THE INEFFICIENT HOUSE

Anya Moryoussef
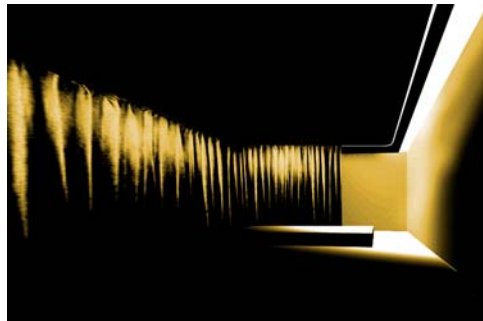
The 2005 Shinkenchiku Residential Design Competition asked students to consider the state of the world at the beginning of the 21st century and design according to the primary challenge facing the Earth's population: the finite nature of our resources. Mass production and consumption, with little long-term thinking and equally little regard for the consequences of the geometric expansion of our appetites, has led us to a crisis of proportions so great the response can seemingly only be to mitigate the disaster, as opposed to solve it. In Japan the post-war decades are sometimes called the 'Age of Satisfaction', where instant gratification is the norm, and any thought as to the ensuing contamination caused by this curse of an expectation is a concern both distant and abstract. The list of 'contaminations' put forward by the judges, Richard Rogers and Tadao Ando, is daunting: 'global warming, ozone destruction, receding glaciers, and the depletion of mining, farming, and marine resources.' The contribution to the mitigation of this slowly unfolding panoply of catastrophes, where architecture is concerned, is encapsulated in the multifarious term, *sustainability*. Rogers and Ando write: 'Numerous hopes are confided in this word, among them a desire for intergenerational ethics, for preservation of the ecosystem, and for historical and cultural continuance.'[1]

Something between one third and one half of the earth's resources (renewable and non-renewable, including energy from manual labour), is directed towards construction and development. Tadao Ando writes, 'Architecture is a methodology for creating an artificial environment within nature, and essentially it cannot be implemented without being accompanied by environmental destruction. With its very existence being a burden on the environment, it is no exaggeration to describe architecture as a major "culprit".' Ando's response, in regards to the question of sustainability, is to advocate the practice of recycling materials, focusing, as a correlative, on the practice of increasing our use of renewable resources. This is, by and large, a technical answer, and Ando explains himself with references to 'ecological symbiosis houses,' the increased use of solar power, circular usage of water, planted rooftops, composting trash, etc., but admits these are not

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[1] All quotes from Ando and Rogers on Shinkenchiku Residential Design Competition 2005. www.japan-architect.co.jp/english/5info/topics/skcompe2005/skcompe2005.html.

'fundamental solutions.' 'The issue,' he writes, 'is not to discover new values in architectural elements, but to *construct new relationships between architecture and nature*.' [italics added]

ECO SYM HOUSE

To these questions and ideas, Richard Rogers adds the significant observation that the last 25 years, theorists have been 'rethinking and questioning of old orthodoxies, not least the definition of sustainability and the effects of continuing development on the environment.'

From these two architects, and from the competition brief they supplied, I sought to follow Rogers' words, stepping outside the traditional mode of thinking about sustainability. In essence, I attempted to reevaluate the basis of the current trajectory of sustainable architecture, as articulated by Ando's ideas regarding recycling, minimising wastage, and using what we can colloquially describe as 'environmentally friendly' materials. After an extended inquiry into what Ando and Rogers regard as good sustainable architectural practice, I found their solutions to be *technical*, and only able to mitigate (not that they ever claimed better) a set of problems that will inevitably, with the uncontrollable increase in the world's population, become more urgent. In returning to Ando's words about the need to reconcile the practice and use of architecture to nature, I thought about reconnecting architecture to *human* as opposed to material nature. I set out to re-evaluate the idea of sustainability, to create something that might ultimately be more potent in terms of results and more responsive to the questions at stake, and provide the basis for a possible solution to the problem of sustainability.

Cover. The Technological Society by Jacques Ellul. 1965.

The Technological Society, the major work by the post-war French theorist Jacques Ellul, provided the major impetus for my revaluation. Ellul is no mere continental abstracter: he is a hero of French Resistance, a Christian theologian, and an anarchist. The former is perhaps the inevitable result of the latter two qualities. Anarchy, as explained by the Canadian writer George Woodcock, is a not a state of chaos without rules, as we often think of it. It is an idea that humans don't need rules, because we can generally fend for ourselves, outside governing institutions, and when we need help, we will be, as Jean-Jacques Rousseau wrote in his Discourse on Inequality in the eighteenth-century, guided by our natural compassion for our fellow man (a good Christian idea, even if Rousseau derived this 'law of nature' from what he considered a solid anthropological source – his imagination). Woodcock's notion of 'mutual aid', that assumes the person will be free, and society will still function as a result, is the foundation upon which Ellul writes his extraordinarily incisive, indeed prophetic, work about the destructive consequences of the mass technological society on the relations between individuals, and the relation of the individual to him and herself in the modern era.

