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Grasping the Nettle: Sociology, Political Economy and Carbon Dependency: A Response to Redclift

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In his article, 'The Response of the Hermeneutic Social Sciences to a 'Post Carbon World' ', which appeared in the 2011, Vol. 1, issue 3 of the *International Review of Social Research,* Michael Redclift (2011) argues that sociologists have 'taken a back seat' in the debate about post-carbon societies. Why this is so is never elaborated, although the author suggests that it's related somehow to sociology's longstanding difficulties with policy agendas, and to its skittishness with biological explanations of human behaviour. There are, of course other reasons that aren't included in Redclift's discussion. In their critique of Constance Lever-Tracy's (2008a) article 'Global Warming and Sociology,' Reiner Grundmann and Nico Stehr (2010) offer two alternative explanations for 'sociological abstinence' on issues related to carbon dependence and climate change.

First of all, they suggest that as anthropogenic climate change evolved from a science-based issue to top global policy issue, social scientists became gun-shy, avoiding a 'polarized debate where academic research might be

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seen as politically counterproductive' (pp. 899-900). In support of this claim, the authors cite the sociologist of science, Brian Wynne (1996), who notes that a sociological deconstruction of knowledge about global warming could have an unanticipated effect, perhaps even contributing to 'a political demolition of the environmentalist case.' Social constructionists, in particular, have been reluctant to have much to do with this issue because they fear unwittingly lending support to oil and gas producers, right wing ideologues, Tea Party politicians, and others whom they loathe. As Grundmann and Stehr (2010: 905) observe, ''there has been little engagement with climate change on the part of sociologists (and especially science studies scholars) because they are aware of the political implications and anxious of not wanting to play into the hands of climate change skeptics' (or be accused by their colleagues of doing so).

Much the same is true of some natural scientists. For example, the Danish physicist Henrik Svensmark, a pioneer in suggesting a close correlation between solar variations and changes in the earth's surface temperature, was recently asked if he felt upstaged by recent reports from CERN (European Organization for Nuclear Research) that seem to confirm the impact of cosmic rays on clouds, thus giving new respectability to a much disparaged alternative climate theory. Svensmark replied that while he was pleased that these results were coming from the home of the world's most powerful particle accelerator, he regrets that it has taken so long, 'But this has been something that most climate scientists would not be associated with. I remember another researcher saying to me that the only thing he could say about cosmic rays and climate was that it was a really bad career move' (Jolis, 2011).

Second, Grundmann and Stehr (2010: 900-901) argue that from the beginning climate change was the exclusive domain of the modeling community, who reached out to other academic communities only in a limited way, and only then when they needed useable data 'in the right format' on such things as predictions about mitigation, adaptation costs, and political conflict. Compared to geographers and political scientists, sociologists don't have much to contribute here. It shouldn't be surprising, then, that climate scientists have virtually ignored any potential contribution that sociology could make, opting instead to themselves act as 'lay sociologists'.

Despite sociologists being slow off the starting block, Redclift believes that future prospects for developing a post -carbon sociology are 'encouraging.' Among the possibilities recommended here are approaches that conceptualize emergent energy futures as a 'challenge in social learning'; and the application of a 'post-structural political economy' of the variety favored by Arturo Escobar (1996). Additionally, Redclift suggests several 'areas of sociological work which can inform our analysis of the transition from carbon dependency towards more sustainable, lower energy intensity paths.' One is to investigate societies 'as utopias and imaginaries, freed from the heavy burden of 'real world' policy and practice.' Another is to analyze how everyday behaviour is

'tied into patterns and cycles of carbon dependence.' All things considered, he concludes, the discipline of sociology, working in conjunction with the other social sciences, is well positioned to join the quest for future alternatives to 'hydrocarbon' societies. Sagely, he cautions that the political economy of the withdrawal from carbon dependence 'needs to be analyzed rather than evangelized'.

