoye as the intersection of, and participation between, the universal and the particular, and the opening up of a new possibility of formalization within architecture as an ongoing discipline. Or are we, in more mundane fashion, and at a lower logical level (or type, to use Bertrand Russell's terminology), referring to a work of architecture *itself* – that "thing" (but is it a thing?) which we visit, inhabit, attend to, ignore.... ?

If we choose to observe the latter, then we are operating at the level of the epistemic object. In which case, the study of architectural artefacts might be enriched by taking on board the question of what the epistemic objects of architecture are. In what way, when studying architecture (as scientists study their material), do we make a "preparation" by means of enhancement or contrast of the thing itself and thus create epistemic objects of study? In what way do we create models (in another medium) through schematisation to describe architecture and thus create for ourselves, in a correlationism between knower and known, another series of epistemic architectural objects?

Such a discussion would perhaps be a deconstruction of the existing, latent enhancements and schematisations used to study architecture; and the positing of new types of preparations and models (or other epistemic objects) for such study. There would therefore be an aura of hermeneutics about this exercise: the clarification of the pre-structures and prejudices of our architectural judgements.

At the limit, the structure of this situation cannot be overcome. The structure is that of correlation. Taking Rheinberger as a guide, we referred to the situation of the study of architecture, in analogy to the study of the objects of science. The correlation in that study-situation is that between knower and known. But the study-situation is a particular one. We are always already in a situation with architecture without explicitly studying it; and this means that the “knower and known” tend to fade – at the limit, they disappear – and what is retained is the correlation, the interplay. Another way of saying this is that architecture is correlation; it inhabits or is the “middle ground” of which Goethe speaks (as Rheinberger reminds us). We may use epistemic objects to study architecture; but architecture is already something like an epistemic object in its very being – with the proviso that we evacuate the question of knowledge and with it the object leaving only the differential movement to attend to.

Such attention is rare!

* to use a phrase of Derrida - *un et nu*. I have tried to avoid him (and footnotes), but Rheinberger's invocation of the trace forces my hand. In any event, what the concept of the epistemic object does is to undermine the notion of “nature”; and such a deconstruction of nature (we could say: deconstruction is always a deconstruction of what is deemed to be natural – hence its intense political import) is Derrida's most persistent theme. See in particular *Qual Quelle in Margins of Philosophy*. Shouldn't Derrida always be consigned to footnotes?





Invisible Systems | Seeing with the Body

by Gabi Schillig

*We are the proposers: we are a mould and it's up to you to blow in the meaning of our existence.
We are the proposers: our proposition is the dialogue. We do not exist alone. We are at your mercy.
We are the proposers: we have buried the work of art as such and now ask you to let thought live through your action.
We are the proposers: we do not propose the past, the future, but the present, the here and now.*

- Lygia Clark, 1968¹

Experienced space is lived space, characterized by a complex interplay between visual, aural, haptic, and olfactory qualities. In the sciences and also in the field of architecture, however, we still have to face a hegemony of sight: What is visible is considered to be „real“ or „true“. Over the centuries manifold instruments have been developed for visualizing space such as drawing or modeling. But are visual models effectual to deal with the complexity of space? Other parts of our sensory system (touch, hear, smell, taste) produce rather unstable conditions. Immaterial or invisible dimensions of spaces are elusive, but their impact is real.

Architecture can be considered as a materialisation of manifold forces resulting in a form, an object, something that is stable, concrete and manifest. Quite often architectural space is labeled as an extreme objectification and fetishisation of form deployed by the reductive techniques of architectural production. Of course architecture needs to be much more than form or a lifeless object; as mentioned earlier it is evident that there exists an immaterial potential of space; spatial qualities that are invisible to the eye. Architectural space is not just effective, but needs to be affective, „changeable“ and open. The openness of those unstable conditions requires potentials of change, enable a process of becoming. Consequently form is seen not as an aim or result, but as a vehicle of imagination, a trigger for activating spaces of possibility.

The question for tools or vehicles to achieve the proposed openness of space remains. Those tools should be able to generate „potentials“ of space, allowing for new meanings and act as instruments for „becoming“. But what could be the „substances“, models and strategies for creating those intense, open vivid spatial qualities and experiences? Methods need to be developed to enable tactile dimensions of space. The artistic strategies of Lygia Clark may break new grounds on the verge of planning and possess the potential to refrain from the hegemony of visual models. They work against the dominance of images and objects, moving towards sensorial experiences. Architectural terms need to be extended.

Lygia Clark (1920-1988) was a Brazilian painter, sculptor, conceptual artist and researcher. In her works, spatiality is a vital element manifesting in an intertwining of body, time and space. Two aspects draw a continuous line in her work: the changeability of the object through inclusion of the observer and the temporariness of her work, an open-ended process for experimentation and the production of an immediacy of experience.

Clark's participatory work embraces almost three centuries, in which she developed her work from abstract paintings to three-dimensional, geometrically transformable objects (*Bichos / Machine Animals*) towards a dissolution of the object. *Bichos* (1960-64) were built from metalplates, interconnected and joined by hinges. Therefore the open form could be transformed by its user, unfolding to reveal unpredictable structures. The sculpture, though completely abstract, is conceived of as a small creature: „*The Bicho*,“ Clark said „*has his own-well defined cluster of movements which react to the promptings of the spectator. He is not made of isolated static forms which can be manipulated at random, but his parts are functionally related to each other, as if he were a living organism.*“² Shortly before, in 1959, Ferreira Gullar, a poet and writer introduced on behalf of the neoconcrete group the term of the *Non-Object*³, a work of art (like the *Bicho*) that facilitated a complex engagement of the senses. The *Non-Object* was supposed to generate an experience that unfolds in real time and real space through the active participation of the viewer.



This shift from a stable, geometrical to an unstable spatial condition is developed further in *Caminhando / Trailing*, being the turning point of Lygia Clark's work in 1964. The „work“ consists of a simple paper strip that is twisted into a Möbius band and then is cut continuously along its „endless“ geometry. The softness of the chosen material enables potential qualities of space, a new kind of relationship between contemplator and work. For that work Lygia Clark merely delivered the material and the proposal. The work, however, exists exclusively in the moment of action on the material, solely by the engagement of the contemplator which. The immanent act, leads to the fusion of object and subject. According to Monica Amor, „the destabilization of the body as a fixed entity and the focus on the ephemeral opened up the field of the precarious not only as a paradigm for production but also as a conceptual principle to understand the instability of the self, the uncertainty of the Cartesian cogito shaken by this topological relationship between the inside and outside.“⁴

A second series of interactive work (*Nostalgia of the Body*), consisting of variety of masks, goggles and glasses enabled another level of sensorial exploration between users. After 1968 Clark developed these works further, towards collective body works that one could characterize as the progressive disappearance of the object (*Organic or Ephemeral Architecture*). From 1979 until her death in 1988, Clark distanced herself from a traditional definition of art and her role as artist, applying her collected universal, interactive vocabulary in the form of synaesthetic therapy. After 1965 Lygia Clark referred to her work as *Propositions*⁵ that consist of nothing else but the use by others, according to certain rules determined by the artist. Those *propositions* were easily to be reproduced, composed of materials that were to be „found“ (e.g. stones, plastic bags, etc.). Those works were not to be manifested in a singular stable material condition (form), but were rather open systems of material, spatial and bodily relations. The resulting (spatial) potentials had to be experienced, residing in the „object's“ manipulation. The primary aim was not to give meaning by that what is seen, but rather by that what is experienced through sensory and tactile encounters. Propositions are open systems of material, spatial and bodily relations.

Lygia Clark offered precious models of thought: her work does not constitute fixed points in space, but, by dissolving the object, aims to mobilize people into action, providing soft (not only in terms of material, but also of structure) and therefore adaptive, *abstract machines*⁶ for “getting in touch” with bodies and spaces. She constructs physically perceptible, but ephemeral spaces. Her artistic approach questions the architects' desire to redefine the territory by establishing a “lifeless” object. It rather offers an alternating action between place, subject and constructed space. Clark's *propositions* were operative instruments – often nearly invisible devices to process bodily interaction in space. They established an experimental dialogue in terms of spatial perception and a diversity of reality. Spatial qualities of these unfolded spaces are expressed far beyond all (architectural) languages that are at stake at the moment.

