

INTUITION & EVIDENCE

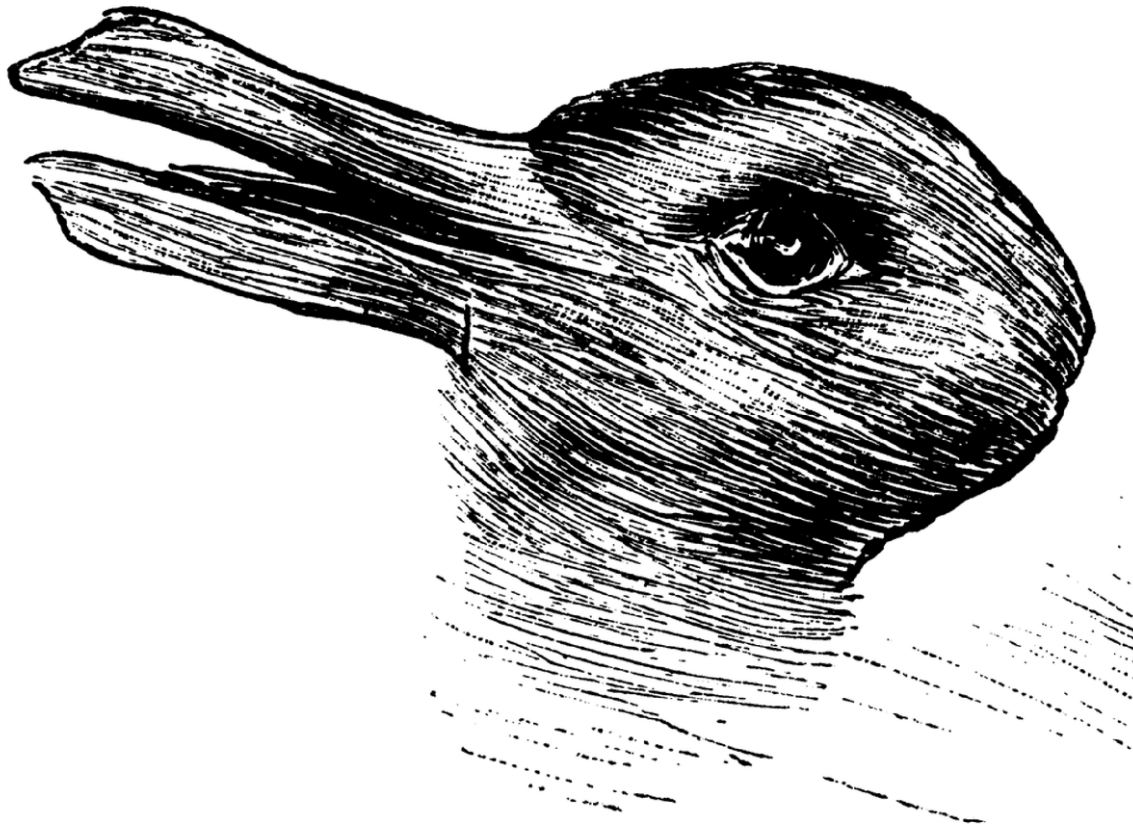
DISEÑO SALUDABLE



Andrew Collyer

Architect, **PUC** and Researcher at **Salutary Design**
Lecture: "Salutary Design: Intuition & Evidence"
Aug. 17, 2021

SINCE OUR PROFESSIONAL RESPONSIBILITY PASSES THROUGH CONTRIBUTING TO DEFINE THE CONCRETE SHAPE OF PUBLIC POLICY, WE ARE FACED WITH HAVING TO DEFINE FIRST WHAT IS THE PUBLIC. AND WHEN IT COMES TO ARCHITECTURE FOR HEALTH, TO DEFINE WHAT IS THE *SALUTARY*.



¿ How a salutary design is defined?

An approximation could be through the *rabbit-duck illusion*, an illustration originally published in the XIX century. The question about if it is about a duck or a rabbit took fifty years to be answered and it wasn't until mid XX century that philosopher Ludwig Wittgenstein finally achieved it.

And his answer was: "*It does not matter if it is a duck or a rabbit, because the question is irrelevant*". Trying to define ambiguity is impossible. And this is the key feature of the liquid world we inhabit today - as put by Zygmunt Bauman - in permanent Flow and accelerated change, therefore there is no need for anguish in trying to define it.

Since our professional responsibility passed through contributing to define the concrete shape of public policy, we are faced with having to define first what is the public. And when it comes to architecture for health, to define what is the *salutary*.

And this is something that salutary design, through suggestive images such as this one, can achieve faster than architecture.



A SALUTARY DESIGN IS WHAT WE WILL HAVE TO DELIVER TO THIS GENERATION, WHICH WILL BE ATTENDED IN THE HOSPITAL OF THE FUTURE AND THAT WILL INHABIT IN THE CITY OF THE FUTURE, DEFINING WHAT IT UNDERSTANDS FOR HEALTHY.

Rabbit Duck Wittgenstein Philosophy Shirt



~~\$26.99~~ \$22.99

In the beginnings of the XXI century, this social change, brewing for decades, begat a new human fenotype: the *millenial*, representing the most recent state in the evolution of the species swimming through the current liquid and digital world like a fish on water.

¿ What is salutary design ?

Is what we Will have to deliver to this generation, which Will be attended in the hospital of the future and that Will inhabit the city of the future, defining what it understands for healthy.

And we know that this definition will be different to the current one, but we don´t know well yet which will it be because we don´t have the right language to define it. Therefore, if the final user of our cities and our hospitals will be this millenial coming from the future, the question then is:

¿ What is the language of the future ?

In the XXI century, the first option always will be in *the green*. And rightly so.

Everyone of us is familiar with this kind of image, simplified to the máximum and on which happy colors, bicycles and happy people are combined. the underlying slogan is to complex problems, *simple answers*. And the interesting thing from the perspective of sanitarion is the promise that the green would have the capacity to heal disease, something that the experts will have to debate based on their own evidence and intuitions.

THE UNDERLYING SLOGAN TO THIS KIND OF ULTIMATE SIMPLIFIED IMAGE, IS TO COMPLEX PROBLEMS, SIMPLE SOLUTIONS.



The Green invites to think different and is absolutely right.

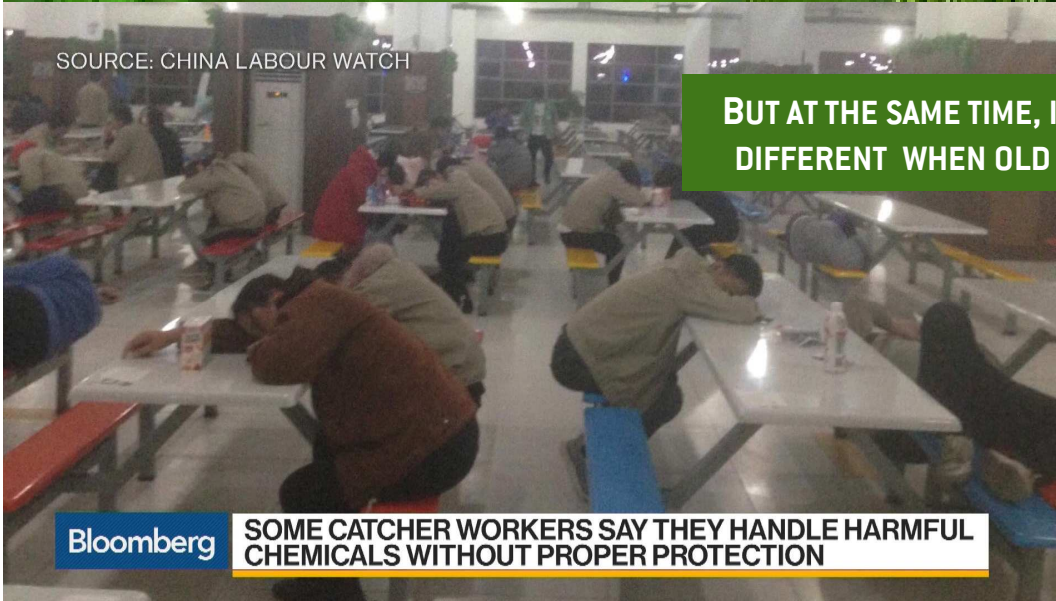
¿ WHO COULD DISAGREE WITH THIS IMAGE,
REPRESENTING THE TECHNOLOGIZED HUMAN
RACE AND NATURE IN PERFECT HARMONY ?



Think different.

But on the other hand, is hard to think different when old habits remain. Like on the image to left depicting the labor conditions of workers who manufacture components for the iPhone on South East Asia.

Or, even more serious, on the image to the right, the culture of consumption which, nevertheless the change of era remains intact, with people willing to wait in line outside the store for up to two weeks in advance every time a new version of that same iPhone is launched.



SOURCE: CHINA LABOUR WATCH


BUT AT THE SAME TIME, IS HARD TO THINK DIFFERENT WHEN OLD HABITS REMAIN.

