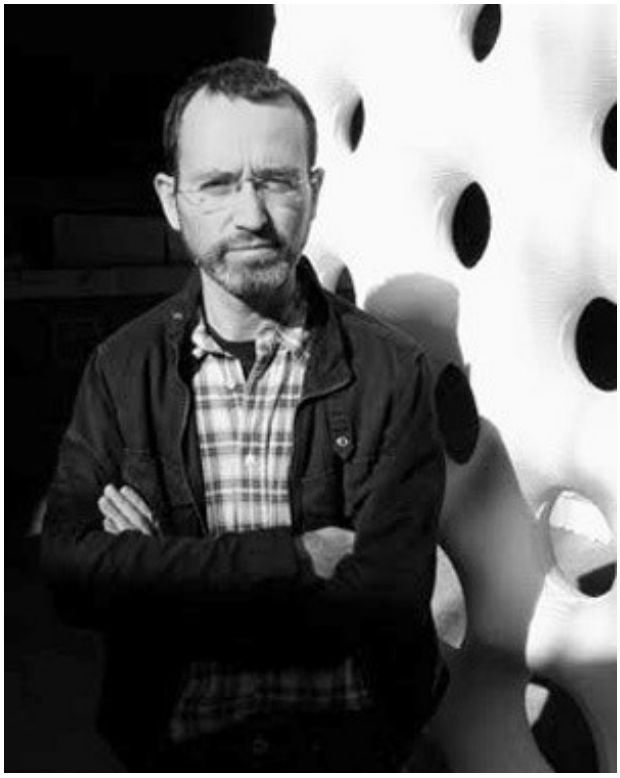
ROUNDTABLE #1 (ARCHITECTURE AND SUSTAINABILITY)

Date: 15.03.2016

Participants:



Alberto T. Estévez – Architect (Universitat Politècnica de Catalunya, 1983), Architecture Ph.D. of Sciences (Universitat Politècnica de Catalunya, 1990), Art Historian (Universitat de Barcelona, 1994), Art History Ph.D. of Arts (Universitat de Barcelona, 2008). Founder in 1996 and first Director of ESARQ, the Architecture School of the Universitat Internacional de Catalunya in Barcelona.

Alina Jerónimo – Architect, Co-founder of CAS (Sustainable Architecture Collective, Lisbon).

Paulo Carneiro Fernandes – Architect, Co-founder of CAS (Sustainable Architecture Collective, Lisbon).

Julian Weyer – Architect, CF Møller architects

Tatiana Afonina – Art historian, Editor-in-chief at BERLOGOS.

Tatiana Afonina:

-The theme of our meeting today is « Sustainability present and future (architecture and cities) ». Before we talk about this subject deeply, I suggest to define the term «sustainability». What does it mean for you?

Julian Weyer:

-It's a large question – we tend to define it fairly broadly, but that is also because we like to look at the bigger scales. We could say it's something which justifies the investment and resources spent.

Alberto T. Estévez:

-My definition of sustainability is not a special definition; it's common, according to global agreement about the sustainability to understand each other quickly. All of us understand the general concept of this term. No problem. We can check it on the dictionaries and wikipedia! The question is what we are proposing after to arrive to the entire planet sustainability.

Paulo Carneiro Fernandes:

-Sustainability in architecture is its impact through design, in the balance between social, economic, cultural and environmental factors. How design can influence these factors.

Alina Jerónimo:

-In my opinion is a tool used to define the parameters to meet the current problems.

Alberto T. Estévez:

-We have the hope to survive if we arrive to a kind of design and architecture that allows the sustainable planet. But architecture, as we understand and build is not sustainable! We live not understanding the radical change that we need. Only we can expect a sustainable future if our architecture and cities learn from the same processes of nature, that demonstrate us million of sustainable years until the XIX Century arrives.

Alberto T. Estévez, *Genetic Barcelona Project*, 1st phase 2003-06 *(Illustration: Aleix Bieto & Gabriel Montañés).*

Vision of Barcelona with the magic light of bioluminescent trees.

Alberto T. Estévez, *Genetic Barcelona Project*, 1st phase 2003-06 *(Illustration: Aleix Bieto & Gabriel Montañés).*

Genetic creation of bioluminescent plants for urban and domestic use: real application of **genetics** in architecture.

Alberto T. Estévez, *Genetic Barcelona Project*, 1st phase 2003-06 *(photo: A. Estévez with conventional reflex camera*).