Finally not the construction (or visibility) of form is of importance but an invention of a world that needs to be discovered. The continuation of the body in space enables a dynamic concrete, corporeal and sensuous experience in real space in real time. Imaginative power is incorporated - sensing relations of the own inner relation to the outside world by instrumentalizing multisensorial apparatuses as tools for modifying the real.

(Footnotes)

1. Lygia Clark in Lygia Clark; exhibition catalog, p. 233; Fundació Antoni Tapies Barcelona, 1999
2. Lucie-Smith, Edward: Latin American Art of the 20th Century; Thames and Hudson London, 1993
3. Ferreira Gullar: Teoria do não-objeto; Suplemento dominical, Jornal de Brasil (SDJB), 19-20 December 1959
4. Monica Amor: From Work to Frame, In Between and Beyond: Lygia Clark and Hélio Oiticica, 1959-1964 / Grey Room 38, p. 33; MIT Press Journals, 2010
5. Lygia Clark on her work *Caminhando* in Lygia Clark; exhibition catalog, p. 151; Fundació Antoni Tapies Barcelona, 1999
6. Abstract machines are machines of possibility; see: Gerald Raunig on Abstract Machines, Chapter 6, p. 100-108 in A Thousand Machines; Semiotexte, 2010

Photos: Propositions for the Landscape (Norway, 2010). A project by Gabi Schillig.

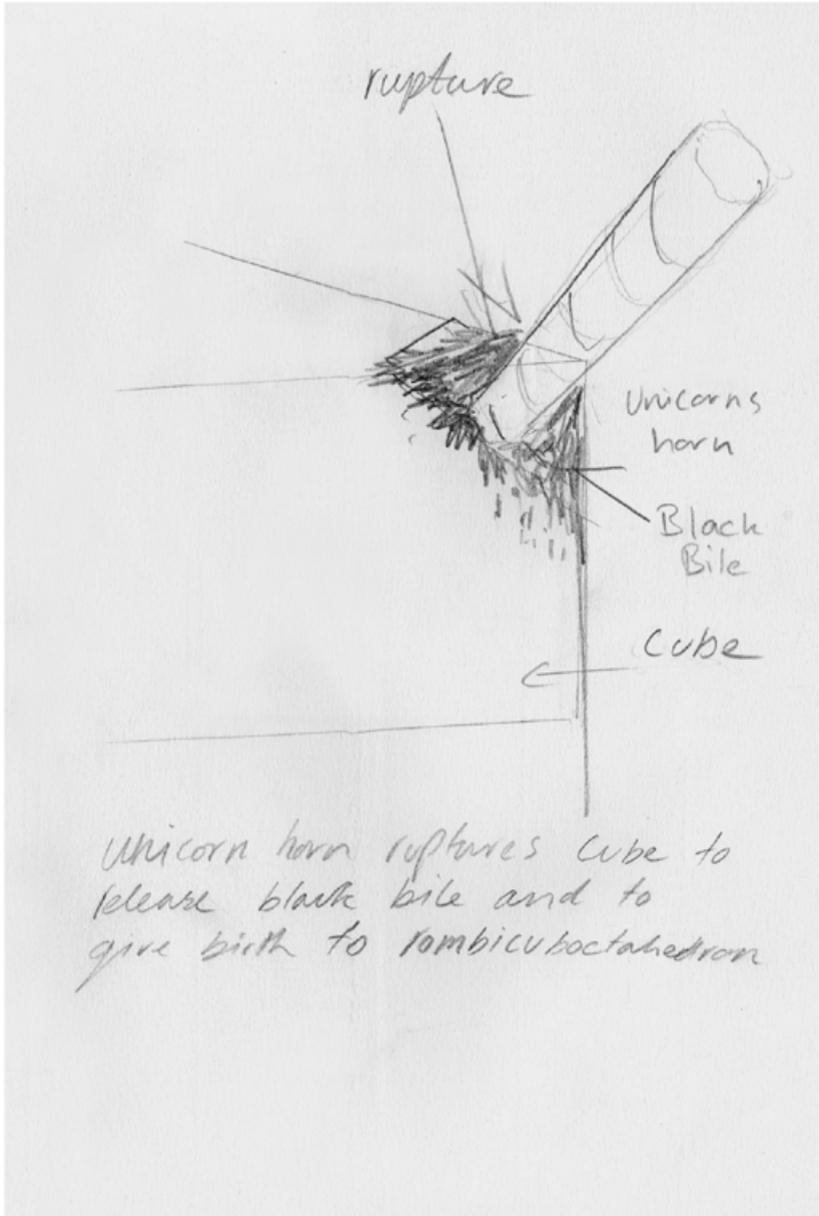
Instructions:

Cut out the letters along the dotted lines.
Tape the page against a window to see through them.

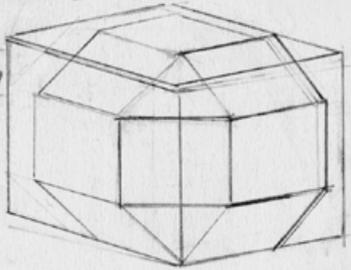
United States of A

You are free
to come and go
whenever you wish.



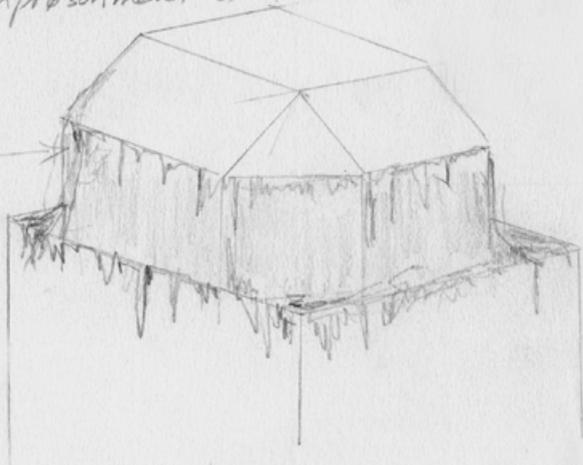


The Enlightenment manifested
via a rhombicuboctahedron
breaks free from
its melancholic
imprisonment of
the cube



Rhombicuboctahedron emerging from
the imprisonment of the cube

Back
Bite



Three dimensional extension

by Mendel Heit

Perspective has always been an important research subject amongst people who needed to represent volume, distance and space. It also is one of the fundamental elements of three dimensional computer graphics. With the help of a computer, artists, engineers, scientists and designers can build objects, worlds, characters and translate or rescale complex compounds into understandable and visible images. Computer Graphics started as an enhancement of traditional maps and radars. "SAGE" was the name of a computer system developed in the 50's, made to intercept and track aircrafts. It managed to display the location of aircrafts on a map of a big round screen, and also allowed a user to transmit commands to an intercepting aircraft. The first drawing system called "Sketchpad" was developed by Ian Sutherland in 1963.

Of course the industry and engineers accompanied the ubiquitous use of three-dimensional representations for the construction of product parts, machines and simulations. Designers and engineers exchange 3D files to update and refine the final shape of kitchen robots, watches, or furniture. The constant innovations and performance improvements in computer technology allow a very wide application range for 3D rendering.

The entertainment and media industries keep pushing the limits of 3D in movies, advertisements, animations and interactive applications. Computer games are probably the most important usage of 3D graphics, but also the fastest development platform for this technology. The computer game industry uses 3D-renders in almost every game and continues to experiment in various ways, mixing real motion and 3D rendering, user interaction, internet connectivity and artificial intelligence. From the very first 3D-Game, "3D Monster Maze" (1982) to Massive Multiplayer Online Role-Playing Games with photorealistic environments, the game industry has explored a lot of possibilities, and still widens the research. A couple of years after Neal Stephenson's parallel internet world, the Metaverse, which appeared alongside the term avatar in "Snow Crash" (1992), virtual worlds like "Second Life" have emerged and offer an alternative 3D-rendered world, where one can slip into a self-constructed avatar, and lead a parallel (business) life, create, explore environments and design scenarios within the digital habitat.