Bloomberg

SOME CATCHER WORKERS SAY THEY HANDLE HARMFUL CHEMICALS WITHOUT PROPER PROTECTION



indifferent.
~~Think different.~~



IF THE COMPUTER ALREADY SOLVED EFFICIENCY, THEN WHERE THAT LEAVES THE ARCHITECT? WILL WE BECOME *AIRBUS* PILOTS ON A FULLY AUTOMATED COCKPIT ? ¿OR WILL WE REMAIN AS BEFORE ONLY WITH A PENCIL ?

COMPLEX

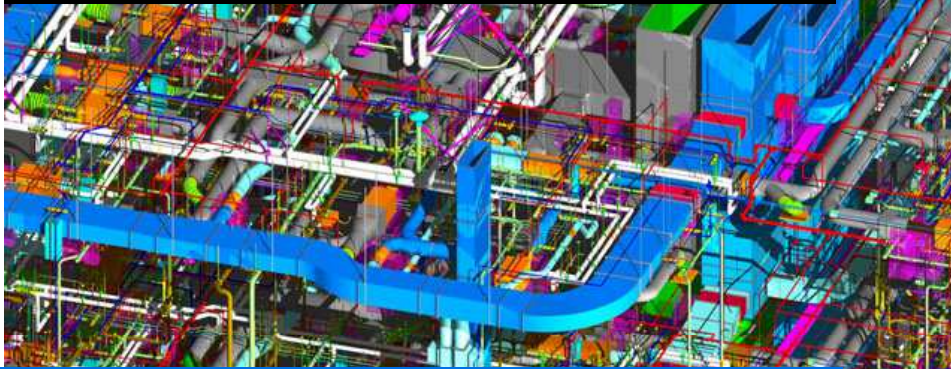
Therefore, clearly the healthy is not equivalent to the green. Is something more. The built environment watched from the green, clashes with the built environment watched, for instance, from technology and this is a second language of the future through which buildings and cities speak, while we architects remain silent.

And this second language represents the opposite paradigm, meaning, from the *hypersimple* to the *hypercomplex*. In this case, the language of architecture is radically opposite, it's slogan being *To complex problems, complex solutions*.

The image represents the informatic promise of visualizing complexity on real time, metaphorically integrating every variable and aspiration of a society on a single icon, able then to manage possible interferences between them.

"Technology is the answer, but what was the question?"

CEDRIC PRICE, 1978



From time to time, something new appears promising to change architecture, such as sustainability, BIM or the Smart City.

Still there isn't enough evidence that, for instance, BIM systems and all its iterations 2D,3D,4D,5D or 6D produce better architecture. Evidence show that standardization is more efficient, but intuition indicates that on Chilean offices there is a prevalent use of cracked software, therefore standardization becomes impossible or too complex to implement broadly.

Generative design's tools are able to offer with a single click, ten or more parametric design options, based on evidence. Alternatives which then the architect simply chooses from the one his *gut-feels* the most, using his intuition.

But beyond BIM, the paradigm is the one of the Smart City, meaning a parametric urbanism, able to define through algorithms every aspect of life. And of health, indeed.

How BIM is changing the face of architecture

Mike Russell*

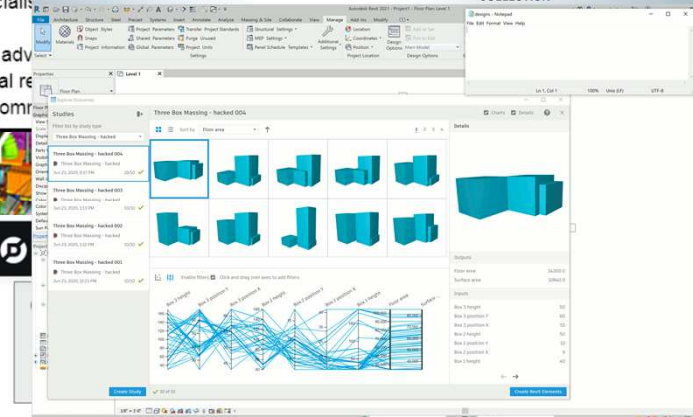
Historical architectural design has relied on envisioning the building in the mind, then to be brought to life through physical models and construction. The digital revolution has brought new services to the table.

The urgent need for digital registration to reach the building specialists.

The advantages of digital registration can be compared to the traditional methods.

GENERATIVE DESIGN NOW IN REVIT

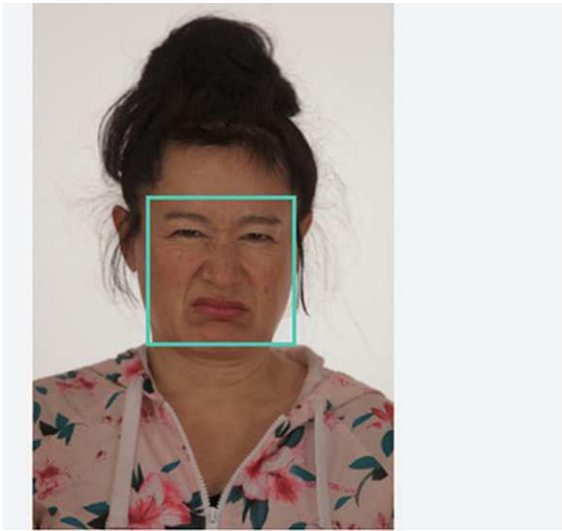
AUTODESK ARCHITECTURE, ENGINEERING & CONSTRUCTION COLLECTION



The new architecture of Smart Cities

Author
rickrobinson
[@dr_rick](#)





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Detection Result:
JSON:
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      "top": 457,
      "width": 332,
      "height": 332
    },
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]

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(Research Image) "Disgust" Custom Hito Steyerl Emotion Training Set



And in order to find the question, evidence is needed. Hard data. And today, data is no longer obtained from the environment, but directly extracted from people. Personal data is the new oil and there is no doubt about that it will be the language of the future. In fact, today already is.

And even when all dystopic predictions prove false and *big data* effectively contribute to quality of life, it would anyhow leave out an important percentage of the population that dwells under the poverty line and does not generate data attractive enough for tech corporations.

And something in which the three languages of the future coincide is in that they are taken for granted and cannot be ignored, because what it's at stake is our own survival as a species. That is to say, THEY ARE NOT LONGER OPTIONAL. Today it can't be done without BIM, it can't be done without clean energies and also it can't be done until the internet reaches the last corner of the planet, because if people is left out of the future, then the paradigm isn't useful anymore.



Deep Learning en sistemas AI. Arriba: Reconocimiento de objetos en el espacio público. Abajo: Reconocimiento corporal a través de sistemas de *Clothing Parsing*.

It's now or never: Scientists warn time of reckoning has come for the planet

The Observer
Climate change

Robin McKie

Sun 15 Aug 2021 08.00 BST



THERE IS NO ALTERNATIVE

The image shows the headline from *The Guardian* the day before yesterday, 15 August 2021, in which we are informed about how the scientific community, faced with the evidence, issues a call to the global coordination of states. However, central governments are deeply entangled on their own internal politics and are unable to respond. Evidence of this is the recent COP25, hosted by Chile during the height of its social revolt.

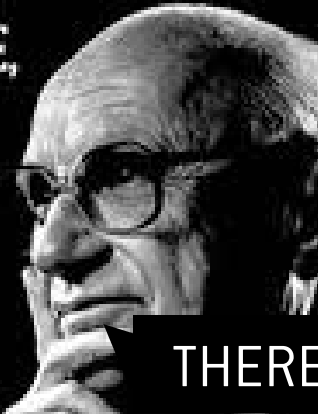
▲ Volunteers support firefighters tackling a wildfire next to the village of Kamatriades on the Greek island of Evia. Photograph: Angelos Tzortzinis/AFP/Getty Images

The IPCC is unequivocal: we must take urgent action to curb

Advertisement 10 SALUTARY DESIGN: Intuition & Evidence

"THE GREATEST ADVANCES OF CIVILIZATION, WHETHER IN ARCHITECTURE OR PAINTING, IN SCIENCE AND LITERATURE, IN INDUSTRY OR AGRICULTURE, HAVE NEVER COME FROM CENTRALIZED GOVERNMENT."

-MILTON FRIEDMAN



THERE IS NO ALTERNATIVE



Remarkably, the expression *There is no alternative* is the same that the father of neoliberal capitalism, Milton Friedman, used to repeat. There is no alternative to private entrepreneurship. And while the planet requires collective action, the development model on the contrary awards individual entrepreneurs like the one shown on the image, who in a way won the race for survival and managed to save themselves, while the rest of us- less intelligent- burn and become extinct.

▲ Volunteers support firefighters tackling a wildfire next to the village of Kamatriades on the Greek island of Evia. Photograph: Angelos Tzortzinis/AFP/Getty Images

The IPCC is unequivocal: we must take urgent action to curb

THE IMAGE CHOSEN BY *THE GUARDIAN* ON AUGUST 15, 2021 TO ANNOUNCE THE APOCALYPSIS, RESONATES WITH AN IMAGE THAT THE ART WORLD HAD PRODUCED 15 YEARS EARLIER.

