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READING THE DESIGNED ENVIRONMENT

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La cerimonia di apertura del George W. Bush's Presidential Center si è tenuta il 25 aprile 2013, esattamente dieci anni dopo il "Mission Accomplished Day" in cui gli Stati Uniti annunciarono la vittoria nella guerra contro l'Iraq.

I 19,200 mq del complesso comprendono una copia dell'Ufficio Ovale e un museo dedicato al 43° presidente americano. Con la sua collezione di 80 terabytes di informazioni digitali, oltre 200 milioni di e-mail e 43,000 documenti, il Centro è una risorsa unica per studiare gli obiettivi e le motivazioni dell'amministrazione Bush in casi come l'invasione dell'Afghanistan e dell'Iraq, la decisione di non sottoscrivere il Protocollo di Kyoto o di abbassare la percentuale di arsenico ammessa nell'acqua potabile, l'apertura dell'Arctic National Wildlife Refuge alle trivellazioni petrolifere o la promozione delle miniere di carbone *mountaintop removal**. L'edificio, a firma di Robert A.M. Stern, è certificato Platinum LEED. Le sue caratteristiche in tema di sostenibilità comprendono un tetto-giardino, pannelli fotovoltaici e materiali di costruzione di provenienza locale.

Secondo Mark Langdale, presidente della George W. Bush Foundation, "il Bush Center e il lavoro che stiamo portando avanti riflettono i principi che hanno guidato il presidente e la signora Bush nel loro impegno al servizio della nazione, compresa la loro costante dedizione alla cura e alla conservazione del territorio".

The opening ceremony of the George W. Bush's Presidential Center took place on April 25th 2013, exactly ten years after "Mission Accomplished Day" when the US declared they had won the war against Iraq.

The 19,200 sqm premises include a replica of the Oval Office and a museum dedicated to the 43rd president. With its collection of 80 terabytes of digital information, more than 200 million e-mails and over 43,000 artefacts, the center is a unique resource for those seeking to investigate the administration's goals and motives in cases as diverse as the invasion of Afghanistan and Iraq, the decision to withdraw from the Kyoto protocol, the decision to lower standards for arsenic in drinking water, the opening of the Arctic National Wildlife Refuge for oil drilling or the promotion of mountaintop removal coal mining.

The building, by Robert A.M. Stern, is Platinum LEED certified. Its sustainability features include a green roof, photovoltaic panels and regionally sourced building materials.

Mark Langdale, president of the George W. Bush Foundation, comments: "The Bush Center and our ongoing work are a reflection of the principles that guided President and Mrs. Bush in their public service, including their longstanding commitment to conservation and caring for the land".

* Tecnica di estrazione del carbone che consiste nel prelevare il materiale dalla cima delle montagne, il che si traduce nella letterale rimozione di parte della montagna stessa.

L'accezione attuale della parola *sostenibile* – abbreviazione di *sviluppo sostenibile* – viene costruita con cura alla fine degli anni Ottanta. A coniare il termine è la Brundtland Commission, organismo internazionale delle Nazioni Unite, nel quadro della sua missione più ampia mirata a creare “maggiore cooperazione [...] tra le nazioni”, “definire percezioni condivise circa le questioni ambientali di lungo termine” e formulare “ideali e obiettivi futuri per la comunità internazionale”. In altre parole, l'obiettivo era redigere una definizione il più possibile condivisa e trasversale rispetto alle barriere ideologiche, economiche o di altro genere. E la commissione lo ha centrato in pieno. Il risultato è che oggi è virtualmente impossibile essere contrari al termine “sostenibilità”: ogni governo o ente che si rispetti ha la sua politica “sostenibile”, così come definita dalla Brundtland Commission. La discussione sembra essersi spenta. È come se tutti, a parte una risibile minoranza, fossero d'accordo sul modo giusto di procedere: “Assicurare il soddisfacimento dei bisogni della generazione presente senza compromettere la possibilità delle generazioni future di realizzare i propri”.