In science, 3D-Imagery is used to represent structures, processes, reactions and theories in a way that is easy to understand and visible to the human eye. Because the scale of molecular or astronomical phenomena makes it difficult to simply record or photograph them, they are translated into 3D renderings or illustrations, which allow a better readability and simplification. Representing mechanical forces, chemical reactions, or explain nanotechnologies by schematizing them, taking them out of their context are possible ways to visualize complex discoveries.

In architecture, design, engineering and industrial production, 3D rendering and modelling are commonly used to verify the functionality, ergonomics, shapes and proportions, as well as feasibility. Thanks to 3D graphics, architects are able to create new but still constructible shapes for buildings, optimize the construction and use of energy efficiently, and even create generative and modular building systems. A few years ago, an open source software plugin called "Grasshopper" started to be developed together with other scripts and is now used in architecture and design to easily create stunning new shapes from algorithms, and also enable a parameterization of the production, whilst staying editable in realtime. Digital Fabrication would not be possible without three dimensional representations. To simulate and calculate the machine movements for 3D printing and CNC milling, a 3D model is needed. But 3D-rendering can also be used for simulations of crashes, weather calculation, aerodynamics, surface reflexion or stress-tests. The car industry for example, uses those systems to see how and where car structures need to be perfected in order to minimize human injuries during accidents.

In order to generate a 3D rendering, two main activities can be separated, the modelling and the actual rendering. In the 3D modelling, the context and the subject are built. It is where objects, buildings, people, landscapes, and sceneries are actually constructed. This is where the structure and architecture of the representation happens. But modelling is more than a structure for a pictorial finality; it is the blueprint for simulation, fabrication, and engineering.

3D models can be defined by points, lines, surfaces, mathematical functions, or algorithms. If a model is only defined by a triangular-mesh, the quality of the surface will be dependent of the scale (like a bitmap), but will be easier to use for simulation and rendering. If the model is defined by mathematical surfaces (NURBS), its quality will be the same at any scale (like vector drawings), and will be more suitable for the production of highly precise tools and products. Most of the time, 3D models are created on screen, with a computer mouse that enables the selection of editing tools and the rotation around the model, as well as a precise examination of the shape. From the very first drawings that had to be programmed with coordinates and long lines of code, through modelling with a computer mouse, it is now possible to scan objects or "sculpt" them with virtual clay.

Once the shape is modelled and available in 3D, it can be rendered. The rendering process occurs when the virtually constructed model is being prepared for representation. The final picture can be printed on paper, displayed on a screen, or projected. It means that the 3D model is translated into lines, shapes, gradients, and shadows.

3D Rendering is not only used to create images or draw objects in three dimensions, it also extends the capabilities of the physical world. It can be a copy of the real world, a reconstruction of historical buildings, a simulation of the future or a totally new imaginary place, a schematic representation. In this making-visible processes there is always a simplification that takes place. Modelling a house in 3D can bypasses gravity, human labour, logistics and machine power. The ability to change shapes, colours and scale within a few clicks, shows that there is a lot of freedom involved in the act of modelling and rendering a scene in 3D. That freedom enables us to illustrate with a selection of information, a change of scale, or even an enhancement of reality.

In virtual worlds anyone can be represented by a chosen avatar, to enter another context, another story. In 3D virtual worlds like "Second Life", massive multiplayer online role-playing games, or city-specific platforms like "Twinty" the user has access to an extended reality, virtual spaces and stories. Robbie Cooper's photographic work "Alter Ego" shows the distance, but also the proximity between an avatar and the real person who created it.

When hardware programming, animation techniques and 3D rendering are combined with human interaction and digital fabrication, it is possible to create new shapes and behaviours.. Not only does it allow exchanging 3D files rapidly between designer and engineer over the internet, it also created open source libraries of 3D-objects, where everyone can download and replicate a physical model with a 3D printer. Whether it is a 3D-rendered prototype of sun-responsive architectural structure panels driven by a photo resistor, randomized building shapes in urban planning, individually customized fashion products, or open source machine parts that can be downloaded and produced locally, 3D computer graphics modified our perception of objects.

```
>>CHAPTER NINE<<
\\SCREEN L : KILL KEYNOTE KILL SKYPE (R)\\
\\SEX MACHINE : MUSIC PLAYS (C)\\
\\SCREEN R : SECOND LIFE BUNNY FLIES (VL)\\
```

B.U.L.L. MASCOT FOR SOFT SOUL



Still from Settlement 1, 4 Channel DV (Channel 1)
Erlangen, Germany 2008 (Arena Festival)

```
\\RADEK SET UP XMEETING\\
\\SEX MACHINE : VLADIMIR CUE FADE OUT STOP
SONG TURN VOLUME BACK TO TWO\\
\\VIRGINIA PREPARE TO GO ON VIDEO\\
```

```
\\MUSIC STOPS : DIAL UP VIRGINIA VIDEO (R)
IP ADDRESSE 171.66.50.177 apple+f = full
screen\\
```

```
>>CHAPTER TEN<<
\\DRAMATIC PAUSE : EVERYONE LOOKS AT SCREEN AND
COUNTS TO FIVE IN HEAD\\
\\SCREEN R : SECOND LIFE STILL (VL)\\
\\CARRIE TAKE VL COMPUTER\\
```

```
//VLADIMIR DESCRIBES ROOM TO VIRGINIA//
```

```
VLADIMIR
adlib : try to use as many senses as possible
```

```
>>CHAPTER ELEVEN<<
\\SCREEN R : CARRIE PREPARE TO TELEPORT TO ARCADIA
IN SECOND LIFE\\
```

```
VLADIMIR
Virginia? Are you sitting or standing?
```

```
\\TELEPORT\\
```



Still from Museum 1, DV
Sadyba, Poland 2007



Still from Landmark 2, DV
Warsaw, Poland 2007

>>CHAPTER SEVEN<<

\\SCREEN L : KEYNOTE (VL) VLADIMIR MOVES TO RADEK'S
COMPUTER, CARRIE AND RADEK MOVE OVER ONE SEAT\\

VLADIMIR

The word avatar comes from Hindi. It means
“descent”. In Hinduism, avatars are the physical
manifestations of the divine on earth.

Avatars are communication tools and messengers
which are sent from one reality into another. They
are always adjusted to the perceptual constraints
of the realities into which they are sent.

In our research, we came to think that mascots are
avatars of companies.

GODS -> GOODS

>>CHAPTER THIRTEEN<<

\\SCREEN L : DIAL NEW IP IN XMEETING 171.66.33.190 (R)
CONNECTION ESTABLISHED, VIDEO RUNNING\\
\\SCREEN R : SL BUNNY HAS A NEW PERSPECTIVE (C) M
switch view -> move around\\

//VLADIMIR GUIDES VIRGINIA THROUGH SERVER ROOM//

VLADIMIR

adlib : based on visuals at hand

.....OK Virginia, stay where you are. We're going to
turn off the video now.



Still from Highway 1, DV
Giessen, Germany 2007 (Diskurs Festival)

Your personal space is not a bubble, it's an ellipsoid

by Eric Ellingsen

(Glance # 1) Carving a little perceptual crawl space, the pick-pocket slides in beside you, breaks just to the periphery of your line-of-sight. By doing this the pick-pocket also ducks under your personal space, the hyper-perceptual-bubble where you are submerged in almost-touch, the feeling of being almost-touched. Almost-touched is intimate. Almost-touch is invasive. Almost-touch is a space of relations usually reserved for the extended invitation of eyes, the RSVP of a lover's affirmative look. If approached head on that personal space bubble is penetrated sooner. Which means the bubble is not a sphere, not a soap film, not a symmetric-minimal-perceptual-structure. Our personal bubbles are elliptical, ellipsoids, egged, askew. The pick-pocket knows this. Not from school. Not from the neuroscientists they perform stand-up routines with on the Vegas strip. (Don't let education get in the way of learning; the pick-pockets favorite line from Mark Twain.)