However fortunately, the salutary conscience is not something new, existing for a long time. It is encouraging to verify that the image chosen last Sunday by the editor of *The Guardian* to announce the apocalypse, resonates with an image that the art world had produced 15 years earlier in this installation on the Tate Modern gallery in London, located just meters away of the heart of the financial district of the city, where the most determinant decisions about global warming are made.

That is why from SALUTARY DESIGN, we recommend always to look closely at artists, who on many occasions walk ahead of us, signaling the roads to follow.



The Weather Project, Olafur Eliasson, (Tate Modern, UK 2004)



WITTGENSTEIN SAID ALSO THAT WHEREOF ONE CANNOT SPEAK, THEREOF ONE MUST BE SILENT AND THAT IS WHAT I HAVE BEEN DOING FOR THE LAST 15 YEARS, WAITING TO HAVE SOMETHING INTERESTING TO SAY. THAT IS WHY THIS IS MY FIRST LECTURE.



1977

Original Apple II



And since this is my first lectura, i will start from the beginning.

I was born on the year 1977, that was a rather newsworthy year, due to events like the simultaneous launch of the Apple II and the Atari 2600, where the former promised domestic informatics and the latter, entertainment through video games, inaugurating with that the era of digital individualism, in an historical progression passing through the PC or personal computer, the Walkman or personal cassette player, the Discman or personal CD player, the Gameboy or personal gaming console and then the iMac, the iPod, the iPad, the iPhone; all with a letter *i*, clearly stating that the important is the I and not the WE.

The launch of the Voyager 2 probe would confirm or deny through evidence, the intuition that we are not alone in the solar system.

That same year the first fiber optics networks was deployed, inaugurating the era of speculative capitalism in Wall Street, where now more power could be accumulated through intuition than through evidence, based only on a Good eye for business.



WITH THE DEPLOYMENT OF THE FIRST FIBER OPTICS NETWORK, THE ERA OF SPECULATIVE CAPITALISM IN WALL STREET WAS INAUGURATED, WHERE NOW MORE POWER COULD BE ACCUMULATED THROUGH INTUITION THAN THROUGH EVIDENCE.

1977

Also that year in Chile, the neoliberal cosmovisión was fully embraced. The tax on books is implemented, banning the import of certain texts and political parties are dissolved. Thinking people were dangerous, because that stimulated precisely intuition. And all evidence warned of the dangers of that to elites, looking pretty much healthy here.

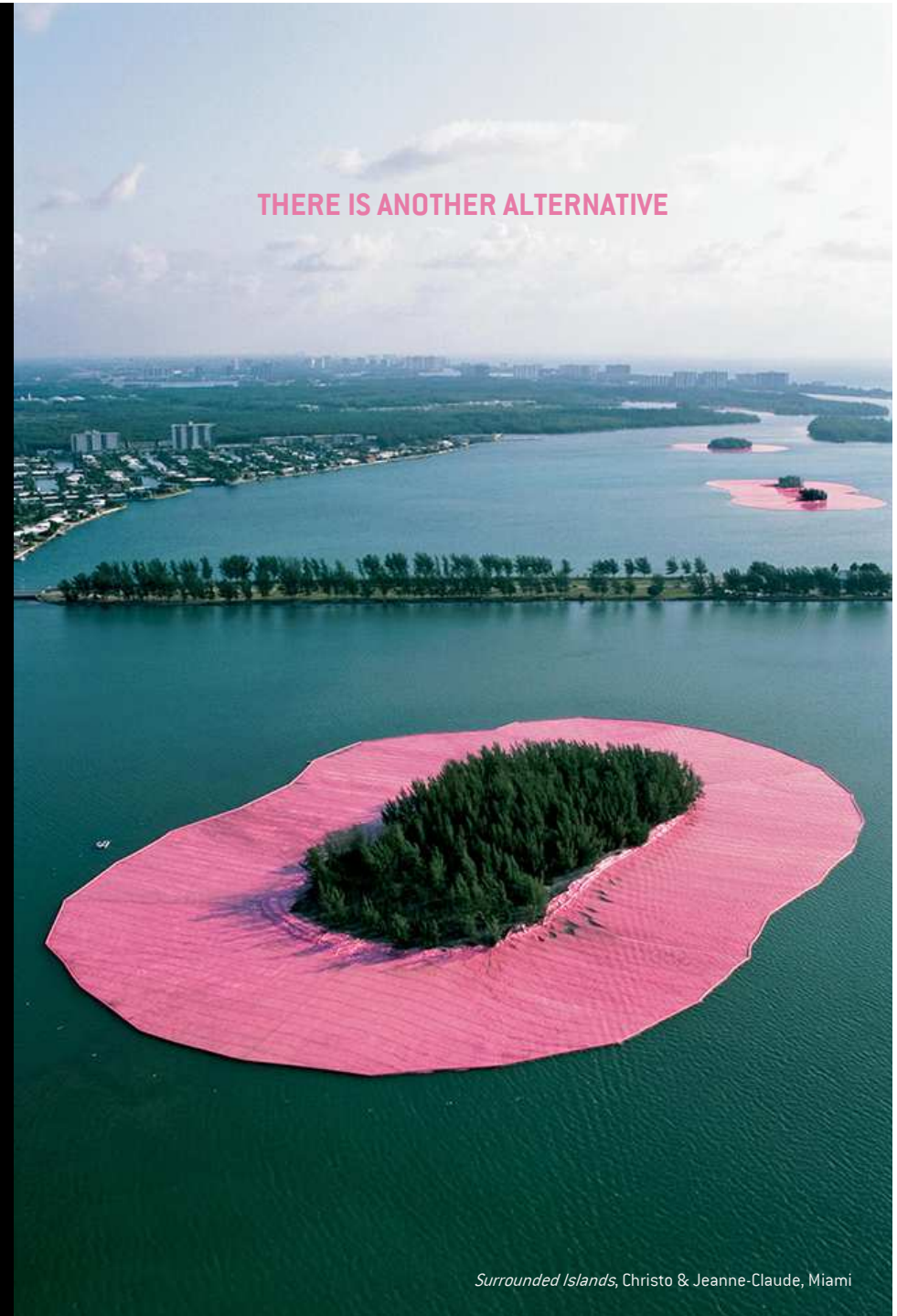
The image to the left shows the british prime minister Margaret Thatcher and the president of the United States, Ronald Reagan celebrating the victory of the West on the cold war. It is worth remembering that at that time, Thatcher would also repeat the same expresión, that there is *no alternative* to neoliberal capitalism.

But at the same time, humanism rebels and opens radically opposed alternatives. The image on the right corresponds to a piece by artist Christo, reknown by huge artworks in which he wraps things in fabric, in this case several islands on a canal with pink tinted PVC fabric.

And the only reason someone could think that wrapping islands is a good idea is because *it can be done*. Art, in this case through the work of Christo is about showing that *there is another alternative*. For instance, to allow the installation of the fabric first it was needed to remove 40.000 tons of garbage accumulated on the shores, therefore mitigating a pollution cycle on this ecosystem.

That is also salutary design.

THERE IS ANOTHER ALTERNATIVE



Surrounded Islands, Christo & Jeanne-Claude, Miami

¿ HOW WILL THE EVIDENT AND THE INTUITIVE WILL BALANCE IN THE FUTURE ?

5G

Again, ambiguity. It is not clear if this image represent good news or bad news for health. And experts, who should know this, cannot reach an agreement with their communities. Therefore under the logic of salutary design, the question should not be directed to experts but to ordinary citizens.

And for ordinary citizens we have this boys in the picture, who are an example of common people, years before becoming productive members of society and developing a civic conscience.

At that age, with far too little experience about life, but with a lot of experience about the city, in this case Arica, that these skaters travelled daily on wheels, knowing every street inside out, probably deeper than some expert planner.

The idea behind this image is that participatory design, a key component of the salutary project, more than relief should be about deep research on the life experiences of a particular community.