'The purpose of human techniques is to defend man,' writes Ellul.[2] (Here it will be instructive to trace the development of *techne*, the Greek work that can roughly be translated as technique, and technology, as explained by Martin Heidegger in The Question Concerning Technology. Technique is a manual thing. It works alongside nature, amplifying it and focusing it. The example is the sailboat: the sail catches the wind, and the boat is propelled forward as a result. There is a connection between the individual and nature. Technology is mechanical. With the mechanical object as the intermediary between individual and nature, the connection is lost. This is the motorboat. Regardless of which way the wind is blowing, the boat will be propelled forward. Technology allows the individual to act *in spite* of nature, to disregard it. Heidegger points to the difference between the mill, turning with the river, and the hydroelectric dam, diverting, covering, and altering the landscape around the river, to underline his point.[3])

the motor boat vs. the sail boat: technology vs. techne

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[2] Ellul, Jacques, <u>The Technological Society</u>. 143.

[3] Heidegger, Martin. <u>Basic Writings</u>. 72.

Ellul charts the consequences of the dominance of technology, showing how what started as an impulse to defend the individual from nature turned into the thing that ineluctably separated man *from* nature. The move from techne to technology is an abstract shift – a change from reality to theory that had started long ago with Plato and the Greeks, who exalted theory, which comes from contemplation, a fascination with the space between the human world (physis – mutable and inconstant) and the divine night sky (cosmos – fixed and systematic). Ellul notes that Archimedes used to destroy any models he used to construct his theories, once he had demonstrated his proofs geometrically.[4] But the greater shift occurs in the seventeenth century, with the Discourse on Method by René Descartes. Descartes, in placing internal 'intentional' reality – the mental conception of the world - before external, 'secondary' reality, he seals the shift in balance between the individual and the world around him. There are no words more beautiful or far-seeing than those of the poet John Donne (1572-1631), who died six years before the publication of the Discourse, explaining the consequence of this change:

> And new philosophy calls all in doubt,
> The element of fire is quite put out,
> The sun is lost, and th'earth, and no man's wit
> Can well direct him where to look for it.
> And freely men confess that this world's spent,
> When in the planets and the firmament
> They seek so many new; they see that this
> Is crumbled out again to his atomies.
> *'Tis all in pieces, all coherence gone,*
> *All just supply, and all relation*
>
> (An Anatomy of the World, 1611 [italics added])[5]

Ellul shows the reader in the first chapters of his book how the shift from techne to technology, and the ensuing spread of technology, has served to separate the individual so much from nature that he or she has lost any sense

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[4] Ellul, Jacques, <u>The Technological Society</u>. 89.

[5] Donne, John. <u>The Complete English Poems</u>. 293.

of their own personal nature as a result. Instead of adapting nature to ourselves, we have begun to adapt ourselves to the mechanical world, and by becoming part of a rationalised *mass* society, we've lost our individual selves. 'Consider a worker who is subject to a machine and its caprices,' writes Ellul. 'He must follow the machine's tempo and breathe its waste products. At the same time, he must fight off fatigue and boredom. In short, he must perform the work of two men. The efficiency expert comes and institutes procedures to automate actions and save energy by transforming everything into mechanical reflexes.'[6]

His examples of factory work are indeed striking. Man has involuntarily become machine (even as I type this report on the keyboard, I feel a chill of self-recognition in this argument). He focuses on the change in mental processes brought about as a result of the technologisation of society, ultimately internalising the separation of the individual from nature, making the cause of this effect disappear from view.

> The aims of technology, which were clear enough a century and a half ago, have gradually vanished. Humanity seems to have forgotten the wherefore of all its travail, as though its goals had been translated into an abstraction or had become implicit; or as though its ends rested in an unforeseeable future of undetermined date, as in the case of Communist society. Everything today seems to happen as though ends disappear, as a result of the magnitude of the very means at our disposal. Comprehending that the proliferation of means brings about the disappearance of the ends, we have become preoccupied with rediscovering a purpose or a goal.[7]

In a time when technology no longer does the work of separating ourselves from nature, it cannot be a question of devising new technologies to reconnect ourselves, as Ando and Rogers, and so many of their view, argue. It is a question of reprogramming, or rather *deprogramming*, ourselves.

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[6] Ellul, Jacques. The Technological Society. 187.

[7] *Ibid*. 214.