Pick-pockets know a few tricks about seeing worth looking into. How the eye sips over unchanging information in the environment. One technique is to approach you from the side, askance, because approaching you head-on would force a straight line between your eyes and their body, 2 points, an A to B to see you, from beginning to end and skip over all the middles.

The pick-pocket has slipped beside you, on the right side, into the narrow part of your perceptual ellipsoid. The straight line movement is now transferred to a movement of the pick-pockets arms. It's the same spatial-perceptual strategy, just smaller parts. His right arm reaches across and away from his body in a large arch and swings across the front of your body. The pick-pocket is patting the front contour of your perceptual ellipsoid. His shoulders rotate slightly. He's pointing at a pigeon, a child in a burning building, a plane spelling out your name in the sky. But you're not looking at where his right hand is pointing. He's a perceptual snake-charmer. Your eyes are forced to follow the curve of his arm, look at the changing information of the arch of the arm as it rounds your perceptual ellipsoid. The hand, the wrist, the elbow, the involutions of fabric, the claviced shoulder, the mole on the left side of your neck that feels like bubbles blown underwater when whispered on by so-and-so. Your eye is led along the arm's curve, your perceptual hook is wormed. Your eyes take the bait. The pick-pocket then ducks his head towards you, leans in, just slightly. You pull away. Again the ellipsoid is pressured, pierced by the pick-pockets head. And like two similar magnet ends nudging each other around a table-top, he is marionetting you. It's a small perceptual dance in which you are being choreographed in space, Fred Astaired into vulnerable spatial pockets, bumped and shading the poke into the most opportune position. You don't see it. It's happening in a few seconds, the time it takes to look at your watch to check the time. His left arm darts like a pit-viper into your back pocket. You don't feel a thing. The seeing knowledge, the pick-pocket pact between perception and movement. He slips off Scott-free.

(Glance # 2) Some mammals (which ones I can't remember, I think they are birds, but that's not the point)... Some mammals can't swivel the eyeballs in their sockets, they have no eye-ball muscles, others have no floating lens, so they have to dart their head rapidly back and forth to see the still things around them. Us human animals reading this maccroseccade. We unconsciously make tiny-jerky movement with the eyes which dart over the room scanning for useful information, information which reinforce safety, instinct, desire. We don't see ourselves doing it (there are experiments which we can see them), but for the most part these movements are stealth-bombing under our perceptual radar.

A few years ago Scientific America published a study of looking at seeing; it covered things like engendered visibility and seeing subliminal thoughts. (Scientific American, vol 297 number 2 pp 56-63, August 2007). Examples were women on diets whose eyes dart to the piece of chocolate cake on the countertop, and men whose eye's saccade-dart to the women who feels they are being peeping-Tomed, oogled in broad daylight. The women didn't know they were looking at the cake. They knew they were being looked at but they couldn't catch the glances groping them. What are you looking at? The cake. You're not looking at the cake. I'm not looking at the cake either. How many glances equals up to a stare? The peeping-Tom gets no answer, no phone number, is kind of a perceptual-perv, taking advantage, even if unconsciously, of the perceptual loop-holes in looking at seeing, the small gaps in our conscious armor, giving you the bird in the blind spots in the visual field. Go to your corner.

(Glance #3) The corners of a modernist ceiling are the darkest spot in the room. Our eyes are led by the planes of wall and ceiling to the seams, then skip over the seams to where the plain planes meet, bisect, like stepping onto a rapidly moving airport walkway. It's an old-days reason for molding; cherubs make you look, egg-and-dart patterns, trim. In strokes of perceptual genius, it's why Corbusier or Wright or Scarpa would by empty out the corners in the walls, the axis of three planes meeting, the 0,0,0 point, or one of them, where the eyes are lead, where the darkest spot in the room should be, where the shadows should gather, and they empty it, put a window there. The eyes find a view. Find an opening. Find light. Find the sunlight blinding. Find the outside. Find yourself throw-out of the room, launched. Unless there is cake in the room perhaps, then the eye's wander, but I don't think Frank's prescribed allowances permitted cake eating in a Wright house.

(Glance # 4) The Soothsayers are looking at you. The Seers. Vitruvius writes of the entrails of animals being used to see where to found a new city. Entrails left on the stones. What's attracted. Birds, other animals. Good eats. What rots. Nothing around for hunting. Read the signs. Consult the oracles. Move on.

Other signs, after consulting the insides, are the winds. Consult the breezes. This is what determines the lay-out of the streets, the health of the city depends on it, the inhabitants. Airs carry humors. What blows in must blow out.

A salt-water well is discovered. The city is 200km from the sea. Pausanias tells this part of the story (one line; it made the city famous, legitimated its stats). We're in Anatolia, Turkey. The salt-water is a sign, everyone can see it. An anomaly in the landscape, a difference that makes a difference at Bateson says. The salt-water is a visible clue, a hint, something sacred perhaps. A good enough reason to construct an alter over the spot to Aphrodite. A temple around the alter. Aphrodisias. The winds have oriented the streets which lead to the temple of Aphrodisias. There is a poplar grove nearby.

Poplars have shallow root systems. Grow quickly. Straight as a chaperones sense of moral superiority, as a soldier's posture in the tin-hut! Anyone can use the growth of the poplars to see that there is fresh water source near the surface, just under the crust. A reservoir that's fed through the seasons. The crust, there is a small mountain not a km away. Marble underneath. You can see the lines after a little erosion from the storms. A quarry of possibilities. An economy. A trade. Other cities can order their column drums, their sarcophagi lids. We can start a school of sculpting. A road will bend to the city. Link us. We can quarry the rock in the morning on the side of the mountain which rests in the shadow, the sun won't get in our eyes and blind us. We can stage the refining and weight removing, carving up of the raw stone in the early afternoon shadow side of the mountain; tune the operations to the shadows path. (If

you go to the quarry today you can see these ancient quarry technique decisions). We can carve reliefs and marble screens with soft scenes of senators and gods and Graces and blind Seers. The visitors and citizens will see our stories of mythological beginnings and now-again all around them. Everything lines up for this to be a city worth founding; what doesn't line up we will fill-in for.

(Glance #5) Up until a little after the mid twentieth century and floating foundations, the Manhattan skyline measured and mapped the geological bedrocks under the city, because the buildings foundations had to reach, piling, and anchor into that bedrock. When the bedrock is out of reach, there is a dramatic lowering of the skyline. Imagine a valley of bedrock under midtown. Or, just look at skyline you can see the topography under the earth.

(Glance #6) Some sea-faring birds are seers. Early Vikings used them as navigation tools, swapping their dummy compasses (before the discovery of magnets), and the phosphorescent sun-stones; the ice-blinks can take a back-seat as seeing devices. In two's and three's the sea-birds are taken onto the Viking ships. If their feathers get wet they can't lift off the surface, so if they can't find land then they can't land on the sea. This constraint assists the decision making process of the bird, however unconscious, it need not be trained like carrier pigeons. Because if they sit for a moment in rest on the waves, if they need to eat and dive into the sea too deep for a snack, they won't be able to generate the lift-power needed for flight. So they must fly from dry place to dry place. They migrate in short jumps.

The sea-farers take sea-birds to sea and release one at time. The sea-bird ascends as high as it can above the ship. The vantage point is in clouds. A four-point perspective, or more probably, the perspective of the bird-seefarer. If there is a shore within sight, the sea-bird will B-line-it for the land. If there is no shore, the bird drops back to the boat where it is dry, safe, where later can happen, even though they know a cage awaits. The sea-farers watch closely what the sea-birds are looking for. They are blind until the sea-birds spot land. Meanwhile, they throw up birds like eyeballs, whenever they get the itch, like the 3 grey witches, the Graeae, sisters to the Gorgons, six empty eye-sockets passing around one good eye which is Perseus-ed, swiped, pick-pocketed to ransom the get Medusa information, like the Homeric Hymns tell (and Clash of the Titans).