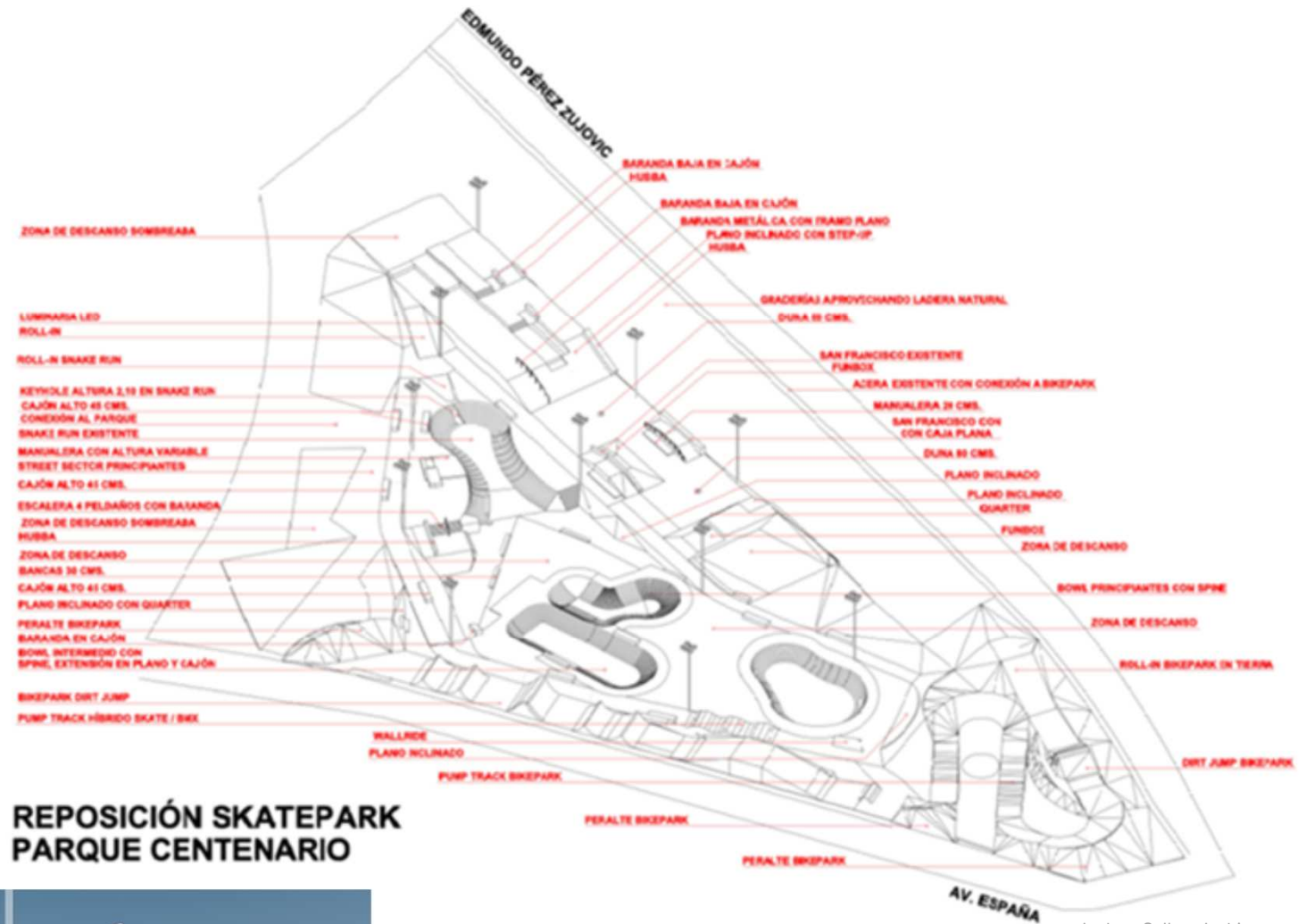
1990



PARTICIPATORY DESIGN, A KEY COMPONENT OF THE SALUTARY PROJECT, MORE THAN RELIEF SHOULD BE ABOUT DEEP RESEARCH ON THE LIFE EXPERIENCES OF A PARTICULAR COMMUNITY.

And that intuition would be verified years later when the opportunity to design a new 8.000 m2 skatepark for the city, which nevertheless it's huge area had none or very little citizen consultation through it's design process.

The only parameter of the client was building a course bigger than the courses of the other majors.



REPOSICIÓN SKATEPARK PARQUE CENTENARIO

Andrew Collyer Architect

**A PROCESS WITH LESS CONTAINMENT AND
MORE EMOTIONAL INTELLIGENCE**



As it turns out the architect, which was me, was the only actor that effectively had ridden a skateboard through the city for years and handled evidence about things no one else sensed, like for instance that for this community of teenage sportsmen the crucial issue wasn't the size of the course but the possibility of seizing a territory of their own to have a social life with peers, therefore forging a group identity

A relevant citizen participation is the one that understands, in practical terms, what is life about. A salutary design cannot be made without having known before and in the first person a salutary life.

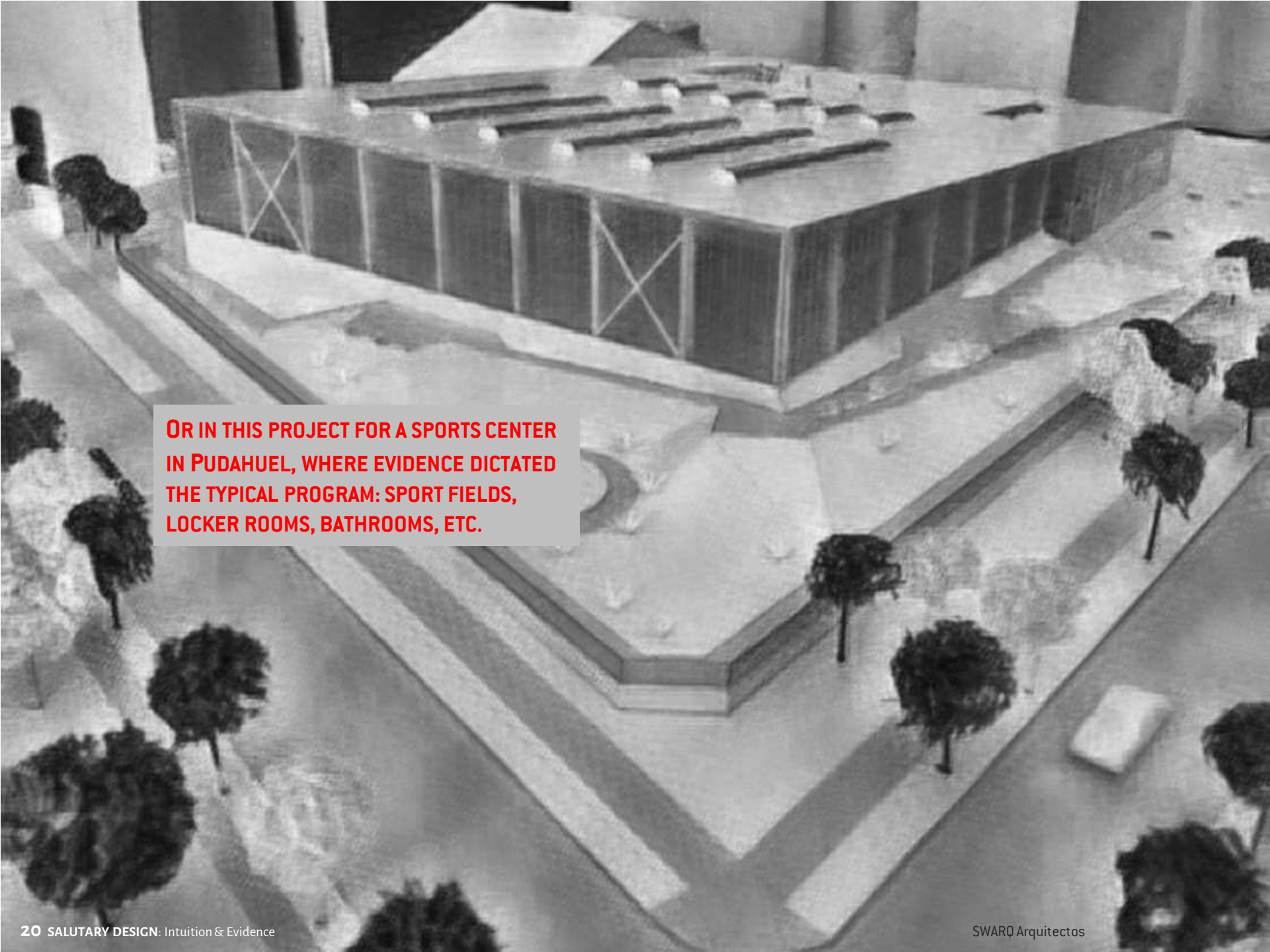
In the case of this project, this intuition would ultimately slash the investment in half, since it prioritized common open spaces where that life could flow, dismissing the idea of having such a big course.