Returning ourselves to nature, *our* nature, returning from technology to techne is not a regressive move. It is not borne of a Luddite impulse. It stems from a conviction that is the foundation of Jacques Ellul's work – from the conviction of Rousseau. Our nature is not to destroy. Humans naturally act in concordance with nature. We have come to gain dominion over it, but lost so much in the process. The matter now is one of recalibration.

The fulcrum upon which we must begin to rebalance ourselves is our relationship to time. In the modern period, we have utterly lost any natural connection to time, and moved into an age of mechanised time that has nothing to do with our individual rhythms and intentions. Prior to the clock, we had the public sundial (an example of techne, of course). In the Medieval Period came the mechanical clock tower – technology. Overcast day, short day – we now always know the time, and every day begins to resemble, in this fundamental aspect, the last, regardless of season and location on the planet. From our natural relationship to the sun, from a sense of time that is natural to us as biological organisms, we now subdivide the day according to some abstract idea of hours, minutes, and, increasingly, seconds. The more accurate, the more abstract – the more meaningless. We no longer have any connection to a human scale of time. Pilgrimages by foot to places such as Santiago de Compostella, for example, are ways people try to restore the natural rhythms of time to their lives.
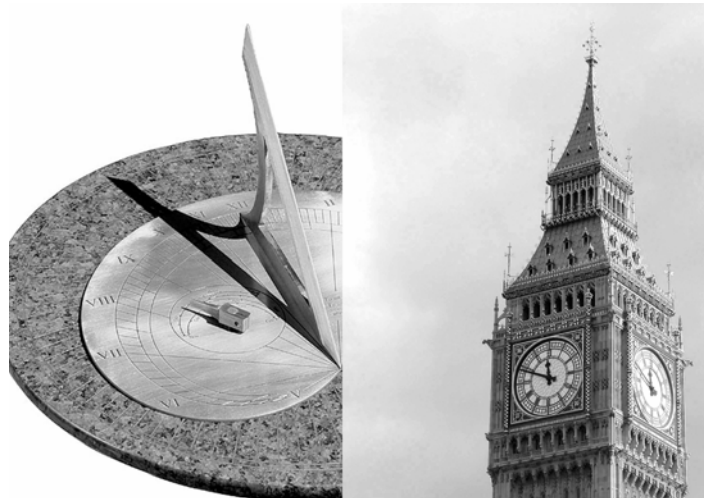
the sundial vs. the clock tower: techne vs. technology

Indeed, the problem of time is critical, and has given birth to a wide range of fascinating interpretations. The chief paradox of time saving machines – the progeny of the clock – is that they increasingly *deprive* us of time. 'Cars save time, but drivers don't spend less time in traffic than non-drivers. Time gained is invested in consumption, so acceleration bears congestion – as much as, or even more than that it enhances life, it undermines it. Life in the fast lane is socially and environmentally unsustainable. Acceleration drives growth, driving more acceleration – it's epidemic.'[8]

It's the epidemic of an unsustainable zeitgeist. Ellul doesn't see an answer to it, but he only looks to the fields of industry and psychology over the course of his investigations. He doesn't consider the natural correlative of time, which is space, and thus never considers architecture, even as his arguments are naturally applicable to our field.

The relationship of time and space – and the acceleration and diminishment of both – comes to our experience via the advent of the railroad in the earliest quarter of the nineteenth century, and its development, throughout the course of the next seventy five years, into the medium of mass transportation, the way in which most people experienced the world around them. In The Railway Journey, the theorist and researcher Wolfgang Schivelbusch recalls how the speed of the railway, moving faster than time, led to the standardisation of time zones. Towns mere miles from eachother were now separated by randomly drawn meridians – and space became a similarly unreal, an unstable quantity as a result.[9] *Real* space, the space we experienced in our everyday lives, was recharted according to some abstract, Cartesian notion of space – a grid. The advents of ferrovitreous architecture and impressionistic painting (the two converging in Claude Monet's great 1877 series of eleven paintings and numerous preparatory sketches of the Gare St Lazare), are the direct result of this increasingly abstract, unstable, and intangible relationship between the individual and space. Trains ran though the countryside at such a pace that the land passed as a blur to the contemporary viewer, utterly unreal, and captured as such in many of Camille

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[8] Doors of Perception. www.doorsofperception.com.

[9] Schivelbusch, Wolfgang. The Railway Journey. 72.

Pissarro's paintings of the areas along the Seine on the way from Paris to Argenteuil, where so many Parisians (the Impressionists, staunch bourgeois, of course among them) vacationed on the weekend. In a number of Monet's other paintings, we see factories encroaching upon the idyllic banks of Argenteuil, the smoke of the coal-fired engines and pilons of iron bridges sullying nature as a result – one of the earliest casualties of modern technology. In Gustave Caillebotte's two paintings of the Pont de l'Europe, the bridge leading to the Gare St Lazare on the southern fringe of 1870s Paris, best illustrate the abstract, Cartesian grid's total dominance of everyday experience. The massive steel bars form, properly speaking, the subject of the painting, utterly obscuring the passerby's view of anything except, of course, for the ethereal smoke – that favourite trope of the Impressionists – from the trains passing underneath.