A un esame più approfondito, si scopre però che il consenso è a dir poco superficiale. È quasi scontato, infatti, essere d'accordo con il principio dello sviluppo sostenibile: il concetto è stato *progettato* proprio con questo fine e la sua dilatazione semantica nel corso degli anni non dipende da una “erosione di significato”. Ma se vogliamo che il termine sia utile in situazioni più concrete, è necessario interpretarlo.

Ad esempio, per chi considera imprescindibile per la società la mobilità individuale, una spider elettrica è un prodotto sostenibile. Ad altri invece potrebbe sembrare un enorme spreco di risorse.

La definizione di cosa sia un “bisogno” è molto difficile da precisare nelle aree del mondo che vivono nell'abbondanza. Con l'invenzione del concetto di “sviluppo sostenibile”, le Nazioni Unite hanno trasformato l'ambientalismo – quasi da un giorno all'altro (e molto deliberatamente) – da problema che riguardava gli attivisti a causa che poteva essere abbracciata da tutti. Una volta convinti, i cittadini hanno iniziato a chiedere che l'economia, i governi e le istituzioni facessero “la cosa più sostenibile”. Influenzare le implicazioni concrete di questa frase è diventato di cruciale importanza per le industrie, i governi e gli altri gestori del potere. Oggi, “sostenibile” è una forza sociale quasi senza rivali e ancora in crescita. Dietro le quinte c'è una dura lotta su chi debba tenerne le redini. In questo contesto l'architettura ha un doppio ruolo. Trasversale a molte discipline, agisce come indicatore dei tanti cambiamenti che la sostenibilità ha causato nel gusto, nel sistema dei valori e nell'apparato legislativo. Poi come parte attiva nel dibattito: gli architetti sviluppano e descrivono visioni di sostenibilità, hanno il potere di provarne la fattibilità e sollecitarne il desiderio. 🏠

Today's understanding of the word *sustainable* – which is short for *sustainable development* – was carefully constructed in the late 1980s. The Brundtland Commission, the UN body that crafted the term, used it as part of its mission to create “greater cooperation [...] between countries”, “to define shared perceptions of long-term environmental issues” and to formulate “aspirational goals for the world community”. In other words, the agenda of the commission was to formulate a position that could be embraced by as many parties as possible, across ideological, economic and other divides. In this the commission succeeded brilliantly. As a result, today, it is virtually impossible to be against the term “sustainable”, and no respectable government or corporation is without a “sustainability” policy, with everyone referring to the definition put forward by the Brundtland Commission. It seems as if discussion has stopped. It is as if all but a tiny few agree on the appropriate way forward: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

On closer inspection the consensus turns out to be superficial at best. Yes, it is quite easy to agree with the principle of sustainable development: that is how the notion is *designed* to perform (its openness is not the result of an “erosion of meaning” over the years). But for the term to be useful in more concrete situations it needs to be interpreted. For someone who considers individual mobility a societal must, an electric roadster is a sustainable product. To others it might seem an incredible waste of resources. The definition's reference to “needs” has proven particularly difficult to work with in those parts of the world that live in abundance. By inventing the notion “sustainable development” the UN almost overnight (and very consciously) transformed environmentalism from an activist concern to a cause that could be embraced by all. Once convinced, citizens started demanding that businesses, governments and institutions do “the most sustainable thing”. To influence the concrete implications of this phrase became of crucial importance for industries, governments and other power brokers. And this is where we stand today. “Sustainable” is a societal force almost unrivaled in strength, growing ever stronger. Backstage, a fierce battle is taking place as to who can hold the reins of power. Architecture is of double relevance in this context. At the crossroads of many disciplines, it acts as an indicator of the many changes in taste, morality and legislation that sustainability has brought about. It is also an active agent in the debate. Architects develop and illustrate visions of sustainability; they have the power to both prove the feasibility of a vision of sustainability and advocate its desirability. 🏠

SUSTAINABLE

Words by

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(p. 74 -105).