Comparison between a bioluminescent leaf of one of the seven first lemon trees with GFP for urban and domestic use, and another leaf without GFP of the same type, called lemon tree type "fine".

Alberto T. Estévez, *Consulting rooms G.*, Barcelona, 2008 *(Illustration: Diego Navarro).*

CAD-CAM technologies for producing real 1:1 scale architecture from genetic points of views.

Alberto T. Estévez, *manifesto-image "the perfect house, or a house is not a box"*, Barcelona, 2006.

ARCHITECTURE IS **VISION**

Tatiana Afonina:
-Can we say that we already had sustainable architecture whenever in past? Nowadays is it a trend or tendency?

Paulo Carneiro:
-Absolutely! Ancient architecture was more sustainable because it used local and reusable resources. People used to build dwells with materials and in a way that didn't spend too much energy or materials. Today because we are a huge amount of people, that's more difficult to do. But possible! The trend will pass to a tendency and then to a need.

Julian Weyer:
-In many cases (but not all), one (or more aspects) of sustainability has been a driver in architecture. For example, in Scandinavia, it has long been a tool of social innovation. The difference now is a much broader view of the complexity of all factors at once, and the balance between them. And yes, buildings won't save the world alone – but we have to regard them as part of the solution, especially cities.

Alina Jerónimo:
-In the old days people knew how to build, respecting the nature. People are depended on the nature resources.

Alberto T. Estévez:
-You know, if the whole planet wants to live as the «developed» countries live we need two planets! And we have only one. We can chat here now with my Mac, because the other half of the planet can not do this! This is a big problem. Nature in the traditional and conventional sense is not more enough for the sustainability of the entire planet and population.

Julian Weyer:
-I am curious about what you think has driven this change away from «natural» sustainability – was it because of 100 years of the modern movement; or because of the rise in global population? Or are these just side effects?

Alberto T. Estévez:
-In the past, with less population people live in the same poverty as today, but the planet was save, now – not. Humans need to find the way to survive. The change needs to come… Politics, leaders (from sport to movies and music) and businessmen need to find motivation in sustainability, so we will be safe, we will have a future as planet.

Paulo Carneiro:
-The modern movement was maybe a consequence of political and social changes since industrial revolution. But it's not a matter of changing the world. That has to come «naturally» by understanding needs and equity between countries and societies.

Julian Weyer:
-I agree, an idealist approach is a difficult path. Sustainability can never be enforced (certainly not by us); it will have to be the most «attractive» choice – that is one of the areas where architects can contribute.

Alberto T. Estévez:
-We need solutions quickly, or first will come the revolution because less water, after because less food. And if the people haven't access to this, you see the drama of today with Syrians trying to arrive

to the «German paradise»…

We, as architects, designers, scientists need to improve ideas and solutions, but leaders, rich people, politics needs to help to do it real. I self can not find money for research in sustainability objectives, but the 1% of the population has the same money that the 99%… The last years, Hollywood improves some movies that describe this fear: very rich people save and with all the technology and the entire planet is in chaos. This can happen really if we have not a radical change in our behavior. All we are little ants of the biggest colony of the knower universe. All we need to take our sand grain to this colony. The colony will be safe if all are working in the same sustainability direction. But you see in our cities how rich people buy big-big cars that they don't need, they don't do safaris in the dessert, but they want to go to the supermarket with these cars.

Julian Weyer:
-It sounds like we are somewhere beyond the scope of architecture – I am maybe not so worried about the Hollywood scenario, but I am concerned about our responsibility to use our craft to propose realistic scenarios. What I find is a challenge is that – looked at in isolation – the most «sustainable» scenario will often be to simply not build. But this is typically not the alternative, so how do we counterbalance that we are using the less sustainable tool of construction to create a more sustainable overall society?

Paulo Carneiro:
-You are right, Julian. We need to scope this to architecture and cities and how can we improve energy, resources use, carbon footprint, without loosing comfort standards.

Alina Jerónimo:

-I agree, mainly because most of the developing countries can not meet these standards.

Paulo Carneiro:
-Yes, societies will accept the challenge if the comfort achieved in the last 100 years don't disappear. And we have a huge amount of research and technology to do it and improve it.
Current situation is urgent but at the same time there are lots of serious professionals, universities, laboratories, organizations improving life. Lot's of things are being done, maybe at a very slow speed but we have to continue to contribute at each one scale and possibility. Through the project and like it was said before architects can contribute in choosing materials, involving people and communities, of course with politicians decisive help and other professionals as well.