Claude Monet. Gare St. Lazare; Train from Normandy. 1877. Oil on canvas.

Camille Pissarro. View of Rouen, St. Sever, Morning, 1898. Oil on canvas.

Gustave Caillebotre. Le Pont de L'Europe a Pairs. 1876. Oil on canvas.

As Ando reminds us, it is architecture that bears a great deal of responsibility for the current state of the world. But Ellul does not look at architecture as a way out, and it is architecture – I am trying to see beyond the natural solipsism of the architect – that is best suited to solve this first problem of the new millennium. If mechanical time, its abstraction and indeed its mastery over our lives, leads directly to a unsustainable mode of life, then it is a new understanding of time through a reinterpretation of space – the two being inextricably linked, logically and Einsteinianly – that we will be able to live better according to our natures, our own natural rhythms and paces, and this, consequently, will cause us to live in accordance with the nature around us. Ando says architecture is an artificial divide between human being and the nature around him – but this divide can be either technical in nature, or can act like a work of techne. A reconnection is needed. It is unarguably *only* through a reconnection of the individual and the context in which he or she lives that will allow the individual to understand the consequences of his or her actions upon the surrounding environment, and it is only through that understanding can we finally begin to change, for we only change when we witness and suffer the consequences of our actions without any intermediary. That reconnection comes about with a new sense of design that *forces* the individual to live according to their own natures, and not some abstract one that has little to do with the human being or the natural world around him.

Efficiency isn't the solution to sustainability, it's the problem. So long as we are watching the clock, we subscribe to the ideas that drive

technological innovation. Squeezing the most out of something, whether it is time, space, light, water, or whatever, makes you view that thing, ultimately, as a quantity.

The concept behind this dwelling is to allow space to once again dictate the pace at which we live, and to make us relearn to appreciate to revalue, the qualities of the day to day, by prolonging the process of getting form a to b. In addressing the space between we lead the inhabitant to reexamine the way he lives. This is the most important thing architecture can offer to the quest of sustainability.

Physis versus cosmos, Donne versus Descartes, techne versus technology: the former all value the world as it is, the latter as it might be. The problem of our current trajectory is that it values the world as it might be, and the current solutions provided by advocates of sustainability only try to solve the problem with a version of the problem itself. Rogers writes that we must reexamine the old orthodoxies, but cannot or will not make the greatest break of all. Ando writes that we must return to our natures, but does not see how this must mean, first and foremost, our human natures.

Architecture – good architecture, at least, and we are only going to concern ourselves with good architecture from here on in – involves the five senses. When architecture becomes too much of a machine, when craft is negated by mechanisation (a demand of the mass economy, for the machine can never work fast enough), the sensual is diminished. In the current model of living, where we inhabit spaces sealed off from their context, where fluctuations don't occur, where light is consistent, where moisture levels are consistent, where nature is constantly overriden by personal desire, where being able to do something, regardless of consequence, is all the invitation needed to do that thing, we lose touch with nature and its natural fluctuations – the basis of our connection with the external world. If we lose that, how can we expect to concern ourselves with ecological sustainability? If global warming is a catastrophe but it's always 21°C, how can we be expected to care?

The first step in returning to a sustainable model of living is in returning to a world where we are in contact – direct contact, through our senses – with the world around us. In order to alter our behaviour and

attitude, we must understand its effects and, more importantly, its repercussions.

Squeezing the most out of something, whether it is time, space, light, water, or whatever, makes you view that thing, ultimately, as a quantity. The first objective of the house was to return to a world of qualities. This idea is in conjunction with the related notion that we must focus on reintroducing techne to our construction, in contradistinction to technology. Architecture will always have an element of the artificial, and will necessarily divide us from the nature around us – what good's a shelter if it doesn't serve to protect you from the elements? – but why not return to the model of the sailboat, the elements working according to their nature and to their context, and eschew the model of the powerboat, overriding its context and making is seem natural for man to speed over water at 90 miles an hour?

