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Vietnam Part 1: Dr. Michael Waibel, Jeremy Rifkin and The Third Industrial Revolution

After two weeks of research along with plenty of beach time, we managed to compile a list of contacts in Vietnam; contacts involved in all different areas of renewable energy and ecological farming.

On Monday morning, we were locked in the apartment where we were couchsurfing. But the afternoon was great! Sasha had contacted the Head Professor at the University of Architecture in Hanoi. He invited us to a lecture given by Dr. Michael Waibel, a German professor, that was trying to give a vision of the sustainable future.

I liked the lecture a lot. Through the heavy use and reference of Jeremy Rifkin's book, '[The Third Industrial Revolution](#),' Dr. Waibel introduced what a sustainable future might look like.

The First Industrial Revolution was powered by the steam engine and coal; bringing with it tremendous economic growth, pollution, urbanization and I suppose what some would call progress. The Second Industrial Revolution was powered by oil and combustible engines. This revolution has transformed the world more than we could have imagined. It gave birth to the use of cars, and with that car culture, came highways, suburbs, white flight, gas stations, resource wars as well as advances in international travel, modern medicine and the internet. The twentieth century itself is very much defined by the use of oil and its byproducts.

The Third Industrial Revolution imagines a more local, renewable and independent form of food and energy production and consumption. According to Jeremy Rifkin and Dr. Waibel, there are five interdependent pillars of the Third Industrial Revolution:

1. Shifting to renewable energy sources (energy from the sun, wind, hydro, geothermal, tides, biogas and biomass).
2. Converting buildings into power plants. There is a tremendous amount of energy used inside every building.
3. Hydrogen and other energy storage technology to assuage any energy inconsistencies due to natural energy sources (store solar power collected during the day for energy use at night).
4. [Smart grid technology](#), an idea that has been promoted to increase energy efficiency and lower energy waste. An example of this could be a motion sensor light that turns on when you enter the room.
5. Plug in, hydrogen and electric transportation.

The five pillars of the Third Industrial Revolution point to a resilient and decentralized system of energy. The role of neighborhoods, Dr. Waibel, hypothesizes, will be redefined. They will cease to be a dependent sector of the city, and instead become an independent city within a city.

However, there are major challenges and concerns for this theory. First, huge investments are needed to make these projects a reality. Governments and multinational corporations are the only entities that possess enough capital to fund these projects. Second, the timeline required to engineer such large scale projects is up to 40 years or more, which is disappointing to most renewable energy advocates and climate change activists. Finally, and probably the largest challenge, is the need for global change of behavior and education.

On the local level, more hindrances abound. To illustrate his point, Dr. Waibel used 'climate-friendly neighborhoods' as an example of the difficulties in creating small scale, energy-efficient systems. Local decision making is very complex when it comes to building additions and new construction. There is hardly any green zoning as the concept in urban planning is very new. Also, the communication between planning authorities, architects, utilities and residents is hardly existent and are often times their interests are diametrically opposed.

Fortunately, there is at least one great example of a neighborhood that has succeeded in designing itself around the concepts of renewable energy.

The [Vauban Quarter](#) is located in Freiberg, Germany. After the reunification of Germany, Freiberg had an old French military base, and nothing to do with it. The city decided to use this space to create a very specific kind of community - one with energy-efficient homes; low rise apartments able to accommodate a high density of residents; a local heating plant; and a good mix of work space and living space. In addition, Freiberg wanted to focus on schools, youth centers, kindergartens and parks, while also reducing the use of cars and increasing access to mass transit.



A city map of the Vauban Quarter

After nearly ten years of discussion and cooperation, residents and planners were to make plans for the Vauban Quarter a reality. On the periphery of the neighborhood are two big car parks, which encourages citizens to minimize car use, and instead utilize public transportation. Every rooftop has either a solar PV or a solar water heater; some rooftops have both. The community owned wood power plant helps to supplement energy demands that solar may not be able to attain on its own. All of the buildings are energy efficient, high density residential and commercial with convenient access to public parks and schools.



A snapshot of Freiburg

The Vauban Quarter was a success partly because it overcame so many hurdles. The city initiated the process by offering a competition to architecture companies: whoever could come up with a viable neighborhood design according to the city's specifications would be the winner. However, it was the community residents that were the main driver in this process of building the Vauban Quarter. These residents held regular meetings, roundtable discussions and workshops to achieve the community they envisioned.

Here's a great [article](#) that discusses life in Freiburg further.

Personally, I found Dr. Waibel's lecture fascinating and inspiring... which was great, but also its downfall. I get excited when I hear about how humans can switch to renewable energy in a remarkably short amount of time; however, when I leave a lecture venue or finish an article about these big global plans, I can't help but feel a little distressed. Often, those plans seem to be more rooted in fantasy than reality. What made Dr. Waibel's lecture most compelling was the example of Freiburg, Germany. It would be even better if he had ten examples rather than just one. Perhaps a climate-friendly neighborhood from each continent, or from large country. Real world examples of energy-reduction projects are certainly useful; they can act as blueprints for other, bigger transitions from conventional to renewable energy. Perhaps even more important, energy success stories make people excited about the possibilities of a renewable future. But concrete steps, and not just theories and stories, are still necessary to help people to organize themselves into effective organizations that promote transition. I really enjoyed learning about the Third Industrial Revolution, but frankly, I felt there was a huge missed opportunity to create a useful and lasting impact upon the students.

No comments:

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