If the sea-bird jets off in a direction, the Vikings steer the boat in that direction. They know they are seeing land without being able to see over the horizon, around the earth's curve, over the edge. After enough time goes by, the Vikings release another sea-bird. Again, another arrow to increase the seeing space, the seeing potential, a street sign of wind and wing, a living satellite, a GPS device which eats worms and fish near the surface. The Vikings are so happy it works that they spend all their time now singing Christmas carols: do you see what I see.... do you hear what I hear...

(Glance #7) We see an opening in a wall and know it is a door, a window. We don't bother to think about it. We don't have to figure it out. We have untextured the space around us. Generalized it. It even bores us most of the time. We look at it only enough in order to try and see what's coming. To confirm what we already know ahead of time. How loaded we come with perceptual presumptions. How skilled we are at skipping over things. The child spends her and his time jumping till they can touch the top of the door's opening. (I'm sure this opening has a word.) As adults, we don't stand in front of doors perplexed or amazed, stunned or enthralled. So eager for every little break we don't meditate on the literal openings that afford glances, sound waves, heat flows. We don't have to go up to the opening and push our arm through just to make sure the opening is not a mirror and we are not ghosts. We don't try to feel what is not there. Maybe it's an oversight.

(Glance #8) There are rules to seeing what is not there, like the 20th century null experiments of Michelson-Morley. It took so long to see the luminiferous ether, which doesn't exist. Extraordinary measuring devices to prove what's not there. There are rules to seeing what doesn't exist. Rule of enmeshment, this almost-touching, this seeing feeling which no one teaches us or tells us about until we run our perceptual cartwheels weaving embodied textures.

(Glance #9) We make a visual poem together. A seeing your blind-spot poem. I'll provide the pre-conditions, set up a few constraints. It is a little like placing a spot light behind a mist; you horizon the rainbow by merely looking. What Beauty! Meine lieblings.

In our blind-spot poem, you'll fill-in the rest. Literally, because it's what we do all the time. Fill-in. As the Gestalt psychologists have helped us see, we complete contours, we closure, we connect, we line from dashes, we group similar things (by proximity, by shape, by color), we construct smoothness, we simplify. We see the dog that is not there. We flip the necker cube into the singular plural cubes. We surface the pool and submerge the snake in the water that is has no boundaries or coast, just blank page (and this regardless if we've read Jung, if we know what Joseph Campbell says water is a sign for in many mythologies). We alter the perspective because (a) the lines obtuse like the lines in a room spreading over us, obtuse sometimes, from the corner of room, or (b) the lines recede, like the lines on the out-side of the corner of building recede into perspective. We Op to see the profiles in the faces that are cups we drink from by looking. We eclipse the illuminated halo around the black dot—on the white page below, which is a part of our poem. We fill-in.

So here is a poem I wrote for us to write together, half a poem; I half-wrote it, but none of it is missing. Or, to be more precise, the poem I wrote is the conditions for you to see poem you will write by filing-in what is missing. (Aside: I didn't even write these rules; I didn't discover this perceptual phenomenon; I pick-pocked this from months of searching on-line through web-sites which give examples of experiments you can experience. I can't even tell you the name anymore of the author. I can't carve the author's name in a marble screen. Sea-birds couldn't see that far into my search space. Is there an author of this experiment? I'm tired of looking for you. Find me if you exist.)

The huge font 'period' on the right is not the end of the sentence on seeing; the smaller font 'x' is not someone you've broken up with, split from, are still in love with somehow and wish you could see again, one more time, at least. The other conditions are simple instructions, a grammar of moving the pages closer to your eyes and farther from your eyes till you see the spot where the optical nerves enter your brain through the back of your eyeball, the place where the signals are relayed at light speed into your head. You'll do a little arm dance between the book moving further and closer to you till you find the right spot, but you'll find it by looking. No catch. You will fill-in the rest.

This is my poem. Let's call the instructions the title:

To see your blind-spot (1) cover your left eye. (2) stare at the X. (3) move your head closer to the X until you see the spot disappear.

Curators without bodies

by Luis Berríos-Negrón

"In relatedness I can enjoy more, be more, give more, than in isolation." - Fredrick Kiesler

"Two is not a number." - Federico García Lorca

Curatorship is elusive. Reason why self-organization and collectivity are again on the horizon, steadily. When I speak of curatorship, I am speaking about an opaque, devoted exercise, not the self-congratulatory fetish it has become. It is that fetish, that need to outstand, that has formalized the curator into yet another power structure that in the end weakens the very resource they work with: the compositional integrity of the work of art. That compositional integrity is increasingly compromised by a confusion between curatorial action and journalism, if the lack of depth of knowledge about the relation between exhibition and representation. While both disciplines deal with representation, curatorial action delves in the matter of situating, not modeling, in a manner that projects the object, not the narrative, of the artwork.

In that 20th century period of art critics, Frederick Kiesler (and Meyerhold, et al, in Soviet theater before him) knew this. And that is evident in his extensive experimental exhibition architecture and scenography proposed as correlational practice. Through his Columbia University Laboratory for Design Correlation, he and his students expanded upon manifold exhibition architectures, scenographic works, and other loose variations like the Mobile Home Library of 1937. These could be reviewed, and even contextualized as hyperboles. These infrastructures without curators could in retrospect be referred to as preparations, of an often not discerned material dialectic between instrument and subject.

In this material dialectic is where Hans-Jörg Rheinberger elegantly projects the action of Making-Visible, while we find a parallel contrast with George Stiny's Shape Grammars - a contrast, not only between preparing and seeing as epistemological actions, but how each differentiate from one-another towards exhibiting and production, the space between subject and audience. No doubt these are architectural propositions in their own right, and are in tune with the seminal concerns of *The Anxious Prop*: about how to stage labor, the contemporary, performative object of cultural production, more specifically, how to curate collectivity, or rather produce curatorship without body. This proposes a vigilant observation of visualizing in architecture that Jan Bovelet and yours truly put forth, and a general need to agitate those 'truth-procedures' Tim Gough reminds us of, questioning the teleological leaps that are so pervasive in contemporary curatorial action.

Therefore, preparing and seeing can condition the virtues of the abstract machines proposed by Gerald Raunig. These abstract machines seem to us to be a way to reveal and conceal a world where architectural and curatorial action have evolved both, on one hand, into exciting, programmatic, theatrical, fluctuating, physical, mental, biological, collaborative practices, and on the other, toxic, inadequate, crystallized, irresponsible pathologies.

Abstract machines have a role in the production of such worlds because their separate components, their monads, not only figure concatenations that make these worlds possible, but also become affective when the machines are only visible to those operating in it. Secret languages can take hold here, and the elusive/opaque qualities that once made the common possible can unwittingly revert into a vacuum where the political potency disbands. Remember, you need to make your gravity, it is about attraction, not promotion. Grounding territories can facilitate a coordinate system adaptable to the components of a given machine, a field of production; but it may also provide an oppositional blueprint for its dismantling.

One possibility to set forth this abstract machine of precarious, collective curatorial action is to deftly program a verbal lattice from Rheinberger, Stiny, and Raunig as principal characters of Case 4. Not to formulate judgement frameworks, but to deploy potential formats and preparations that could appear and disappear, leaving behind loosely commodifiable remnants, elusive memories visualized through the action itself of knowledge production... shaking the conference, hovering microphones, bar tables, and all.