Lionel Devlieger, Maarten Gielen (Rotor)

ARCHITETTURA E DESIDERIO DI SOSTENIBILITÀ

Per la mostra *Behind the Green Door* da noi curata come evento principale della Triennale di Architettura di Oslo (19.09>01.12.2013), abbiamo preso in considerazione un'ampia varietà di progetti edilizi che si dichiarano sostenibili: invece di partire dalla nostra idea di sostenibilità e poi cercare buoni esempi per supportarla, abbiamo scelto di documentare quello che altri presentano come "sostenibile". La nostra è stata una ricerca archeologica al contrario: abbiamo raccolto rapidamente un'impressionante collezione di frammenti e testimonianze di aspirazioni ambientaliste – render digitali, applicazioni software, volantini promozionali, campioni di materiali, mock up, citazioni – tra i quali abbiamo selezionato 600 pezzi. Ognuno è presentato come un reperto originale, accompagnato da una didascalia breve e diretta che aiuta il visitatore a ricostruire il contesto da cui l'oggetto è stato tratto. Alcuni oggetti rappresentano operazioni realizzate su grande scala, altri raccontano dei micro-interventi. Alcuni fanno appello all'innovazione tecnologica, altri al cambiamento degli schemi di consumo. Qualcuno è rurale, qualcun altro urbano. Qualcuno interviene pesantemente nell'ambiente costruito, altri si astengono dal farlo. Ci siamo permessi di non avere pregiudizi circa i limiti del campo dell'architettura: l'ambito della mostra comprende design industriale e grafica, urbanistica, ingegneria e molte altre discipline.

La mostra ha uno schema aperto: non c'è una sequenza imposta, non una prospettiva complessiva, né una conclusione univoca. Non si cerca di persuadere il visitatore a condurre un'esistenza "sostenibile". L'obiettivo è piuttosto raccontare come il desiderio di essere sostenibili stia operando quale nuova forza sociale che rimodella la nostra cultura abilitando nuove forme di eroismo, nuove poetiche, ma anche introducendo nuove prassi burocratiche e nuovi possibili irregolarità e scorrettezze. Non sorprendentemente, l'architettura si rivela ottimo strumento per conseguire questo obiettivo.

ARCHITECTURE AND THE DESIRE FOR SUSTAINABILITY

Behind the Green Door is the exhibition we set up as the central event of the 2013 Oslo Architecture Triennale (19.09>01.12.2013). As a starting point we looked at a broad variety of building projects that claim to be sustainable. Rather than starting from our own assumption as to what is to be considered sustainable and then trying to find good examples to illustrate our point, we have chosen to document what others call "sustainable".

To talk about these projects, we did some reverse archeology. We collected significant fragments and relics that bear testimony of the environmental aspirations. Digital render, façade study model, software package, promotional leaflet, material sample,

mock-up, quotes... our collection of physical and digital objects quickly grew into an impressive quantity of materials which we narrowed down to 600 pieces. Each of these is presented as an original artifact, accompanied by a short, factual caption that helps the visitor understand the context it was taken from. Some of the exhibits assume that large scale action is the way forward, others stick to acupunctural interventions. Some advocate technological innovation, others hinge on changes in consumption patterns. Some are rural, others are urban. Some intervene heavily in the built environment, others refrain from doing so. We have allowed ourselves to be liberal about what constitutes the boundaries of the field of architecture. The exhibition includes product design, graphic design, urban planning, engineering as well as many other disciplines in its purview. This exhibition is open ended. Visitors are not offered a single narrative that ties everything together. There is no imposed sequence, no one overarching perspective from which to look at things, no single conclusion to be drawn. The exhibition doesn't intend to persuade the visitor to live his or her life more sustainably. The aim is instead to illustrate how the desire to be sustainable is operating as a new societal force, reshaping our culture, enabling new heroisms, new poetics, but also introducing new bureaucracies and new trickeries. Unsurprisingly, architecture proved the perfect vehicle to do so.

Green Dollhouse

Green Energy

- Adjustable Solar Cell Panel
- Vertical Axis Wind Turbine
- Electrical Inverter

How much energy can renewable resources produce for our homes?

Solar Cell - An 80 watt solar panel with 2 hours of sunlight can generate 0.4 kWh (400 watt hours) of electricity per day.