Alberto T. Estévez:
-Yes, Paulo, it is right. But we need to increase urgently this work in all the levels of the developed countries.

Paulo Carneiro:
-That is absolutely right in the so called developed countries, but there are lots of countries still in need of housing.

Alina Jerónimo:

-I think we can not see sustainability as a trend but rather a tool to rebalance the way architecture is implemented.

Paulo Carneiro:

-In Portugal there are more than 30.000 buildings aged more than 100 years old almost in ruin

waiting for being renovated.

Alberto T. Estévez:
-That's right. It's all over the World. Empty buildings are everywhere, where are the owners? Why do you need 3 or 4 buildings, when you need only one? The radical change is for us all in behavior, but for rich people in understanding that they don't help.

Julian Weyer:
-Again, it's more a political debate now – I find it hard to contribute, because I insist that our solutions must work in any political context.

Tatiana Afonina:
-Julian is right; we're coming to political sphere sometimes more than in architecture itself. Do we have a possibility to change existed cities, how can we make them sustainable?

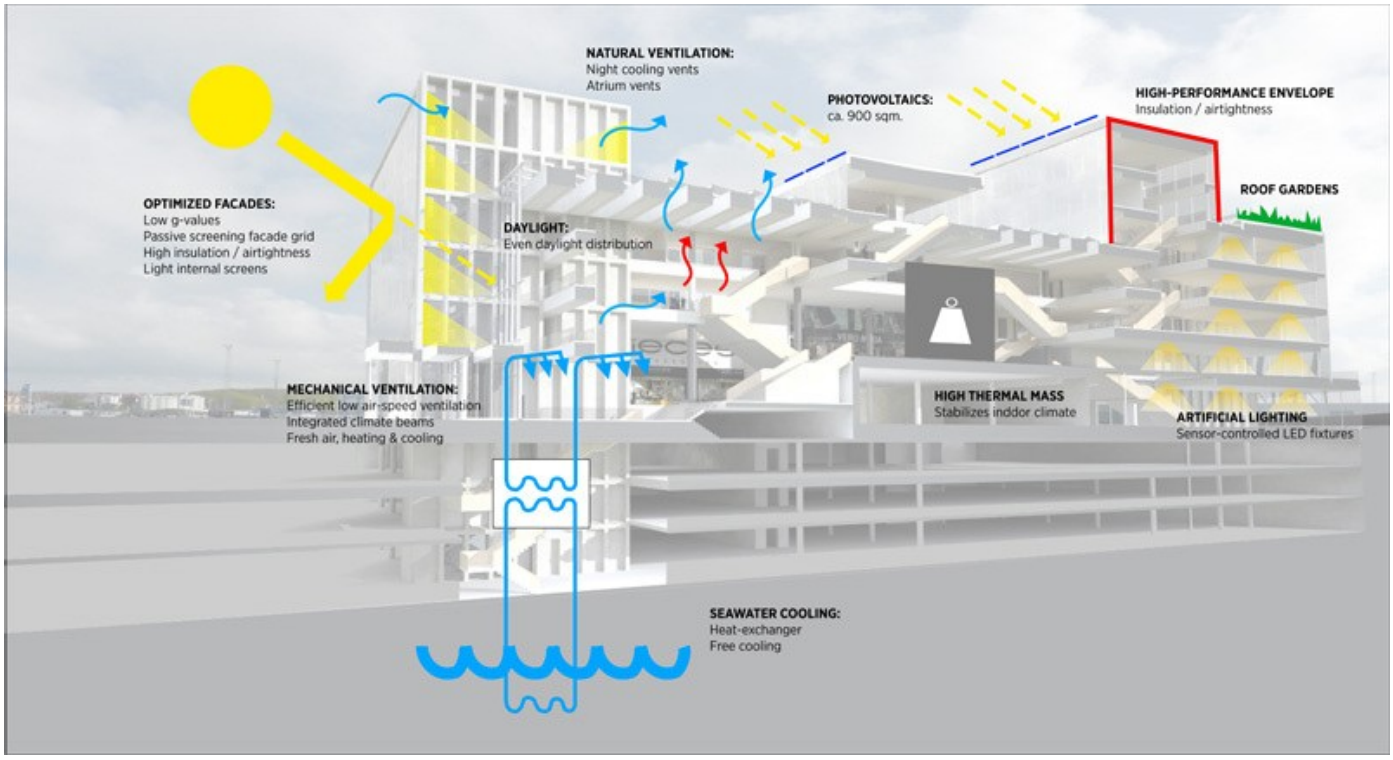
Alberto T. Estévez:
-We come to the political matter another time. Architectural solutions are known,
yes, for materials – solar, wind, energy etc, and ways of building. Some cities are obligatory to improve solar energy in buildings.
New inventions come every time more, but where they are? At the end we need to obligate people to introduce recycling, sustainable materials, etc.