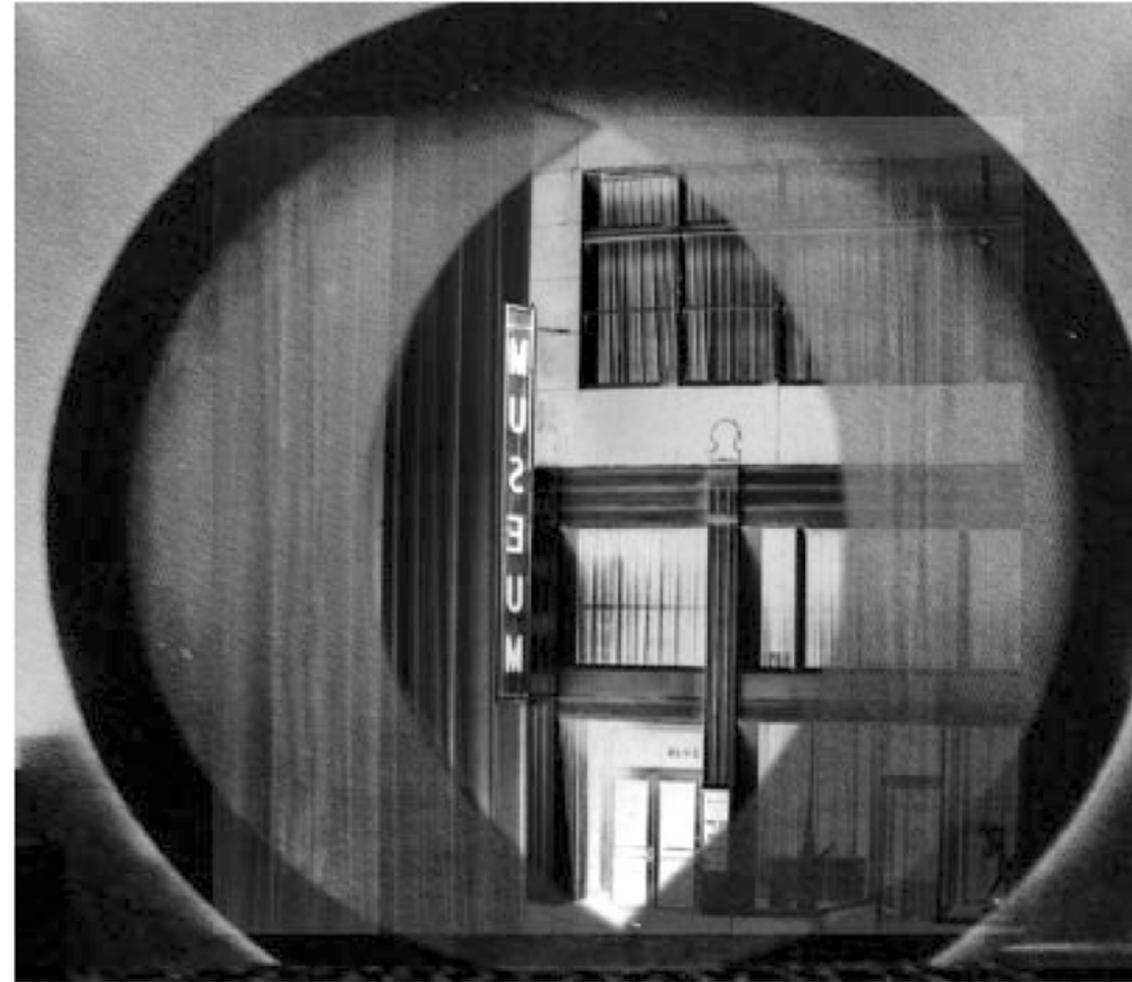
overleaf: Glass Jellyfish collection at the Naturkunde Museum Berlin, 2011



The Mechanical Mirror

(that has a memory)

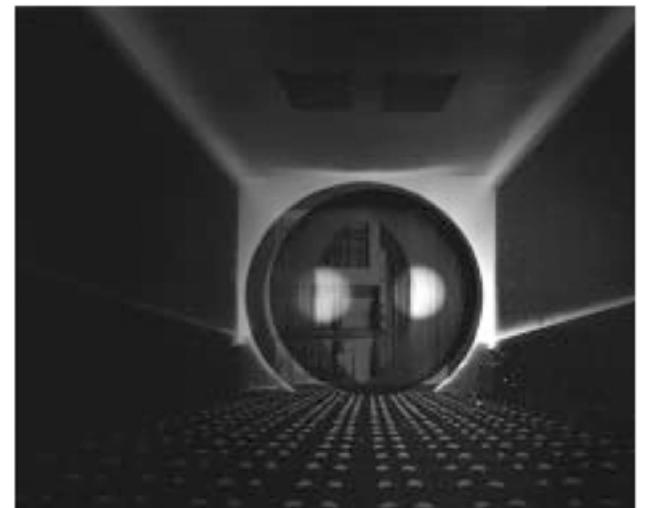
The museum as a colossal mirror in which man contemplates himself freed from material cares and dedicated profound reunion with the world of images. Images that no longer represent the world but instead have put themselves in place of the world...?



In 1948, when the first non-objective movie theatre was built, the utopian idea of a flexible movie screen was finally realized in the museum. Titled „The Mechanical Mirror,” it functioned similarly to the eye. According to the images, the film set out to show how the architectural frame around a projected image changed.

The mobile diaphragm reduced the act of viewing to the opening and closing of the eye. The viewer thus became aware that the intervening frame of the screen defined the same stimulus as that received by the eye or camera lens. Because of this duplicated gaze the entropy of the viewing frame generated the desired dynamic of the visible. The act of viewing and the act of constructing space became inseparable. The forms decomposed before they could possibly enter a discourse, and the whole vanished before one could even envision it.

Paradoxically, the spectators had to be able to lose themselves in an imaginary, endless space – even though the screen implied the opposite.



Manual of Decolonization

by Salottobuono

A manual is a cluster of instructions organized in correspondence with a detailed visual layout, in which both words and illustrations work together towards clarifying the complexity of the result. It has the aim of explaining the functioning “or the construction, the operation, the assemblage, the dismantling” of a particular device. It has the aim of enabling the final user to have a complete and fulfilling experience of that device.

Usually, drawings are the primary means of communication when one is browsing through a manual: often they could even support themselves independently of their context. They have established characteristics: they are computable, their measures are properly scaled, and they frequently make use of axonometry as crucial means of representation. The reason for this latter essential quality is that the parallel projection maintains unchanged the dimensions of the object it represents, while adding information to the tridimensional image of it. Drawings don't stand alone, as isolated items throughout the narration, but they form constellations, bigger ensemble of contents which define new horizons of meaning.

Text constitutes a complementary layer to the graphic one, and a necessary second language of the manual, acquiring a wide range of roles. Besides conventional columns, it works as a caption, a subtitle, a corollary or as an instrument for further analysis. In most of the cases notes are arranged in little blocks of lines directly connected to individual parts of a drawing.

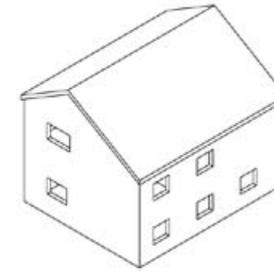
The Manual of Decolonization originates from the report of precise strategies of colonization of the West Bank carried out by the State of Israel. In a more accurate way, it is a counter-manual replying to the 1984 handbook published by the Israeli Ministry of Construction and Housing. It virtually reframes it, partitioning the different strategies of parcelling, grounding, settling, plugging, folding, homing and roofing; it manipulates then these codified agencies in order to subset their meaning. The use of the prefixes un-, de-, re- within the titles of the chapters is the output of this tactic.

The Manual of Decolonization is conceived as an open-source work-in-progress, far from being completed within this publication. The role of the designer is discharged in order to encourage the process it contributes to start. It escapes evocative or emotional methods of representation.

The Manual of Decolonization does not imply a normative role such as an urban masterplan: it generates a set of possibilities, stressing on a common and shared know-how in order to become itself a collective legacy. It doesn't discard a technical language, but it aims to simplify it and to even turn itself into a manual for autoconstruction. Since it focuses on details and on the micro-scale of architecture, its instances can be transferred to other contexts as well.