The first step and one of the design principles of our iconographic revaluation of the notion of sustainability was to return sensual qualities to significant parts of the house – the door, the stair, the window, etc – by *not* making them as efficient as possible. In this way, the user will not mindlessly open a window to let in air; he or she, in our design, will first need to part an oversized, floor-to-ceiling curtain, to reveal a small window whose light, in the morning, awakens the one who sleeps in the room – a room, à la Adolf Loos, whose only purpose is as a place of rest. The experience of the sun, whose natural role is as the earth's sovereign timekeeper, is heightened; its place in the life of the house's occupant is ritualised. Rituals focus on process rather than result – techne, as opposed to technology. The process of letting the sun into the room takes time and work on the part of the occupant. The time it takes to go from state A to B, from darkness to light, reflects the time it takes nature to make that transition. The reflection is analogous of course, but effective when contrasted to the switching on of a lightbulb, where light arrives instantaneously, simultaneous to the desire for its arrival (unless someone has forgotten to replace an old bulb) by the occupant. That is a state of mindlessness, and unconscious. Here the result is the opposite, and this consciousness causes the occupant, as a result, to value the commodity, light, and the air that comes eventually through the window for he or she has worked for it. The window is deliberately small. The more focused the quantity of a thing, the greater its quality and value.

In thinking about the roles of sensuality, ritual, focus, and quality (as opposed to quantity) in architecture, Edward and I came upon the title that encapsulates this major first step, the fount from which all following decisions flow, and the overall idea of the project: the Inefficient House. In naming our project in this backhanded way, we are underlining our own reinterpretation of the idea that efficiency – the current basis of sustainable design, the purported solution to our problems. We say, quite plainly, efficiency isn't the solution to the question of sustainability, it's the problem. In being more and more efficient, we merely give ourselves more time to consume – think of the example of the driver stuck in traffic.
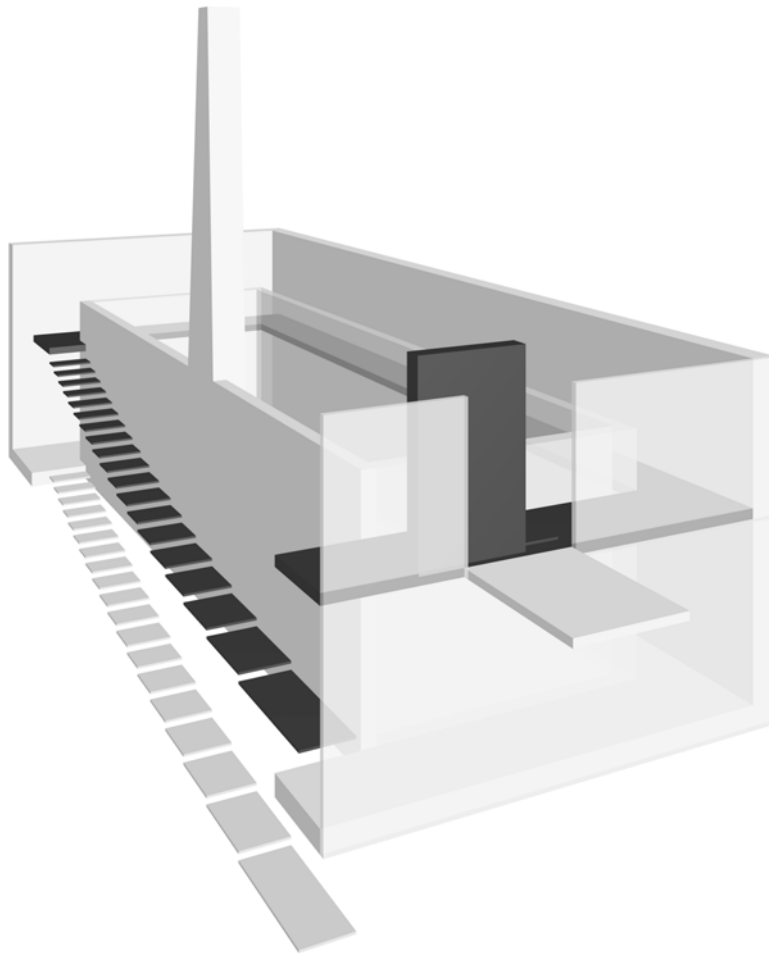
The Inefficient House. Axonometric rendering showing the heavy door, the (un)winding path, and the slow stair.

The concept behind this dwelling is to allow space to once again dictate the pace at which we live, and to make us relearn to appreciate to revalue, the qualities of the day to day, by prolonging the process of getting form a to b. We have already touched upon the design of the window, but it is with the approach to the house that we should begin. The Unwinding Path slows down the approach to the house, causing the user to focus on the path where generally the path is short, in terms of both time and distance. In that journey, a natural self-awareness will arise, focused by the absence of any other distractions and therefore the primacy of the experience itself. Self-awareness is a subject I have explored before, in a project I completed in 3A – design a room – which I still regards as one of my most successful works, especially in terms of its continued influence on my thoughts and designs. The room is one which, like this house, is approached circuitously, and this route into the room, like our route into the house, is the first step in a protracted ritual which is the use of the space. Charlotte Salomon was a young German woman who painted a series of thousands of pictures which she collected under the rubric, *Leben oder Theater?* – Life or Theatre? Her autofiction – her use of the events of her life and family history in the creation of a fictional narrative – is a protracted act of self-reflection, an attempt to look at her life objectively through the daily rituals of life itself, echoed in Salomon's own daily ritual, which was the creation of at least one new canvas to add to the collection. Salomon, in reflecting on our own natures and habits, arrives at this title, Life or Theater – the latter being a studied and focused reflection of the former, an idea that permeates our design.