Alina Jerónimo:
-It's not possible to obligate people to this. As Julian referred, it's should be attractive.

Alberto T. Estévez:
-There are some examples of sustainable cities, but what with Mexico DF, Beijing, Calcutta, etc, etc, etc?

Alina Jerónimo:
-It's true, but the developed countries are an example for the developing countries.

Julian Weyer:
-Since the issues of for example energy reductions have been a part of the Scandinavian context for about 40 years now, we have seen that simply by our building codes, we are now almost at net-zero. What remains to be done here is the «grey» energy of the materials cycle, and the ecological aspects of our sector. The social is also very much in focus, and constantly being challenged, but – and this is important – it is based on the economic aspect because this drives it all. So it's not a model that is easily copied anywhere, but it does give some solid evidence that can be used!



Office Bestseller, Aarhus, Denmark, CF Møller

Paulo Carneiro:
-That's an interesting and complex question. Just a small example: I'll talk of an example I know well. In Portugal and in a general way, architects during several years didn't use wood in projects. Maybe as Julian said before, it was Modern Movement influence but since some years ago it started to change. But in this period where wood was not used forests were not being much protected or taken care because wood was not used in a large scale as in other previous centuries. Today things are changing and we are not at the Scandinavian level but improving. Wood is not anymore seen as not trendy in architecture or a old fashion material.

Alberto T. Estévez:
-Only developed cities can dream in 100% sustainability? The entire planet needs this. If rich countries not improve the sustainability of the «other» cities, it will be impossible to have a sustainable planet. If all the million of habitants of the planet want to cut trees for make buildings the planet will die.

Tatiana Afonina:
-Can they really reach 100% sustainability?

Alina Jerónimo:
-It's a hard question, because also political.

Paulo Carneiro:
-As architects, engineers and others crafts we can contribute to improve but to achieve 100% we need to have rules, codes, and certificates. That's complex but possible.

Julian Weyer:
-What is important is to keep focus on the big picture – wood is great, but depending on the sources. So knowing more about the full cycle, with reliable data, will make it possible to find «shortcuts» that can also be used in less developed contexts, I believe.

Paulo Carneiro:
-Yes, the life cycle is essential to understand the next life of materials and even more important the

new possible function of the building in the future – «cradle to cradle» solution.

Alberto T. Estévez:
-Every year forests disappear as the whole surface of Portugal, and more and more.

Julian Weyer:
-For example, forests are not disappearing because of construction – that is for other reasons. If timber becomes a more valued resource, re-planting will increase. So our sector can influence bigger mechanism, indirectly.

Alberto T. Estévez:
-At last, who we are discussing this? All the leaders of the planet come together in International conferences and so less is happen. How you recycle the ancient wood buildings? With fire… wood and minerals of earth becomes contamination. Alive buildings becomes earth when they death.

Paulo Carneiro Fernandes:
-Yes, but in some countries in Africa construction is having a negative country on forests (deforestation and soil erosion) because ancient know how was lost. Old techniques used to build in communities are almost lost forever and people build to be modern with industrial materials. Buildings can be made with earth as in the past but with a new contemporary approach! Ancient cultures knew they depended on wood and they replanted but at this moment more trees are being cut than planted.

Primary school in Igbo-ora, Nigeria, Alina Jerónimo & Paulo Carneiro

Alberto T. Estévez:
-Yes, earth is good for construction.
I founded in 1996 the first architecture school that was compulsory subject on sustainability and international cooperation, education. This is what we need every where – educated architects.

Julian Weyer:
-We have often asked ourselves what could be the most valuable contribution we could make – and find that it is not just designing examples or reducing our own impact, but more importantly to help influence the desire for something different, in the end create a market for sustainable (or at least more sustainable) designs. I keep coming back to the question, what is the option and role of the architect?
Education is surely one part, but our everyday practice has to have a higher aim– even if not every project is zero-impact! That is where our influence is the biggest, far bigger than the energy values of a single project.

Alina Jerónimo:
-As architects we have to focus also on being catalysts of improving the existing reality and to use every possible tool in a way of decreasing the «grey» energy impact in our projects.

Tatiana Afonina