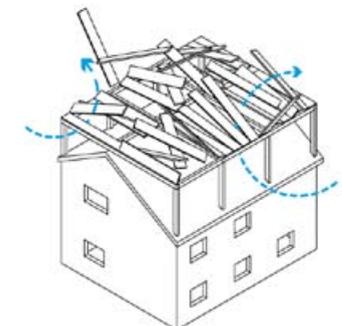
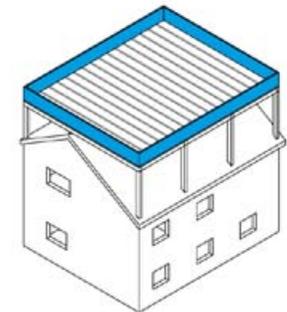
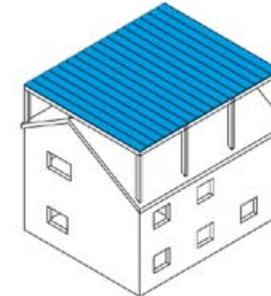
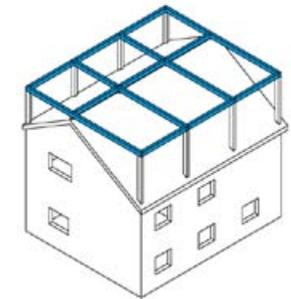
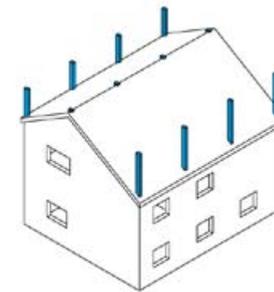
UNROOFING

The UNROOFING strategy deals with the uniformity of red-pitched roofs punctuating West Bank hilltops. Beyond responding to typical middle-class suburban aesthetics, the adorning of settlement's homes with red roofs also serves a security function: the sites can be identified from afar as Israeli, even in the case of an air raid. A transformation is proposed in order to build a new flat and collective surface over a series of private pitched-roofs.



Addition

Others – through the vertical extension of the structural frame – foresee the addition of a new floor that acts both as terrace and new roof.



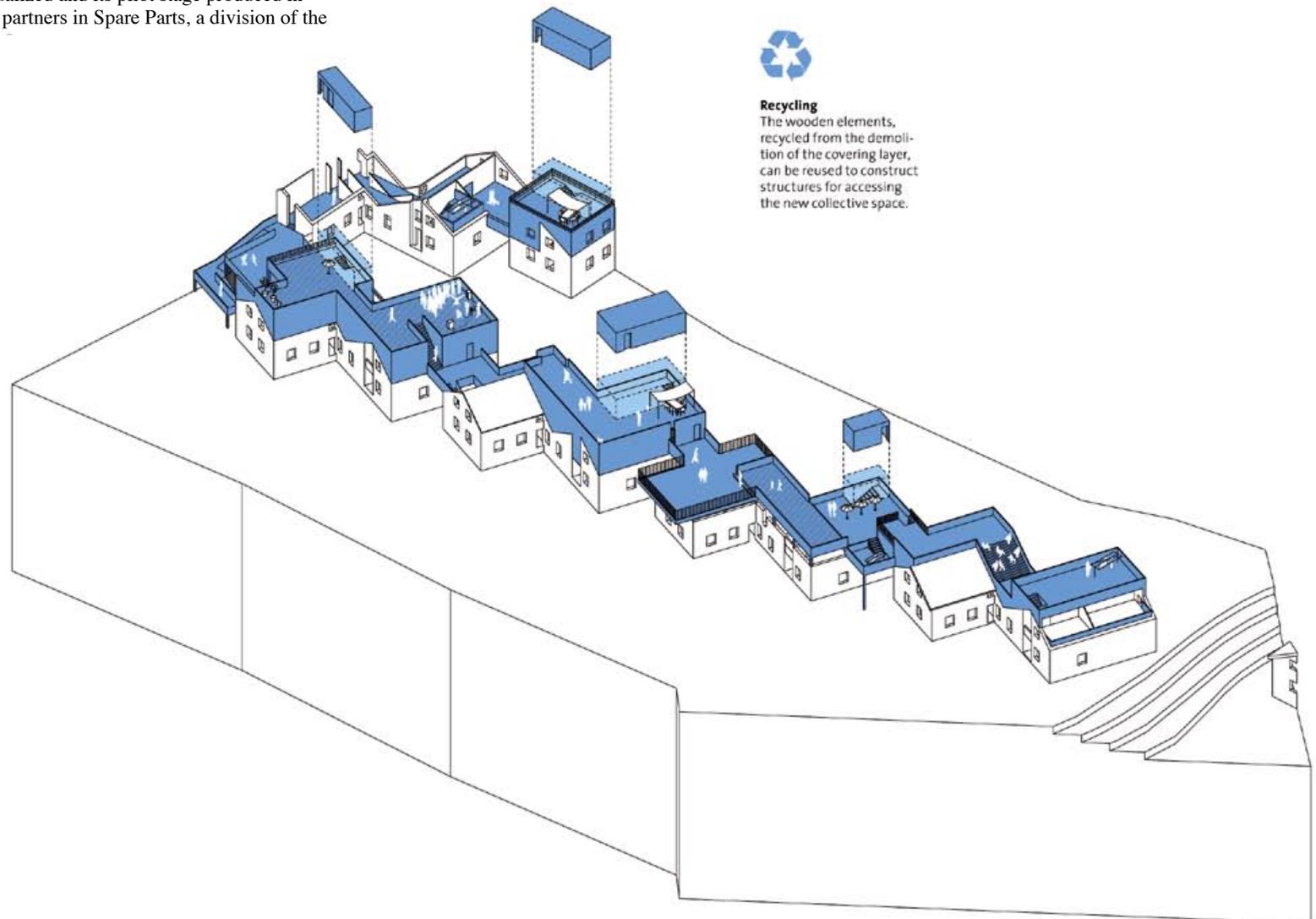
To avoid the damage that the wind can cause to the structures, the planks of the flat roof are conveniently spaced out.

The Manual of Decolonization is the result of a residency that Salottobuono made in August 2008 in Beit Sahour (Bethlehem), and it is part of Decolonizing Architecture: scenarios for the transformation of Israeli settlements, a project by the London–Bethlehem based architectural studio of Sandi Hilal, Alessandro Petti and Eyal Weizman.

Manual of Decolonization has been produced in the conceptual framework of Decolonizing Architecture. The manual has been built on the basis of a previous research, and in constant dialogue with Decolonizing Architecture.

Salottobuono, Manual of Decolonization, A&Mbookstore Edizioni, Milano, 2010
www.artecontemporanea.com/manual-of-decolonization

Decolonizing Architecture was originally conceptualized and its pilot stage produced in dialogue with Eloisa Haudenschild & Steve Fagin partners in Spare Parts, a division of the HaudenschildGarage.



Impossible architecture?

by Boris Kajmak

The children's drawing of a house.

From the scribbling at the age of two until what mental development of the age of twelve brings, humans have order in the drawn motifs. The order of the motifs appearing in drawings is somewhat logical, organic. According to research it starts with showing one-self, or mum (human), then the sun (nature) and a bird (animal), a tree (plant) and a house (home). In the beginning these motifs appear as unrelated to all social elements usually determining human actions.¹ Later their ordering will depend more on the particular context of the upbringing.

Many aspects bind the elements mentioned in the order, like familiarity, safety, etc. My particular interest is focused on the dynamics, the ones that show adjustability in time. Each of the mentioned motifs is identified by children as living and developing. This puts a spotlight on the house and explains the necessity to understand it, not only as the shelter, a safe, solid structure, there, so important in the hierarchy, but as a fluctuating form made of those emerging, emotional projections.

It's a home, not a house!

According to child psychologists, the first elaborated home shapes appear on drawings in "the schematic stage" (5 to 8 years of age).² This is the time when particular elements of the house drawing can be clearly translated into the aspects of the child's psyche. For example: closed curtains in many cases signify a sort of a family rage. From the perspective of psychoanalysis, everything present in a drawing is a genuine bearer of emotional conditions.³ The strokes/lines are not an incorrect interpretation of the structural integrity of the house. Instead, they are accurate manifestation of the subject's concepts of living expressed through the form/shape of a house.