EDUARDO PEREZ LUJOVIC

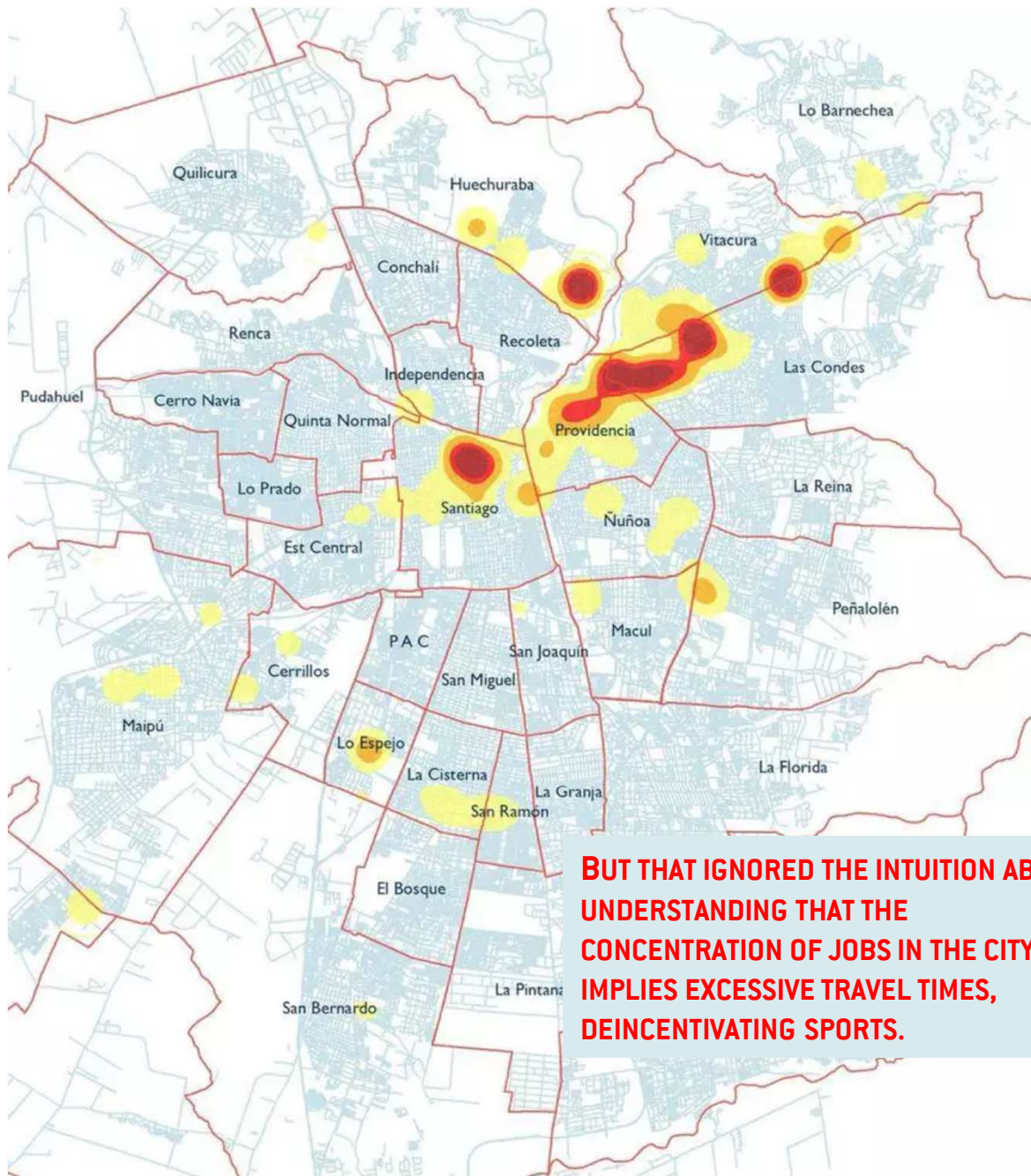
AV. ESCOBAR



EL DEPORTE URBANO ADEMÁS
ES VIDA SOCIAL



**OR IN THIS PROJECT FOR A SPORTS CENTER
IN PUDAHUEL, WHERE EVIDENCE DICTATED
THE TYPICAL PROGRAM: SPORT FIELDS,
LOCKER ROOMS, BATHROOMS, ETC.**



Concentraciones de fuentes laborales
Área Metropolitana de Santiago

Trabajadores en empresas contribuyentes
 niveles de concentración

- Bajo
- Medio
- Alto
- Muy alto

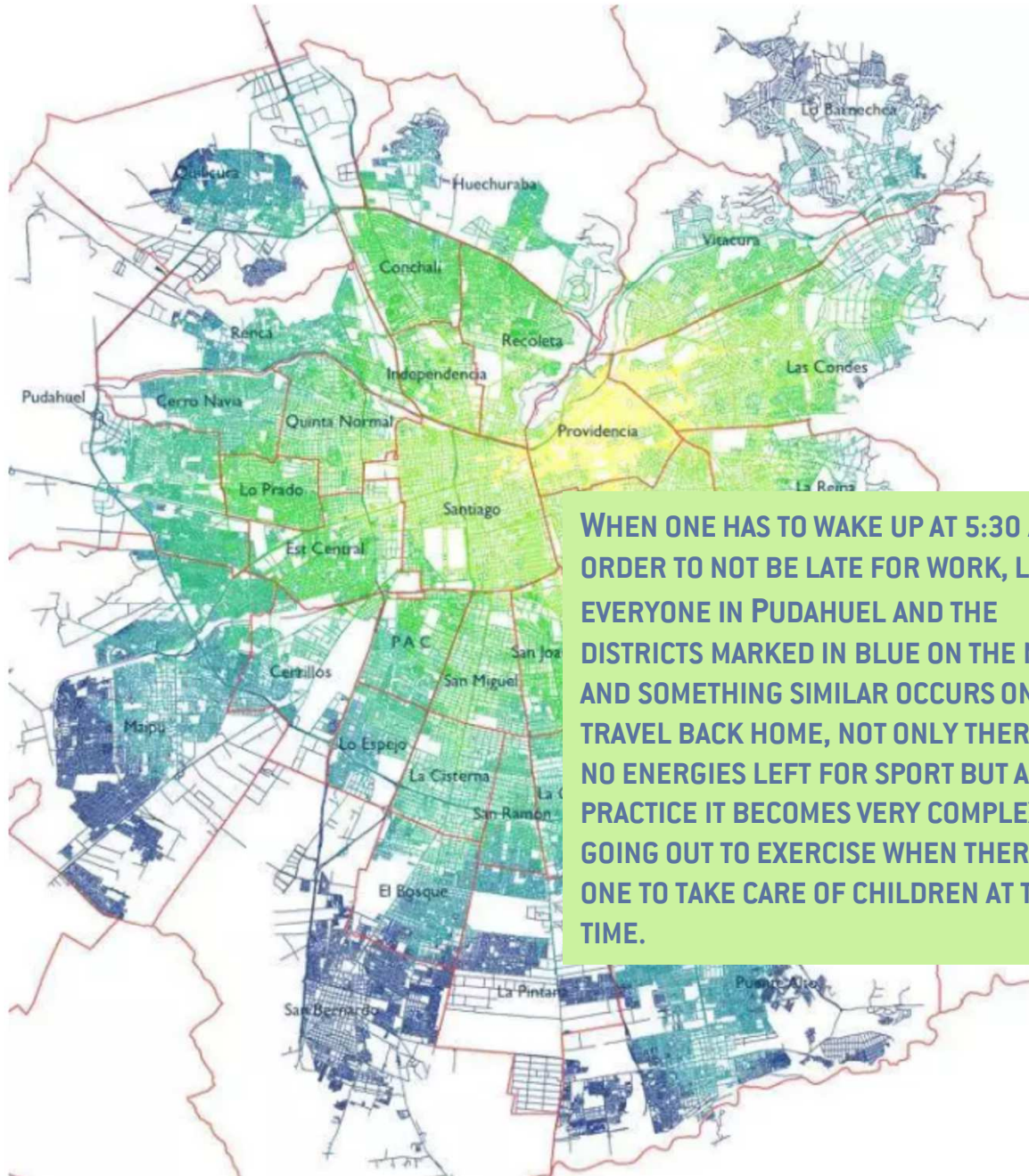
Límites comunales

Principales redes viales

BUT THAT IGNORED THE INTUITION ABOUT UNDERSTANDING THAT THE CONCENTRATION OF JOBS IN THE CITY IMPLIES EXCESSIVE TRAVEL TIMES, DEINCENTIVATING SPORTS.

Fuentes:
 Fundación Vivienda, 2017
 Servicio de Impuestos Internos, 2015

Autor: Juan Correa, Geógrafo.



WHEN ONE HAS TO WAKE UP AT 5:30 AM IN ORDER TO NOT BE LATE FOR WORK, LIKE EVERYONE IN PUDAHUEL AND THE DISTRICTS MARKED IN BLUE ON THE MAP, AND SOMETHING SIMILAR OCCURS ON THE TRAVEL BACK HOME, NOT ONLY THERE ARE NO ENERGIES LEFT FOR SPORT BUT ALSO IN PRACTICE IT BECOMES VERY COMPLEX GOING OUT TO EXERCISE WHEN THERE IS NO ONE TO TAKE CARE OF CHILDREN AT THAT TIME.



Tiempo de viaje en transporte público

Área Metropolitana de Santiago

¿A que hora debería levantarse para entrar a trabajar a las 8 am?

