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The NOW dilemma in Energy. The possibilities for Architecture and Urbanism

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Abstract

Energy efficiency has found its place at the very core of the discussion in Architecture and Urban Planning. Research & Development, Political Agendas and Education Curriculums are increasingly driven by the need to reach a fair balance between the way we inhabit the world and the energy we require for it. After many decades neglecting this discussion a growing awareness about the carrying capacity of our environment is being brought to actual policies on the built environment. The dominant tendency today privileges economic growth, thus being the maximization of performed labor per energy unit its ultimate goal. Renewal energy sources and energy efficiency are means for, on the one hand, an alternative to finite fossil fuel sources and, on the other hand, the optimization in the use of energy. Very little attention has been paid, however, to a more profound paradigm shift in economy. Some authors, however, have also claimed replacing the myth of economic growth by a more steady-state development as a solution for the current sustainability conundrum. The question is whether withholding the use of energy might be an alternative to its hi-tech optimization. Some of the contemporary authors who have discussed the issue in recent energy crisis are recounted here for a wider and holistic understanding of the problem.

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1. Energy, Efficiency & Equality.

At the time the oil crisis of the 1970s stroke the global economy, a barely spread manifesto called “Energy and Equality” posed a critical theme for discussion: How energy efficiency is related to social equality and, ultimately, to a sustainable relationship with the environment that humankind lives in?. Author Ivan Illich delved into the theme and concluded that the energy policies adopted for the aftermath of the 70’ crisis “will determine the range of social relationships a society will be able to enjoy by the year 2000” [1]. For him, the key question was whether or not increasing technology optimization was the right path to follow.

By the time “Energy and Equality” was published, the English economist Len Brookes argued that an economy responsive to increasing energy costs, thus based on fuel optimization, would merely accommodate the new prices, causing energy consumption to be higher than it would have been if no effort to increase efficiency had been made. This effect, which could be devised as Jevons’ paradox in context of the 70’ oil-crisis [2], has been referred to as “rebound” in many scientific studies since then. One of the most celebrated was the special issue of Energy Policy Journal published in 2010 [3]. A reading of the many articles contained in the issue concludes that the rebound effect on a certain sector very much depends on the cost share of energy in such economic sector. To put it simple, in processes, products, and activities where energy is a very high part of the cost the rebound effect may be remarkable, whereas in activities where energy plays a secondary role in costs, the rebound can be considered as neglectable. Assuming such conclusions, we may ask ourselves about the share of energy-costs in our societies, since the large-scale rebound is escalating up as investment in energy efficiency keeps growing in developed countries. Rebound increase might be seen, therefore, as the symptom of an energy-junkie society, being much of our economic processing greatly dependent on energy consumption -and the efficiency of its cycle-. So, rather than rapidly assuming energy efficiency as the ultimate goal for a more sustainable society, it seems worthy to stop for a moment and ask ourselves whether sustainability might rely in other approaches other than mere efficiency. Suffice is to say that once such debate transcends the pure monetary focus and, instead, considers a widest environmental and ethical scope, alternate views to efficiency gain ground in the discussion. As the oil crisis of the 1970s paved the way for this critical debate, several -and quite divergent- approaches were devised.

2. The NOW dilemma. Three attitudes towards the environment.

“Energy and Equality” advocates for a low-consumption energy policy as a mean for a wide choice of life styles and cultures. He envisioned three diverse attitudes when it comes to link human development and energy usage. For him wellbeing can be identified with high amounts of per capita energy use, with high efficiency of energy transformation or with the least possible use of mechanical energy.

The first approach keeps on using increasing shares of energy and stresses tight management of scarce and destructive fuels for the sake of endless industrial growth, thus neglecting sustainability as a critical component for human development. The second approach fosters, as Illich would say, the retooling of industry of thermodynamic thrift. The third option is, on the contrary, based on the responsible and conscious use of power as the foundation for a more equally, fair and sustainable society. While the first attitude Neglects the problem and the second tackles it by Optimizing the use of energy, the third option proposes a Withhold of energy activity. More than 40 years after Illich analysed them, these three attitudes are currently standing as the alternatives for energy policy worldwide, thus defining what we might identify as “the NOW dilemma” –standing N for neglect, O for optimization and W for withhold).

The first two attitudes imply huge public expenditure and increased social, technological and geopolitical control; both rationalize the emergence of highly technology dependant societies and both are present and widely discussed. However, Neglecting skips the fundamental discussion that we face today, either from the economic standpoint as, more importantly, from the environmental perspective. This attitude is very much discredited in developed societies and, although it is still the leading trend in some contexts, its prospect run is very much limited in the future. Optimization enjoys, on the contrary, an incredibly favourable acceptance in diverse forums aiming to maintain the rate of economic growth by making the most out of available resources. Withholding, on the other

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