Observing the same during the maturing of the young "artist" (a child) provides more complex structures. The form drawings take shifts accordingly to the major mental developments, along with all emotional changes. Between the ages of eight and twelve, the drawing shifts from a didactic deciphering tool of psychodiagnostics to a heuristic tool, serving the subject primarily. At this point the "artist" is already affected by the education, which emphasizes the drawing to be the most important learning methodology. Independently it is still triggered intuitively. Brain development now enables the introduction of new elements. Most significant is the physical capability to understand and question the geometrical rules of perspective and how to see. The new interests of the brain widen the analytical aspect of the drawing.² It means that the concepts based on the emotional structure are now spatialized, experimenting through the form/shape of a house.

How does fear/awe/guilt translate into a wall?

In a technical sense, experimenting provides sufficient clues to transliterate the drawn lines into manufactured lines. By observing the attempt to show perspective in the drawings, surfaces became visible together with the three-dimensional qualities of the lines. The interest progressed into the "building" of a physical structure based on elements of the "emotional cognition"⁴.

The resulting form is a permanent physical document of the temporary form. It is a possibility rather than a result. Because of the temporal development and the contextual adaptation of a child's concept of home, the making of an object is the extrapolation of one shape only, out of that permanently shifting shape. Its form is a process.

Making of the object/model signifies by no means strict architectural practice based on the factual drawing. On the contrary, it continues the questions over the interpretation of the shape. The original drawing does not define the final shape of the model but it does dictate the dominant viewpoint. Taking over the viewpoint of a child's drawing is a recognized, used

practice in the fine arts context⁵, but not explored enough in architecture. A defined viewpoint triggers the necessity of new shapes to complete a structure - in this case, the model - that is statically firm. As such, this constitutes a newly formed creative process expressed through the CAD drawing as the mediation between the children's drawing and its potential architecture.

¹ see: Polona Bizjak, *On psychology of children's drawings, unpublished essay, 2009.*

² see: Viktor Lowenfeld, *Creative and Mental Growth, 1947.*

³ see: Betty Edwards, *Drawing on the Right Side of the Brain, 1979.*

⁴ see: Paul Thagard, *Hot Thought - Mechanisms and Applications of Emotional Cognition, 2006.*

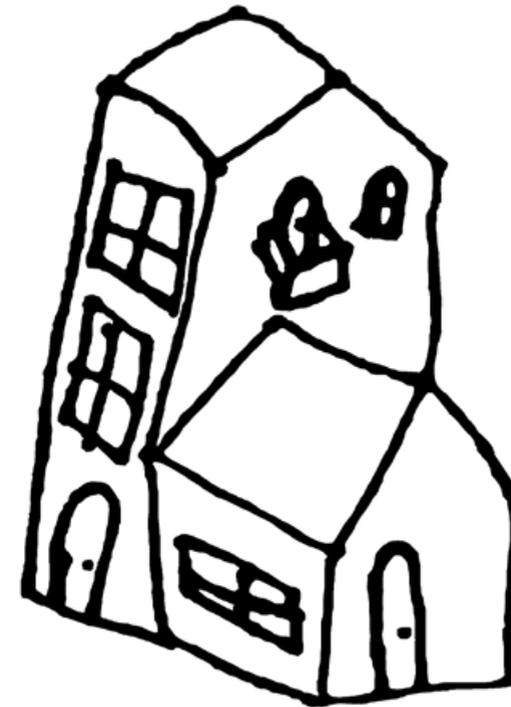
⁵ see: Paul Klee, *Creative Credo, 1920.*

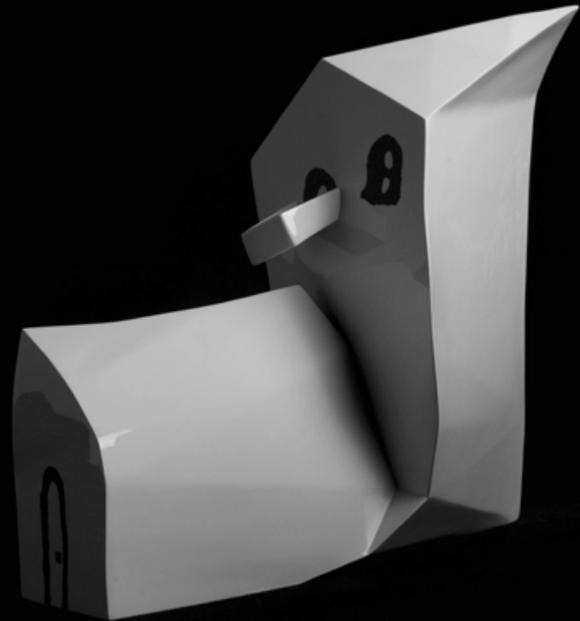
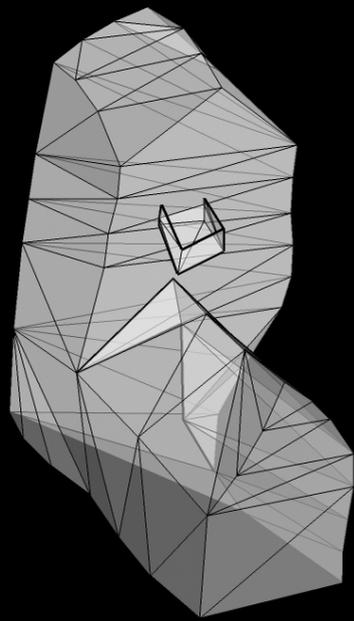
exhibition

Homes/Houses, Tenderpixel gallery, London, 2009

original house drawing

Chloe Reynaldo





GENERATIVE SPECIFICATION

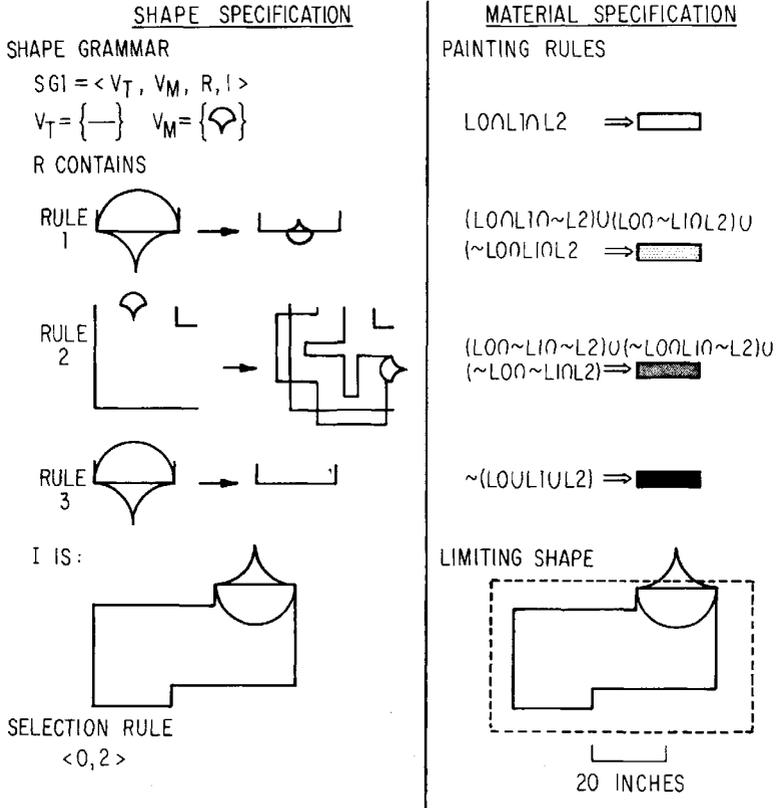


Figure 6-2. Complete, generative specification of the class of paintings containing *Urform I, II, and III*.

Shape Grammars