*Charlotte Salomon. Plate from Leben oder Theater? c. 1940. Gouache on paper.*
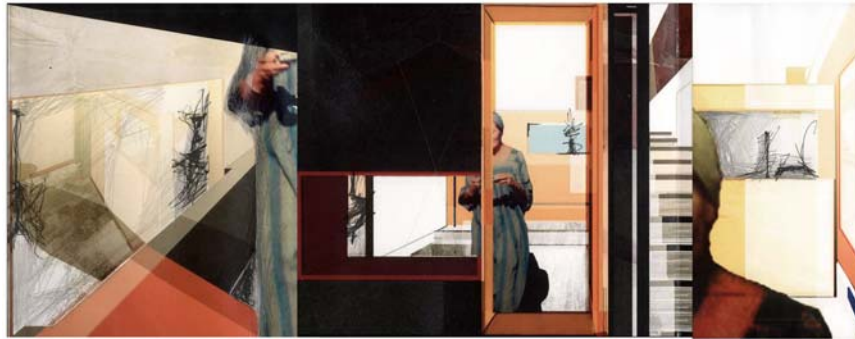
Excerpt from my 3A project: A Room for Charlotte Salomon.

The next element is the Heavy Door. The idea here is to extend the moment of the threshold, one of the key elements of architecture as well as of the entire question of sustainability. You do not instantaneously pass from the outside in. By prolonging the time it takes to move between the two spheres, the user again cannot ignore this passage, and with repeated usage, the implications of this passage. On a sensual level, the weight of this door is a constant signal to the one who passes from outside to inside what this passage entails, its weight – a weight not borne or mitigated by hinges, but impressed upon the user who must first push the door behind the threshold and then slide it to the slide, then repeat the process in reverse in order to close the house off – a reified symbol of architecture's separation of the individual from his environment.
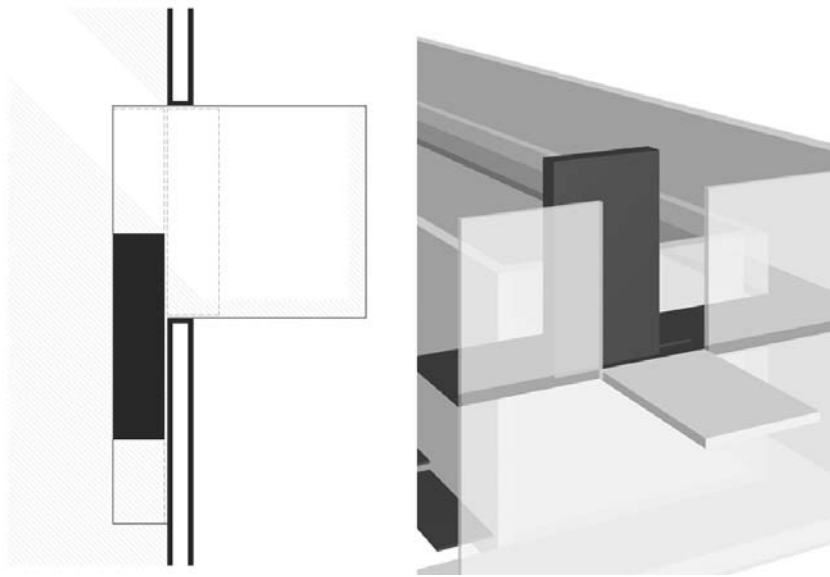
The Heavy Door. Plan and Axonometric.