Whether or not you agree with Redclift that a 'brighter narrative' can be developed for the future depends a lot on why you think we have currently reached an impasse on de-carbonization. In his *New York Times* review of Daniel Yergin's (2011) new book *The Quest: Energy, Security and the Remaking of the Modern World*, CNN host and *Time* magazine editor Fareed Zakaria (2011) offers two possible explanations. First, 'The renewable technologies that are currently being deployed are highly unlikely to provide enough reliable and cheap energy to replace fossil fuels.' For example, solar and wind energy are expensive to produce, require hefty subsidies, and are difficult to store. Zakaria cites Bill Gates' observation that 'if you take the entire world's battery capacity –every battery everywhere- it can store just 10 minutes of the world's current energy use.' This explanation assumes that, if there were to be a miraculous technological breakthrough, alternative energy would immediately be embraced by the corporate sector and find wide public acceptance.

Second, Zakaria (and Yergin) suggest that more often than not governments subvert this quest for reliable and inexpensive alternative energy sources and technologies by backing the wrong horse for crass political reasons. For example, in the United States, 'The huge subsidies for ethanol are an example of government involvement that has clearly caused more harm than good.' Even as it has become widely known that ethanol production comes with a host of negatives, elected officials have stubbornly continued to support it. Phasing out ethanol subsidies, they fear, would lose them the support of Mid-Western farmers at election time.

There's a third explanation here. A low carbon economy is achievable, but it's in the interests of 'carbon capitalism', to use John Urry's (2011: 92) term, to make sure this doesn't happen any time soon. One corporate strategy is to confuse the public by appearing to be at the forefront of low carbon innovation, while continuing to conduct business as usual. Thus, in 2000, British Petroleum highlighted its decision to branch out into research on alternative energy sources by rebranding itself as BP ('Beyond Petroleum'). However, the new title lost its luster when the company was held primarily responsible for the 2010 Deepwater Horizon oil spill, the largest accidental marine oil spill in the history of the petroleum industry.

Indeed, the corporate sector not only has a long history of co-opting innovation but also of trying to deliberately destroy viable alternatives to the high carbon economy. This is evident in two episodes from the political economy of urban transportation, separated by a half century. Both episodes played out primarily, although not exclusively, in the state of California and centrally implicate General Motors Corporation,

once the most powerful company in the United States.

The first case involves the death of electric trolley systems in U.S. cities. In the first decades of the twentieth century, mass transit was burgeoning in the American metropolis. The city of Los Angeles was a leading example; its Pacific Electric (PE) system of heavy- duty city trolleys carried millions of passengers a year during the 1920s and 1930s. Yet, by 1939 three quarters of these trolleys had completely disappeared. For a long time the decline of the Pacific Electric system was attributed to the effects of increasing urban sprawl and suburbanization. Then, in 1974, Bradford Snell, a staff attorney at the U.S. Senate antitrust committee advanced another explanation. General Motors, he said, had plotted to buy up the electric transit system in Los Angeles, as well as those in 45 other cities, and replace them with polluting buses (Snell, 1979). In undertaking the dismantling of the trolley network, Snell charged, GM joined forces with Standard Oil of California and Firestone, the tire manufacturer. Together the three constitute what Feagin and Parker (1990:156) call the 'auto-oil-rubber industrial complex.'

In recent years, some scholars have questioned the accuracy of Snell's account, pointing out, for example, that GM never legally assumed a controlling ownership stake in Pacific Electric until the 1950s. Rather, PE was part of the Southern Pacific Railroad, which had acquired it early in the century. By the end of World War Two, Southern Pacific wanted to get money-losing passenger trains out of the way in order to operate more profitable freight traffic (Adler, 1991: 57-8; Thompson, 2009: 675). Yet, GM's efforts to eliminate electric trolleys weren't restricted to Los Angeles. Snell noted that GM was convicted in a Chicago federal court of having conspired to destroy electric transit and convert trolley systems to diesel buses whose production the company monopolized (Snell, 1979).

Fast- forward fifty years. In the 1990s, General Motors developed an electric car called the EVI. Concurrently, the California Air Resources Board instantly created a market for EVs (electric vehicles) by passing the 1990 Zero Emissions Vehicle (ZEV) Mandate. As Chris Paine alleges in his documentary film *Who Killed the Electric Car?* (2006), GM, colluded with the oil companies to shut down electric car production and to lobby against ZEV. One reason the company didn't think EVs would make a profit was that they don't require replacement parts or maintenance. Paine shows how the federal government and the oil companies cynically advanced hydrogen cells as a more viable alternative to the electric car, despite knowing full well that the technology was in its infancy.