- 6:45
- 6:30
- 6:15
- 6:00
- 5:45
- 5:30

Límites comunales

Nota:
Se estimó 1 hora de labores en el hogar antes de iniciar el viaje en transporte público hasta el Metro Tobalaba

Fuente:
Fundación Vivienda, 2018

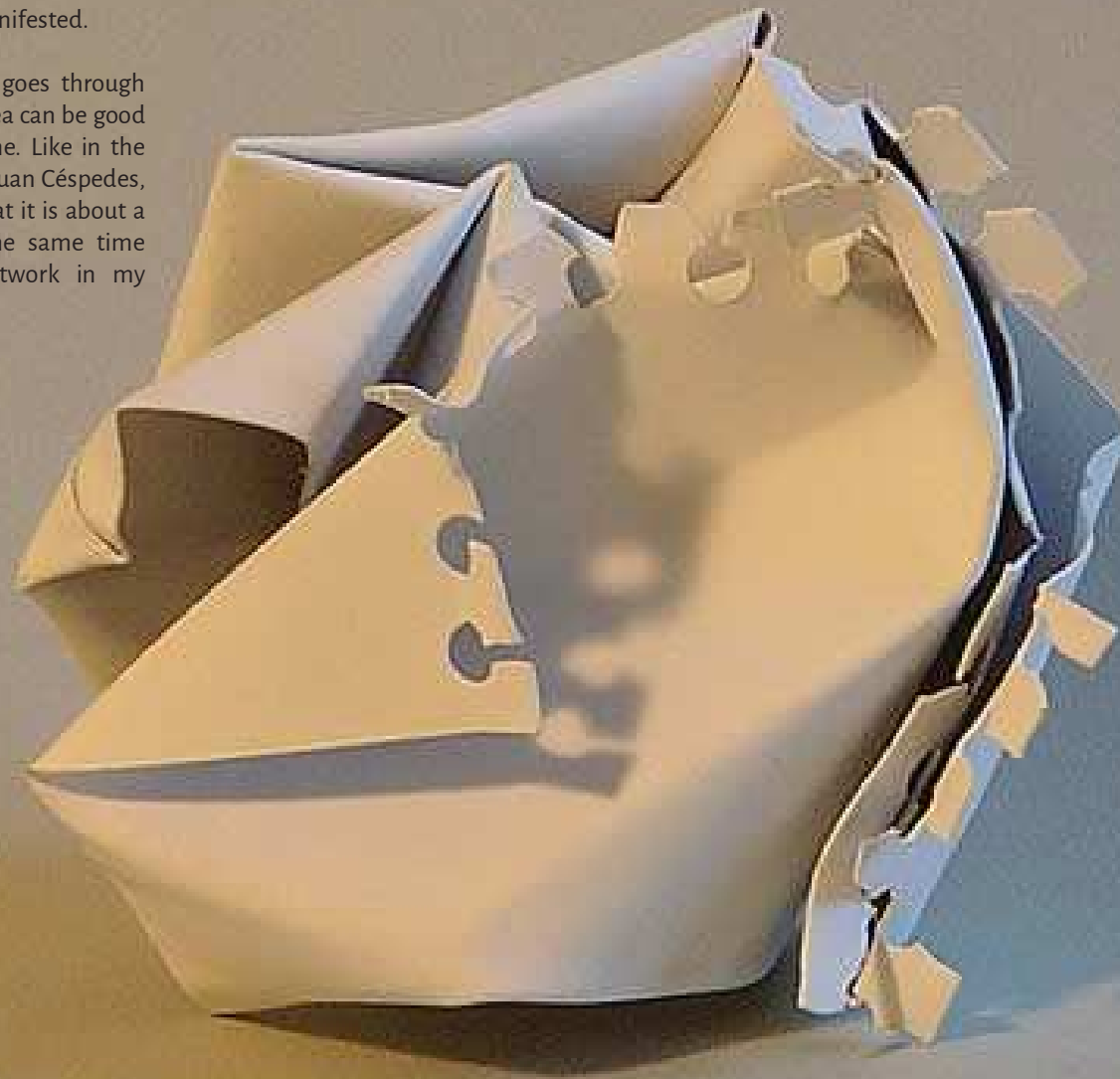
Autor: Juan Correa, Geógrafo.

AND THAT INTUITION. BASED ON EVIDENCE (!)
MATERIALIZED THROUGH THE MODIFICATION OF
THE ARCHITECTURAL PROGRAM TO INCLUDE
FAMILY AND CHILDREN SPACES.

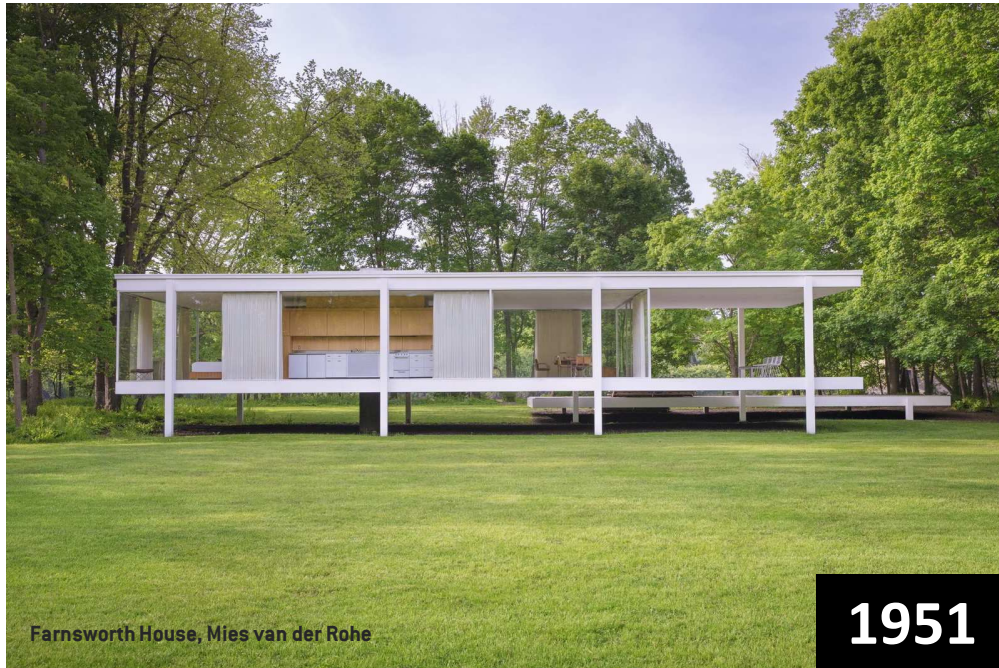


So, again ambiguity is manifested.

A salutary attitude also goes through understanding that an idea can be good and bad at the same time. Like in the case of this sculpture by Juan Céspedes, where it is made clear that it is about a bad idea, however at the same time producing a notable artwork in my opinion.



"BAD IDEA"
JUAN CÉSPEDES (2006)



Farnsworth House, Mies van der Rohe

1951



¿How to know if an architecture is salutary or not?

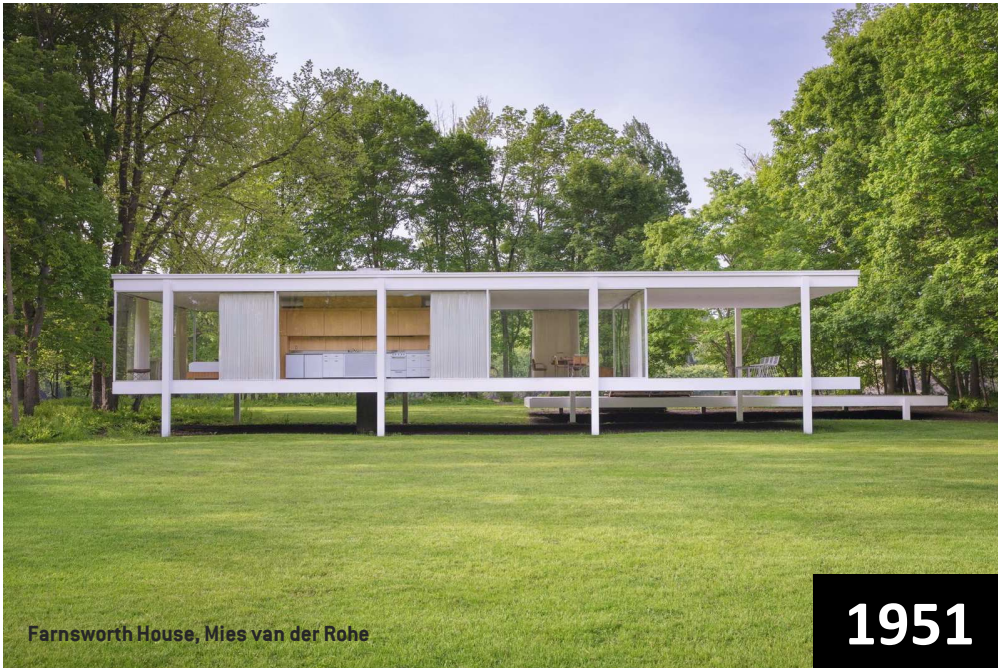
Once again, the answer is through images. If we talk about ambiguity, this is an example of an idea that is both good and bad at the same time.