Wind Turbine - A 1.5 kW wind turbine with an average wind speed of 12 mph can generate 2.7 kWh (2,700 watt hours) of electricity per day.

Green Design

Shade Canopy can be pulled down to retain warmth and prevent cold wind during winter and opened to let in sunlight and breeze in summer.

Passive Solar Design Heating & Cooling System uses the natural movement of hot and air for maximum comfort.

Green Materials

- Recycled Rubberwood
- E-Zero Medium Density Fiberboard (MDF)
- Eco Particle Board
- Organic Cotton

Green Furniture

Green Furniture is made of recycled materials that are 100% biodegradable, friendly with E-Zero MDF and Eco Particle Board. The product is built as a complete, functional, practical, durable, big room, kitchen, and bathroom.

Green Space

- Green Space provides an outdoor area for members and visitors.
- Green Facade or Green Wall
- Trees and Shrubs

The Green Dollhouse's Recycling Area Includes:

- Non Biodegradable Bin (Red)
- Biodegradable Bin (Green)
- Recyclable Bin (Blue)
- Rain Water Harvesting

Le informazioni della pagina accanto sono tratte dalla brochure informativa riguardante la Casa per le bambole "Green Dollhouse" prodotta da PlanToys.

The information reported in the opposite page comes from the Green Dollhouse's brochure. The Green Dollhouse is produced by PlanToys.

ENERGIA RINNOVABILE

- Fonti di energia rinnovabile, compatibili con l'ambiente e non inquinanti (a zero emissioni)
- Un pannello solare orientabile converte l'energia solare in elettricità
- Una turbina eolica ad asse verticale usa il vento e trasforma la sua energia in elettricità
- Un inverter prende l'energia solare ed eolica e la trasforma in energia per gli elettrodomestici

GREEN ENERGY

- Renewable energy sources that are environmentally friendly and non-polluting (carbon neutral)
- Adjustable solar cell panel converts the sun's energy into electricity
- A vertical-axis wind turbine uses wind and converts its energy into electricity
- Electrical inverter takes the solar and wind power and changes it into household power for running appliances

LA CASA PASSIVA

- Il sistema di riscaldamento e raffreddamento usa il movimento naturale del calore e dell'aria per mantenere una temperatura confortevole all'interno della casa

PASSIVE SOLAR DESIGN

- Heating and cooling system uses the natural movement of heat and air to maintain a comfortable temperature in the house

LA TENDA PER L'OMBRA

- In inverno può essere abbassata per trattenere il calore e proteggere dall'aria fredda, mentre in estate si può aprire per far passare la luce e la brezza

SHADE CANOPY

- Can be pulled down to retain warmth and prevent cold wind during winter and opened to let in sunlight and breezes in summer

LA FACCIATA VERDE

- Le piante rampicanti sono usate come isolamento termico per mantenere costante la temperatura all'interno

GREEN FAÇADE

- Climbing plants are used as insulation to keep the indoor temperature comfortable

IL COTONE ORGANICO

- Viene coltivato con metodi che proteggono il terreno e senza l'uso di pesticidi

ORGANIC COTTON

- Grown using methods that maintain the soil and avoid the use of toxic pesticides



LA RACCOLTA DELL'ACQUA PIOVANA

- L'acqua piovana è raccolta dal tetto e conservata in un recipiente, per poi essere utilizzata per innaffiare il giardino, lavare la macchina e per l'acqua di scarico dei wc

RAIN WATER HARVESTING

- Rainwater is collected from the rooftop and stored in a receptacle to be used for watering lawns, washing cars or flushing toilets

LA ZONA PER IL RICICLO

- Contenitore per rifiuti non biodegradabili (rosso), non organici, ad esempio materiali elettronici, pile e certi tipi di plastica che devono essere smaltiti in modo specifico
- Contenitori per rifiuti biodegradabili (verde), organici (di origine vegetale o animale) che si decompongono naturalmente, scarti di cibo e rifiuti vegetali derivati da attività di giardinaggio
- Contenitore per rifiuti riciclabili (blu): carta, vetro, bottiglie, lattine eccetera

RECYCLING AREA

- Non-biodegradable bin (red) for non-organic waste such as electronics, batteries and certain plastics that need specific waste management for proper disposal
- Biodegradable bin (green) for waste that comes from plant or animal sources which can be decomposed by nature including household waste, green waste and food waste
- Recyclable bin (blue) for waste that can be recycled: paper, glass, bottles, cans etc.