GM's defenders deny that there has been an ongoing corporate conspiracy to promote 'mass motorization' and carbon dependence. On cue, they roll out the argument that the marketplace rules and automakers only give consumers what they demand. It is alleged that the electric trolley industry had begun to seriously lose money during World War One, two decades before automotive interests began purchasing operating companies (Thompson, 2009: 674). In their submission to the Senate antitrust

committee, General Motors argued that transit companies in Southern California were in serious financial trouble and their rail lines were in terrible physical shape. Trolley cars were slow and impractical compared to buses. Substituting buses constituted the only available strategy that might turn things around (Adler, 1991: 59). Furthermore, rising income provided middle-class Americans with more travel and housing choices. This being so, consumers opted for large, single-family homes in the suburbs and cars rather than public transportation. In the 1990s, it's said, there was virtually no demand for the electric car, which was viewed by California drivers as too expensive and inconvenient. A particular irritant was said to be the EV's limited range - you could only use them for local travel, since each re-charge would only take your car a relatively short distance.

The response to this is that the auto-oil-rubber industrial complex has distorted market choice by restricting the alternatives (Feagin and Parker, 1990: 158) and manipulating consumers. Thus, in the 1930s, corporate and government forces in concert manipulated the transportation supply in contravention of middle-class American demands, 'Building interstate highway systems and urban freeways enhanced demand for autos and lured Americans to the suburbs' (Thompson, 2009: 673). In the 1990s, General Motors, who didn't think the EVI would make a profit, made absolutely sure that it wouldn't succeed in the marketplace. There's a dramatic clip in the film *Who Killed the Electric Car?* which depicts EVIs being impounded, and then sent to a crushing facility, much to the evident sorrow of their many fans. More generally, Urry (2011:52) argues that high carbon systems aren't merely social patterns or individual preferences, but rather are anchored by such entrenched arrangements as suburban housing necessitating commuting and specialized commercial and leisure sites far from home and neighborhood, notably shopping malls and big box stores; theme parks and sports stadia; and even national parks.

As Lever Tracy (2008b: 490) correctly observes, 'Arguably, sociology is not qualified to evaluate the probability of the scenarios portrayed by natural scientists. What we can do is study the actual and likely social responses in the context of power and culture.' These two episodes in the political economy of urban transportation clearly demonstrate that the road to a low-carbon economy runs through the canyons of corporate power and control. This is fertile turf for social science research, albeit one that is unlikely to secure a place at the policy table any time soon.

Such an analysis is destined to fall short, however, if it turns out to be no more than a clarion call for collective mobilization on behalf of 'deep ecology and 'democratic accountability', spiffed up in social science jargon. If sociologists wish to join the conversation about carbon dependency, they have to be prepared to move beyond simplified narratives about evil carbon capitalists and heroic green crusaders. The political economy of energy is complex, and understanding it requires a firm grounding in environmental economics, international relations and

political ecology, the very 'congruent areas' cited by Redclift as dominating past policy debates about post-carbon societies.

Take, for example the case of fossil fuel subsidies. Environmentalists tend to reflexively condemn them for propping up the oil and gas industry (and, therefore, contributing indirectly to global warming). And, indeed they are hefty; according to the International Energy Agency of the Organization of Cooperation and Development, global subsidies for fossil fuel are set to reach US$660 billion in 2020 (Boselli, 2011). However, the political economy of fossil subsidies is less straightforward than it initially appears. To begin with, the largest subsidizers are not, as might be expected, the United States and the OECD countries, but rather Iran, Saudi Arabia, Russia, India and China. It's unclear how much of this goes to producers as against consumers. Furthermore, we don't know for sure what portion goes to the poor in these countries – the IEA estimates only about 8 per cent. In recent years, the G20 leaders have pledged to phase out subsidies in order to discourage wasteful consumption; however, the IEA estimates that their total elimination (unlikely, insofar as subsidies have actually been rising) would only reduce greenhouse emissions by less than 10 per cent.