This is a classical example of the modern movement in architecture, based on the rationalist paradigm of stability and strength. Le Corbusier might be the father of modern architecture, but it was Mies van der Rohe who patented the idea in 1951 on the Farnsworth house, which is the prototype for 99% of the built environment as we know it today. A rigid system, top-down and with a distant relation to nature.

The Farnsworth house separates from nature because it is of no use to it and in that sense is it not a coincidence that this house was built for a distinguished member of the northamerican elite.

Mies produced this masterpiece, nevertheless precisely because it is a masterpiece, the Farnsworth house is imposible to extend because if extended it's architectural concept would be destroyed. And that is something that, in addition to being counterintuitive it is unforgivable for any housing, masterpiece or not. The possibility of extending it, instead of having to build another house, is of an ecological common sense. But in this case, it was imposible, because upon extending the slab there would be more contact points with the ground, therefore ruining the purity of the design.

But with what Mies wasn't counting on was that nature always finds the way of taking back what belongs to her and in the last fifty years, a producto of climate change, the house has been flooded with increasing frequency.

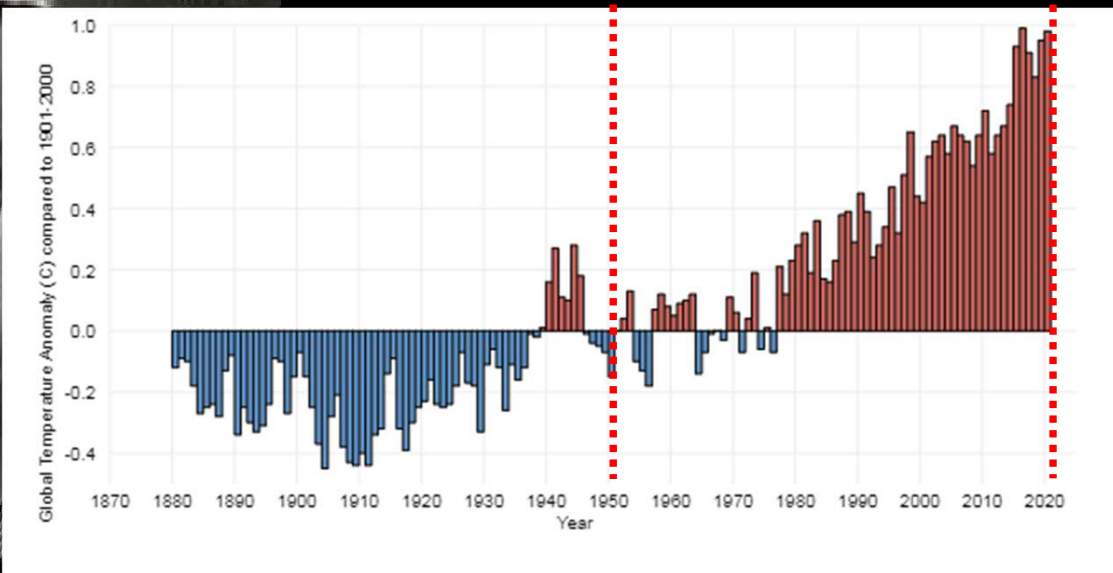


Farnsworth House, Mies van der Rohe

1951



2020



On the right hand side, the image shows the last flood during 2020 and in the graphic is shown the global temperature variation since the ending of the XIX century until the present time, as a consequence of the greenhouse effect and where, since the construction date of the house has increased the temperature of the planet in one degree Celsius, which is too much.

Probably Mies, as any good german, designed considering the climatic evidence at hand, in this case hydrological. But what surely he never sensed is that this evidence would start changing frantically and the speed of climatic phenomena would surpass the speed of science. And that, 70 years ago was radically counterintuitive.



Farnsworth House, Mies van der Rohe



1951

2020

HOW DARE YOU!



Therefore the extensión problem is resolved by nature. Today the house is double as big, at least in perceptual terms, by it's reflection on the stagnant flood water.

This house exemplifies very well the relation between architecture and climate change. Mie's approach was probably healthy, but not salutary. In defense of the colleague, one could say that since the effects of global warming were made evident only after, he had no way of sensing the future and prevent the floods.

Or if we are being evil-minded, maybe he did sensed the future, but chose anyway to not change his plans, maybe because of ideology or ego and therefore decided to ignore evidence to get away with it and make his masterpiece at any cost.



2020



Greta's claim visibilizes the current conflict of interests of hyperideologized political leaders versus the reasonable demands of the community.

The new generations challenges the previous. And that is in general what we are looking at today. A head-on crash between public policy based on evidence or on intuition.

Or in the case of COVID, to the clash between the scientific community and the political elites. And that is what currently is being tried to correct through legislation, implementing the universal principle of Health in All Policies.

But on the other hand, is also has to be understood that public policy, before being public are political and leaders must act always under tensión between the intuitive and the evident.

In this case, we can easily identify who represents intuition and who represents evidence.

To the left, the doctor Anthony Fauci, leader of the strategy against COVID-19 in the United States and who simply cannot keep hiding his embarrassment in view of the foolish suggestions of his president like, for instance, injecting disinfectant to acquire inmunity.

Or to the right, german chancelor Angela Merkel, who also cannot believe what she is hearing and that to us looks like a fun meme, until we start to consider that the last hope of salutary resolution of the geopolitical conflict between the United States and China passes precisely through Europe.

And then her face does not cause laughter anymore, but fear.

2019



SEPTEMBER OCTOBER

And Chile is not exempt from this tensión. Quite the contrary.

Here, energy exploded under the form of accumulated anger caused by the pressure over a hyper-demanded public sector, of which social services are the preferred *targets* of the irate mobs, and where works like this one, which i happened to design in downtown Santiago on 2019, ends completely destroyed just a few weeks after their inauguration.

2008

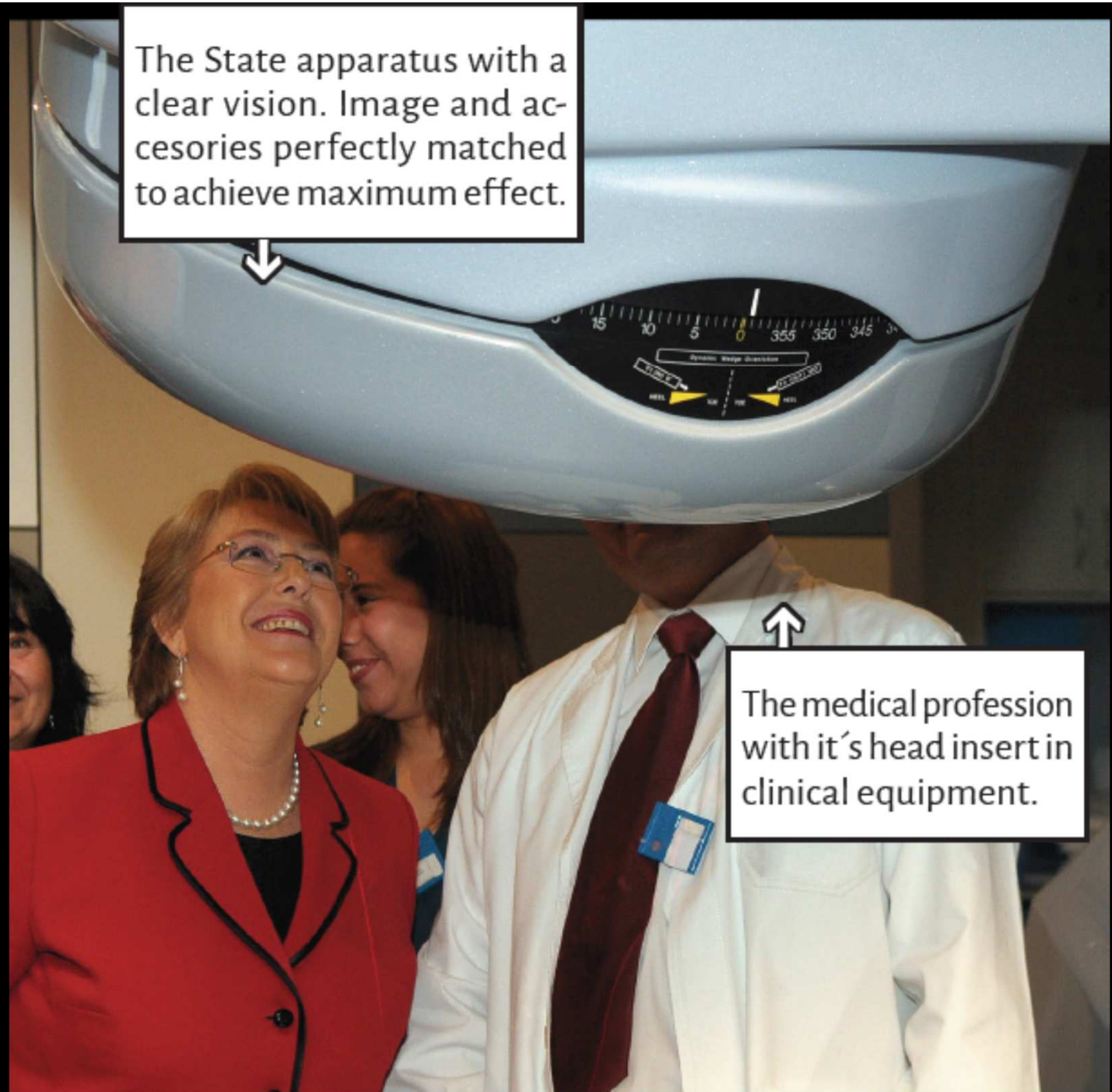
And this does not have to do with left or right wings. The issue is transversal. For instance on the healthcare network, where there is a permanente deficit, long before the pandemic.