We considered the Slow Stair the major move of our design. The path from the Heavy Door to the Slow Stair mimics the approach to the house, winding around the living space from above. The approach to the house takes the house as its subject of examination; the approach to the slow stair takes the space of living as its subject, with the user circling above it like her or she might an object of study, with the path deliberately imitating a balcony at a theatre – the theatrical techniques of the Charlotte Salomon project are again present. As the stairs descend, the tread increases in length. In practice, a longer tread will force the person climbing down the stairs to slow their pace, indeed to readjust it according to their *own* pace. The move from the standard step to the longer, shallower step is a move against the Cartesian ordering of space and its consequence is a new rhythm, a new sense of time. As well, the move from the balcony to the descent of the stair separates the viewer from his or her view of the living space. Once viewed and encircled, the individual, in the long and slow procession downwards, can reflect upon the living space, which has deliberately left clear of objects or divisions in this theoretical project – the message, in this case, doesn't need details to support it.
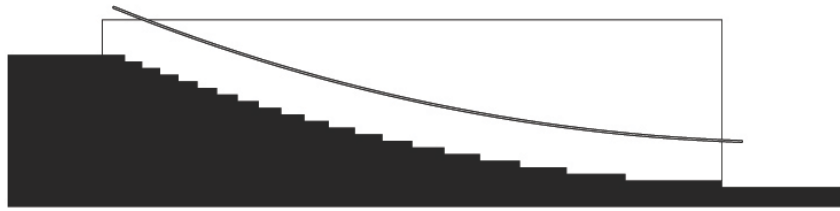
The Slow Stair. Section.

Thusfar self-reflection, arrived at through the tools of sensuality in design and theatricality in plan have led to the creation of a space that is designed for the individual to reflect upon his own relationship to space, time, and the world of nature beyond the walls of the house. The details included in the design are meant to encompass these ideas on a smaller scale. Like the light of the window, for instance, water does not spring instantly from the tap. The water needs to be pumped, and the tap will measure it out before it pours it into the basin. Only when the first container is full does it tip – there is an awareness, on the part of the user, of the quantity, and therefore the quality. The design is also a nod to Ando, as this feature – where the water does not pour until one compartment weighs down the other, is a typical feature of Japanese fountain design. Every aspect of the house works along the underlying principles; micro is meant to conform as best as possible to macro.
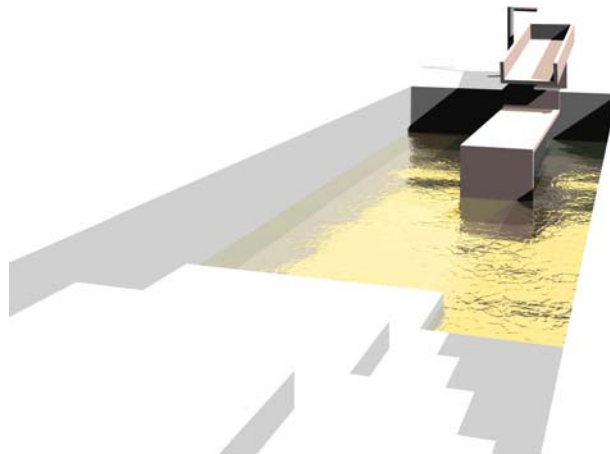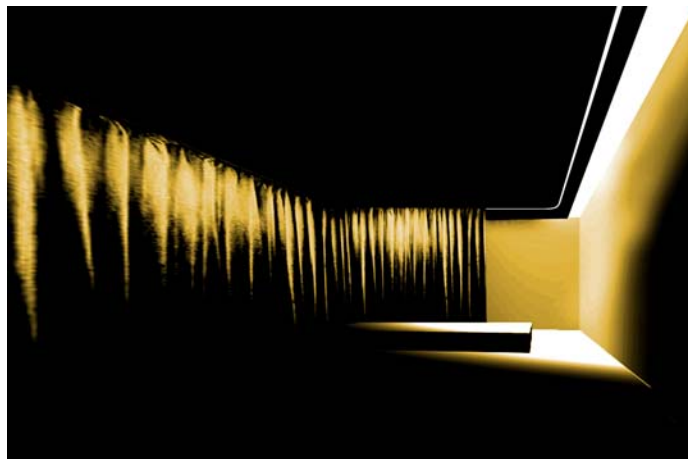

The Water Room. Rendering.
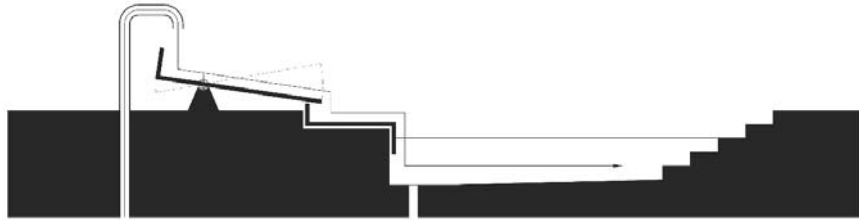
The Water Room. Partial section.
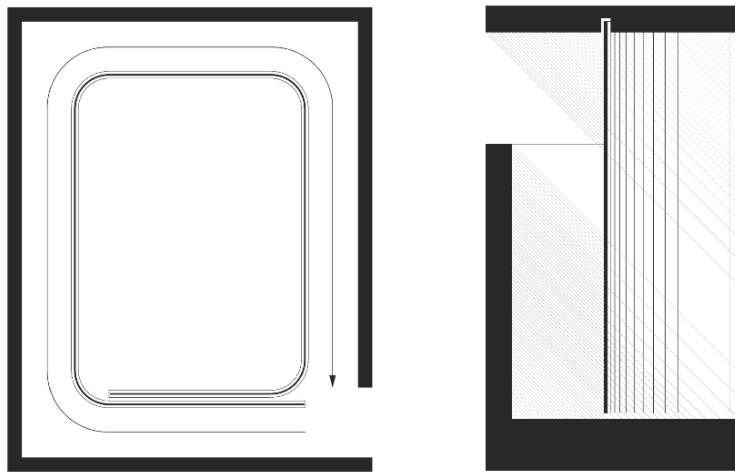
The Bedroom. Reflected ceiling plan and partial section.