LO SPAZIO VERDE

- Un'area all'aperto per il relax e le attività ricreative

GREEN SPACE

- Provides an outdoor area for relaxation and recreational activities

GLI ARREDI

- Sono costruiti con legno dell'albero della gomma provenienti da foreste rinnovabili e non trattato chimicamente grazie all'uso di uno speciale processo di essiccazione

FURNITURE

- Made from replenishable Rubberwood that is non-chemically treated using a special kiln-drying process

Advocating efficiency is easy to do, because it involves no political risk - unlike backing measures that do call for sacrifice [...]

David Owen, *The Conundrum*, 2012, p. 151.

It is similar to a train that is at the station about to go. The train doesn't know if our company, country, or city is safely on board, nor whether your ticket is punched or not. There is now sufficient evidence of change to suggest that if your corporation or institution is not paying attention to this revolution, it will lose competitive advantage.

Natural Capitalism, p. xii

PATENTS

'We still have people talking about sustainability...! Nothing is more boring. Are you proud if your marriage is sustainable...? We feel guilty, and cut our hair to use less shampoo. It's guilt management and celebrating mediocrity.'

Source: www.earthwatch.org (an Earthwatch Institute building for the building industry and community in the architecture)

IMPRESS

It may not be a coincidence that we're working on sustainable cities in political climates that are mainly centralized and more or less autocratic. In our parts of the world the climate is different, which makes it much harder to make tough decisions.

ARUP, Volume

2014 Urban Planning

If one is serious about it, one should leave the profession. Abstain oneself from building all together—and possibly even turn against it. Find ways to not build. Raise awareness in places where it matters.

Thomas Haden Church, <http://www.earthwatch.org>

College students usually live even more compactly than Manhattanites or Hong Kong residents. They occupy tiny spaces in multi-resident housing, reduce waste by eating meals prepared efficiently in bulk, walk to most of their daily activities, use bicycles for primary transportation, and favor inherently low-carbon forms of recreation (sleeping late; engaging in pointless but environmentally harmless philosophical speculation; having sex).

David Owen, *The Conundrum*, Emerald Books, 2011, p. 11

"We're right when we say that we design, build and operate our buildings so that they reduce energy, keep costs down and conserve our planet's resources. We're right when we witness that green building is a powerful world changing force, creating millions of jobs here in the United States and lifting people out of degradation and poverty all around the world. We're right."

Source: www.earthwatch.org (an Earthwatch Institute building for the building industry and community in the architecture)

LEED should give performance requirements and let the architect solve the problem. The point system doesn't scale. A bike rack and air conditioning get you the same point.

Thom Mayne

The goal is to convert every single building in the European Union into your personal green micro-powerplant in the next 20 years.

Jeremy Bullen on the 5 pillar Commission of the European Union for the Third Industrial Revolution, 2011.

While keeping mankind and its needs at its center, this kind of world view begins with a desire to protect and help other species and the natural world of plants. A vision of this type allows energies to be pushed towards re-forestation and the re-naturalization of parts of anthropized territory.

POINT TO CONSIDER

In Copenhagen, where they put all the expenses into a big computer, they are analyzing the cost of a person bicycling for one kilometer for society vs. the cost of a guy doing the same in a car. They found that every time there was a bicyclist doing a kilometer, the society picked up a quarter of a dollar and every time the same distance was driven in a car, society lost 16 cents.

"Have you ever been to Copenhagen? Neither do I until this weekend. It's very nice, but just a little bit. Very clean, very quiet - hardly any traffic at all compared to London. Apparently they had the first pedestrianized shopping precinct in Europe, seems to sum the Danes up, somehow. They're green and energy-conscious. We stayed at a luxury hotel but the heat was turned down to a point that was almost uncomfortable, and in the room there was a little card asking you to help conserve the earth's resources by cutting down on the unnecessary laundry."