And where the medical body, desperate and impotent, has it's head completely insert in clinical equipment and supplies. And in many cases not even dreams with a salutary healthcare infrastructure.

The State apparatus with a clear vision. Image and accesories perfectly matched to achieve maximum effect.

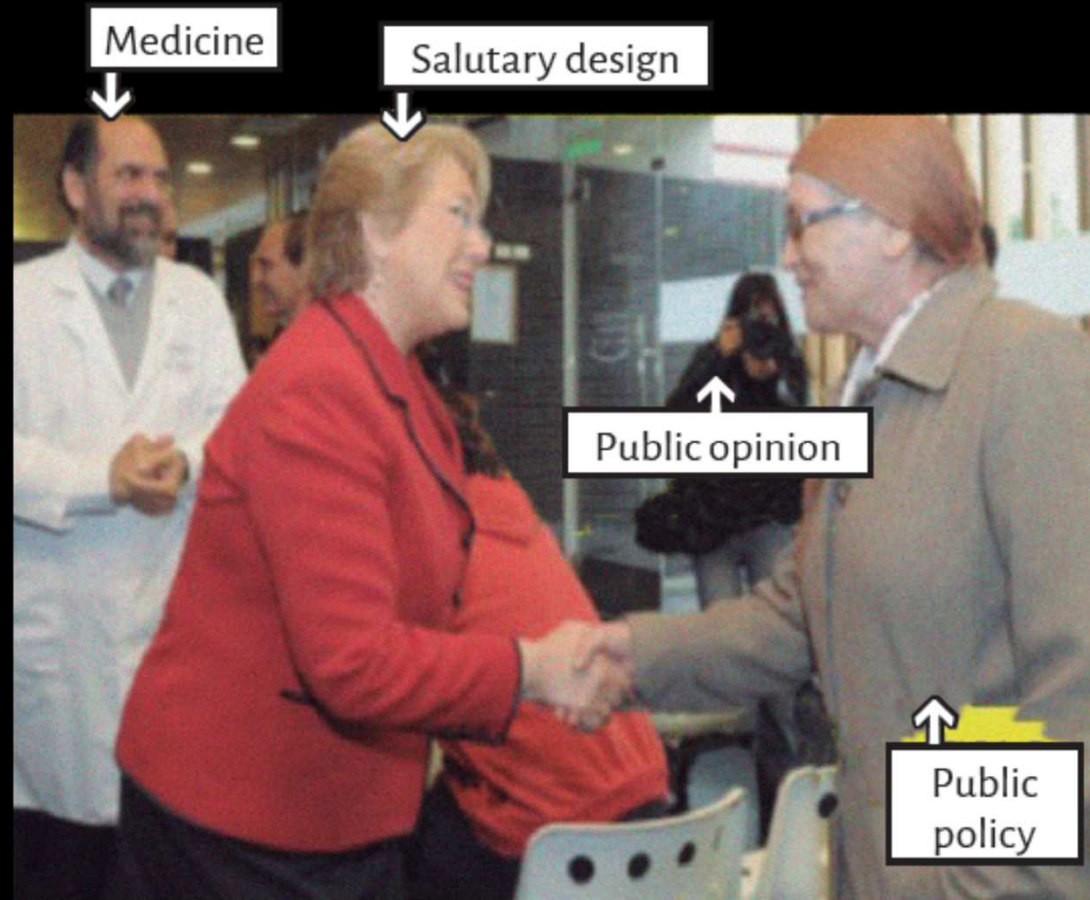


The medical profession with it's head insert in clinical equipment.



2008

Entonces, el Estado debe administrar recursos públicos insuficientes y ante la evidencia de su escasez, no le queda otra opción que recurrir a la intuición para no perder de vista aspectos fundamentales como la dignidad de la población.



All this is of an unhealthy complexity.

The result is that trust in public institutions decreases and therefore the mood of society facing the future also decreases.

REALITY

And so the architect, who is the one that must shape to the public works society commissions him, is stuck in between, trying to keep his sanity in an insane context.

To achieve salutary responses in this scenario, he has to alternate between acting as the most pragmatic person on the team and at the same time acting as the most idealistic.

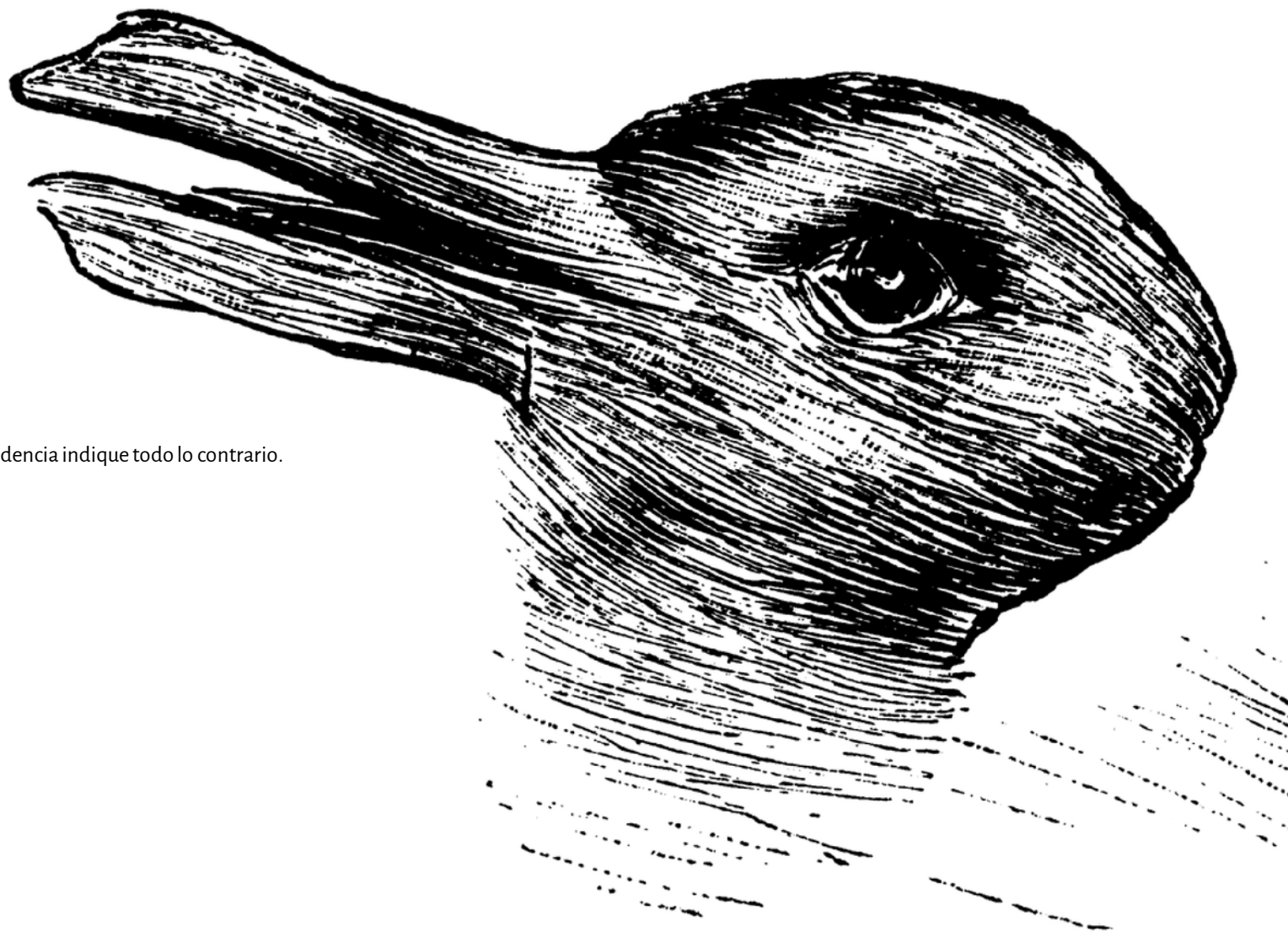
Having to produce solutions simultaneously conservative, based on evidence, and innovative, based on intuition.



ARCHITECT

Y la intuición que todos tenemos es que finalmente algún día el arquitecto logrará su objetivo de alcanzar a la realidad, comprenderla y definirla para siempre.





Aunque la evidencia indique todo lo contrario.