The Bedroom. Rendering.

In the vein of John Hejduk's theoretical cartoon houses, this house, which Hejduk might call 'The House for the New Hedonist' is a reduction, a simplistic but instructive typology, to be seriously considered as an alternative, and perhaps even a solution to the grave questions posed by our unsustainable excesses. The typology says that we cannot any longer to solve the problem of technology with a technology response. Living constantly in mediated environments we have grown out of touch with our environmental context – where energy and waste appear and disappear like magic – and as such the idea of sustainability, so long as it continues to buffer us from reality, remains an abstract notion. Our project both invites and forces the user to reconnect with the environment around him or herself, and to reconnect with him or herself directly as s result, in the belief that such a reconnection will *necessarily* lead to a more direct relationship between the individual and his or her environment. Our project is not reconsidering a formal or technical typology, but a cultural or iconographic one. And though it is an abstract answer to the question, it is also a very direct revaluation of the basis of our approach to the problem of sustainability.
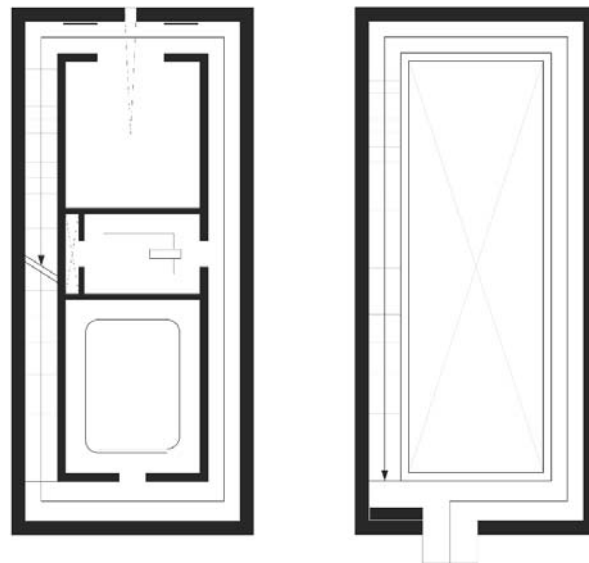
The Inefficient House. Plans.

WORKS CITED

Descartes, René. <u>Discourse on Method and Related Writings</u>. Trans. Desmond M Clarke. Londond: Penguin Classics, 1999.

Donne, John. <u>The Complete English Poems</u>. London: Penguin Classics, 1997.

Doors of Perception. www.doorsofperception.com. [world wide web] 12 May 2005..

Ellul, Jacques. <u>The Technological Society</u>. Trans. John Wilkinson. New York: Vintage Press, 1965.

Heidegger, Martin. <u>Basic Writings</u>. Trans. David Farrell. New York: HarperCollins Publishers, 1993.

Hejduk, John. <u>The Lancaster/Hanover Masque</u>. Montréal : Centre Canadien d'Architecture, 1992.

Loos, Adolf. <u>On Architecture</u>. Trans. Michael Mitchell. Riverside, California: Ariadne Press, 2002.

Nietzsche, Friedrich. <u>The Portable Nietzsche</u>. Trans. Walter Kaufmann. New York: The Viking Press, 1964.

Rousseau, Jean-Jacques. <u>The Essential Rousseau</u>. Trans. Lowell Bair. New York: Penguin Group, 1975.

Salomon, Charlotte. <u>Life? Or Theatre?</u> Trans. Leila Vennewitz. Zwolle: Wanders Publishers, 1998.

Schivelbusch, Wolfgang. <u>The Railway Journey</u>. Los Angeles: University of California Press, 1987.

Shinkenchiku Residential Design Competition 2005. www.japan-architect.co.jp/english/5info/topics/skcompe2005/skcompe2005.html. [world wide web] 28 February 2005.

Woodcock, George. Anarchism: A History Of Libertarian Ideas And Movements. Toronto: Broadview Press, 2004.