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Post-fossil futures: naftological and post-Keynesian notes for politics and art

There are two powerful political narratives that both take as their starting point the transition of societies to a post fossil fuel era.

One is the market and technology oriented narrative, according to which the market is ultimately the best mechanism for discovering and implementing greener technologies in order to allow societies to do what they are now doing but with less environmental impact. This is the neoliberal model adopted by most governments worldwide.

The other narrative links de-carbonized technologies with social justice and argues for a transition where post fossil fuel, decentralized energy and food production and infrastructure developments provide jobs and wealth for local communities rather than the few owners. Making it happen is a matter of leftist politics, activism and community-level fights. This kind of narrative can be seen for instance in the recent Leap Manifesto for Canada by Naomi Klein and others.

I will only deal with the second one, as the first narrative is clearly not interested in solving the problems societies are facing but merely in sustaining itself (which manifests for instance in the attacks of orthodox economists on other scholars that try to voice their views on the economy - thus the international student movement for pluralist economics).

Although I sympathize with the second narrative, I think there are two major omissions that should be seriously thought about before this kind of progress can be effectively pursued. They have to do with oil and money.

First, it seems that the second narrative masks the material difficulty of realizing in practice logistics, housing and energy and food production without fossil fuels. According to some estimates, 90% of current global production is dependent on fossil fuels. This is no coincidence but a result of the special qualities of fossil fuels. Oil is the best: it has been widely available, it packs a lot of energy in small space and is very light, and it can be transformed to almost anything like plastics. Synthetic oil can be made, but it requires a lot of energy that needs to be available for this use. An easy way to think about it is to concentrate on EROI, or energy returned on energy invested. While early oil fields in the 1930's gave 100 barrels of oil with 1 barrel consumed in the process, with the new so-called unconventional oil the ratio is somewhere in the range of 5:1. Solar panels and industrial wind mills do somewhat better than that - but of course they have other qualitative and quantitative limitations. Electricity storage is one especially challenging issue.

In philosophical terms, we need to again begin appreciating the qualities and uniqueness of material things. There is no energy or material in the abstract, but there are certain amounts of certain types of oil, coal and gas in specific places. Then there are certain types of wind mills and solar panels that produce electricity, and

geothermal pumps that transmit heat. What societies and economies can do depends precisely on these particularities.

Economists have for a long time now had the luxury to think energy and material in the abstract. The army, however, does not entertain these kinds of illusions (other kinds for sure), because it needs clear analyses that are based on material realities. In a society in transition, people engaged in politics, too, need a vastly better sense of the material world and how it will develop in order to take care of citizens' wellbeing.

Beginning to acknowledge material things in other ways than through abstractions is not easy. Naftology, or the philosophy of energy and its experience, argues that this disconnection from the material world, the difficulty of thinking specific material things, is due to the fact that with wide-scale use of fossil fuels and continuously growing energy production, we haven't had the need to think about the material conditions of our activities. Now, with global fossil-fueled logistics, it is in fact impossible to know where things come from, what they are and where they go. In essence, this disconnection is the experience of oil.

So can we do anything in advance - before we are quite physically forced to abandon using fossil fuels? I agree with the lines of thought in speculative realism and object-oriented ontology according to which art might very well offer means to deceive the fossil sense in us, to lure us in more intimate relations with material things. From this perspective, art is about experimenting with symbolic-material causalities. It can raise to the foreground and de-naturalize our fossil fuel dependencies as well as allude to other than fossil-fueled material relations. Experiments such as these are essential in order to get in grips with post fossil futures.

When we start to understand materialities, we can also start to see that the dominant political and economic narrative will most likely not survive the post fossil transition. The economy will have to do with less energy and less materials, and the goal of accumulating wealth in these conditions fits uncomfortably with the goal of social justice.