David Lodge, *Three Londoners*, Secker & Warburg, 1993, p. 183

We live in an unsustainable world and we will always live in an unsustainable world. This means that we should build and theorize accordingly. The first theoretical act is to clear the air, get rid of the word sustainability and learn to speak honestly about what it means to design in an unsustainable world.

James Fox, The Architect

We have to make the momentous choice between brief greatness and longer continued mediocrity.

William Stanley Jevons, *The Coal Question*, 1866

Mating calls of toads, potassium cycles in forests, genetic equilibrium between selection and mutation, energy budgets of pond organisms, pollination between plants, predator-prey population oscillations - all of these phenomena fall within the realm of ecology.

Robert G. Bailey, *Ecology*, Clarendon Press, 1974

The Masdar development project by Foster and Partners, a planned sustainable city in Abu Dhabi, is a good example of clearly set boundaries, in this case even marked by a city wall. The scale, 6 square kilometers, is relatively modest and the goals are clearly set: a carbon neutral, zero waste community. Because of these boundaries, I think they can succeed. Never mind what happens outside these boundaries, the car is parked outside the city wall.

John Roberts, *Key to Urban Form*, p. 76

Leidirect RIME

We, leader architects design of a profound of the human living species biodiversity generation change and

and representatives of the profession believe that the built environment has a role to play in ensuring the survival of our race and thousands of other species, the integrity of the earth and the heritage of future generations currently threatened by climate change and unsustainable development.

Declaration and Policy of the National Council of Europe, 1987

One has to question what happens when energy efficiency is raised to the level of a cultural paradigm to the exclusion of other factors.

One has to question what happens when energy efficiency is raised to the level of a cultural paradigm to the exclusion of other factors.

First, we try never to take down what is already there.

Jan Philippe Yvon, *interwagge The Earth House*, OASH, Amsterdam, NL, August, 2012

In the middle of these two layers of glass we have a material which is a polycarbonate in little cubes of which the light is going to be reflected and transported automatically, so behind this we have a pre-fabricated concrete panel which is very massive, very heavy and the outside of this concrete model is painted black matt and that is why this element is going to heat up the concrete during the day time and in the night when there is no radiation the surface here, the heated up panel gives all the heat to the room behind.

"Phosphorus recovery" explained geographically. "On the left, the chimney the gas goes through four separate treatment stages used to go right out of the chimney every time they needed some one. Now they recover over ninety-eight per cent of it. More than a kilo and a half per adult corpse. Which makes (-) the best part of four hundred tons of phosphorus every year from England alone." Henry spoke with a happy pride, rejoicing wholeheartedly in the achievement, as though it had been his own. "Fine to think we can go on being socially useful even after we're dead. Making plants grow."

WORLD REPLYING

Whether a building looks green is irrelevant. What matters is the amount of BTUs per square meter and CO2 per capita or per square meter.

Thom Mayne, *Architectural Record*

[...] we did the Novartis building in Switzerland. They don't use the LEED program over there, the government just says this is what you can and can't do, and things have to be built in a sustainable way.

Frank Gehry, *2012*, www.frankgehr.com

Even if nations could agree upon some optimum population, achieving it could be a messy affair, ethically and politically speaking - and not only because of humans' history with such projects.

John Zaller, *Good Habits, The 1000 Good Habits That Can Save the World*, University of Southern California Press, 2012, p. 196

"For reasons now obscure to anyone, rolls of toilet paper are of a given width. By reducing this by one inch, millions of gallons of water would be saved daily in the manufacturing process, without cutting down on the function of the tissue itself. Yet here is another idea that is ecologically sound but has gone begging."

There is, however, another significant possible source of raw materials which we should not overlook. That is the salvaging of existing materials.

Vance Packard, *The Waste Makers*, 1960, p. 196

"If Greens don't embrace science and technology and jump ahead to a leading role in both, they may follow the Reds into oblivion."

Stewart Brand, *Whole Earth Discipline*, p. 232