We could, of course, choose to sit out any discussions of fossil fuel subsidies, ceding this territory to energy economists, and retreating to areas of sociological work such as those recommended by Redclift. However, my inclination is to urge sociologists to join the fray. Congruent with Lever-Tracy's advice, we probably aren't qualified to estimate how much lowering fossil fuel subsidies would reduce greenhouse gas emissions, if at all. On the other hand, we are well situated to analyze the 'stakes' involved, the process through which these subsidies are set, the discourse surrounding fossil fuel subsidies and the impacts within the countries of the global South.

This holds true not just for fossil fuel subsidies but also for a wide range of issues related to the transition to a 'post carbon world.' One fertile area for sociological research is the rising prominence of exploration and development projects featuring non-conventional fossil fuels. For example, Debra Davidson and Mike Gismondi (2011) have just published a study that focuses on the political discourses surrounding the extraction and processing of the Athabasca 'tar sands' (in the petro sector they are called 'oil sands') in Alberta, Canada. At the time of writing, a major focus of the green movement's campaign against fossil fuels are the public hearings in Washington, D.C. on Keystone XL, a pipeline proposed by TransCanada Corp. which would see a 2,700 kilometre oil sands pipeline built, stretching from northern Alberta to the Gulf Coast of Texas. I would be greatly surprised if this didn't generate quite a bit of research by environmental sociologists and social movements researchers.

Equally, if not more important is the spread of 'fracking' (hydraulic fracturing) or shale gas exploration and drilling, in North America and parts of Northern Europe. Among other things, fracking has been implicated in ground water contamination, and

in triggering minor earthquakes. Shale gas exploration threatens to become a major flash point between environmentalists and politicians, who are desperate to tap into domestic sources of energy beyond conventional petroleum production. If fossil fuels from the tar sands and shale gas drilling come on stream, the advent of a 'brighter narrative' in which a low carbon economy holds center court will, at the very least, be significantly delayed.

References

Adler, S. (1991) 'The transformation of the Pacific Electric Railway, Roger Rabbit and the politics of transportation in Los Angeles', *Urban Affairs Quarterly,* 27(1): 51-86.
Boselli, M. (2011) 'International Energy Agency warns of ballooning world fossil fuel subsidies', *The Vancouver Sun*, 4 October.
Davidson, D. and M. Gismondi (2011) *Challenging Legitimacy at the Precipice of Energy Calamity*. New York: Springer.
Escobar, A. (1996) 'Constructing nature: Elements for a post-structural political ecology'. In Peet, R. and M. Watts (eds.) *Liberation Ecologies*, pp. 46-68. New York: Routledge.
Feagin, J. and R. Parker (1990) *Building American Cities*. Englewood Cliffs, NJ: Prentice Hall.
Grundmann, R. and N. Stehr (2010) 'Climate change: What role for Sociology? A response to Constance Lever-Tracy', *Current Sociology,* 58 (6): 897-910.
Jolis, A. (2011) 'The other climate theory', *The Wall Street Journal*, 7 September.
Lever-Tracy, C. (2008a) 'Global warming and sociology', *Current Sociology*, 56(3): 445-66.
Lever-Tracy, C. (2008b) 'Global warming and sociology: Reply', *Current Sociology*, 56(3): 485-91.
Redclift, M. (2011). The response of the hermeneutic social sciences to a "post-carbon world"'. *International Review of Social Research*, 3 (2): 155-166.
Snell, B. (1979) 'American ground transport'. In Feagin, J. (ed.) *The Urban Scene*, pp. 239-166. New York: Random House.
Thompson, G. (2009) 'Conspiracy or consumer choice?' Review of David W. Jones, *Mass Motorization and Mass Transit: An American History and Policy Analysis* (Bloomington, IN: Indiana University Press, 2008), *Technology and Culture,* 50(3): 673-76.
Urry, J. (2011) *Climate Change and Society*. Cambridge: Polity.
Wynne, B. (1996) 'SSK's identity parade: Signing-up, off-and-on', *Social Studies of Science,* 26(2): 357-91.
Yergin, D. (2011) *The Quest: Energy, Security and the Remaking of the Modern World*. New York: Penguin.
Zakaria, F. (2011) 'Fueling the future'. Review of Daniel Yergin, *The Quest:*

Energy, Security and the Remaking of the Modern World (Penguin, 2011), *New York Times Book Review*, 25 September: 14-15.