This leads to the second dimension, that of money. The key justification behind current neoliberal politics, which supports growth of all kinds of production (not only that which helps to attain the good life in the post fossil era), seeks to cut down on public spending and opposes policies such as universal basic income, is that public funding is directly dependent on growing private markets - that states have a limited amount of their own currency and the amount depends on taxes.

This is where the Leap Manifesto and other similar narratives fall short: they don't really break free from the neoliberal assumptions of state-market relations. Under the assumption of always needing to balance the state budget, achieving social justice or a broad welfare state, in the form of universal minimum material living conditions, for example, is only getting more difficult from now on as the material resources markets depend on get more limited.

According to post-Keynesian thinkers, in the modern fiat money system, which replaced the gold standard, the idea of scarce state money, which inhibits public investments on post fossil infrastructure and discourages any effective limits on

markets, is only a neoliberal narrative without any basis in real money flows. In reality, there's no financial limit to how much the state can spend in its own currency. That is not to say that the clever thing would be to spend infinitely. Practically, as post-Keynesian argue, after the economy has reached full employment, spending more would just lead to inflation, because the new money created through state spending would not result in any new economic activity.

As argued by Keynes, the state - controlled by its people - should always ensure that markets are doing what they should be doing. Markets should be shaped according to democratic deliberation. As public spending is not dependent on private markets, the state gets to set the rules of the market somewhat freely. Democratic decision-making becomes guided by material rather than monetary issues.

The trade between different currency areas, of course, differs from the trade within a single currency area. If the state needs to buy something from another currency area, it needs to ensure it has that foreign currency - basically that it also has something to sell. This is a further reason for aiming at local self-sufficiency rather than relying on external imports of fossil fuels.

In addition to legitimizing democratic guidance of markets, post-Keynesian theory is able to clarify some of the paradoxes that typically plague green thinking relying on orthodox neoliberal economics. First, it removes the double aim of taxation. Carbon taxes, for example, can be set tight enough, because the aim is only to discourage carbon emissions rather than to also contribute to public investments. Second, it makes it easier to distinguish between market prices and the material objects they refer to. It is often said that markets will start to replace fossil fuels with renewable energy solutions once the price of these new solutions gets low enough. This view hides that market prices are always already politically constructed: there is no natural price. It also hides that because of the relatively low EROI of solar panels, for example, a larger share of society needs to focus only on energy production in comparison to easily available fossil fuels so far. There are thus material limits to how many solar panels can be produced and bought to run society.

In a way of conclusion, the implication of the perspectives on oil and money presented here is that the political narratives must change on both/all sides. We can't just aim at an improved strategy for the Left. If the ideas of basically unlimited or infinitely replaceable material resources on the one hand and limited public funding on the other hand persist on the political field, not much progress can be made. Details of the connections between money and oil can be debated, but if we are faced with a choice between leaving to future generations either public debt (which always equals private wealth!) or skills and infrastructure that rely on fossil fuels in a situation where those fuels cannot be used, the decision should be very clear.

Read more:

Leap Manifesto: https://leapmanifesto.org/en/the-leap-manifesto/

OIL
Antti Salminen and Tere Vadén (forthcoming in 2015): Energy and Experience. An Essay in Naftology. Chicago: M-C-M'

Richard Heinberg: http://www.postcarbon.org/our-renewable-future-essay/
Tim Morton: Hyperobjects
Mustarinda HPB 2014: Objects on Oil: http/www.mustarinda.fi/en/publication

MONEY
Bill Mitchell: Eurozone Dystopia
Randall Wray: Modern Money Theory:
http://www.levyinstitute.org/pubs/wray_understanding_modern.pdf
Levy Institute: http://www.levyinstitute.org/
New Economic Perspectives: A US Climate Platform: Anchoring Climate Policy in Reality: http://neweconomicperspectives.org/2015/09/a-us-climate-platform-anchoring-climate-policy-in-reality-13.html
Mustarinda KEYNES 2013: http/www.mustarinda.fi/en/publication