### 2NC Cards

#### We must begin with a social critique. Starting with incentives dodges the fundamental issue of social inequality and sustainability.

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Transition without Change: A Failing Discourse After more than thirty years of contested discourse, the major 'energy futures' under consideration appear committed to the prevailing systems of governance and political economy that animate late modernity. The new technologies-conventional or sustainable-that will govern the energy sector and accumulate capital mjght be described as centaurian technics21 in which the crude efficiency of the fossil energy era is bestowed a new sheen by high . technologies and modernized ecosystems: capitalism without smoky cities, contaminated industrial landscapes, or an excessively carbonized atmosphere. Emerging energy solutions are poised to realize a postmodern transition (Roosevelt, 2002), but their shared commitment to capitalist political economy and the democratic-authoritarian bargain lend credence to Jameson's assessment (1991) of postmodernism as the "cultural logic of late capitalism." Differences in ecological commitments between conventional and sustainable energy strategies still demarcate a battleground that, we agree, is important-even fundamental. But so also are the common aspirations of the two camps. Each sublimates social considerations in favor of a politics of more-is-better, and each regards the advance of energy capitalism with a sense of inevitability and triumph. Conventional and sustainable energy visions equally presume that a social order governed by a 'democratic' ideal of cornucopia, marked by economic plenty, and delivered by technological marvels will eventually lance the wounds of poverty and inequality and start the healing process. Consequently, silence on questions of governance and social justice is studiously observed by both·proposals. Likewise, both agree to, or demur on, the question of capitalism's sustainability.22 Nothing is said on these questions because, apparently, nothing needs to be. If the above assessment of the contemporary energy discourse is correct, then the enterprise is not at a crossroad; rather, it has reached a point of acquiescence to things as they are. Building an inquiry into energy as a social project will require the recovery of a critical voice that can interrogate, rather than concede, the discourse's current moorings in technological politics and capitalist political economy. A fertile direction in this regard is to investigate an energy-society order in which energy systems evolve in response to social values and goals, and not simply according to the dictates of technique, prices, or capital. Initial interest in renewable energy by the sustainability camp no doubt emanated, at least in part, from the fact that its fuel price is non-existent and that capitalization of systems to collect renewable sources need not involve the extravagant, convoluted corporate forms that manage the conventional energy regime. But forgotten, or misunderstood, in the attraction of renewable energy have been the social origins of such emergent possibilities. Communities exist today who address energy needs outside the global marketplace: they are often rural in character and organize energy services that are immune to oil price spikes and do not require water heated to between 550Q and 900Q Fahrenheit (300Q and 500Q Celsius) (the typical temperatures in nuclear reactors). No energy bills are sent or paid and governance of the serving infrastructure is based on local (rather than distantly developed professional) knowledge. Needless to say, sustainability is embodied in the lifeworld of these communities, unlike the modern strategy that hopes to design sustainability into its technology and economics so as not to seriously change its otherwise unsustainable way of life . Predictably, modern society will underscore its wealth and technical acumen as evidence of its superiority over alternatives. But smugness cannot overcome the fact that energy-society relations are evident in which the bribe of democratic-authoritarianism and the unsustainability of energy capitalism are successfully declined. In L 928, Mahatma Gandhi (cited in Gandhi, 1965: 52) explained why the democratic-authoritarian bargain and Western capitalism should be rejected: God forbid that India should ever take to industrialization after the manner of the West. The economic imperialism of a single tiny island kingdom (England) is today keeping the world in chains. If an entire nation of 300 million took to similar economic exploitation, it would strip the world bare like locusts. Unless the capitalists of India help to avert that tragedy by becoming trustees of the welfare of the masses and by devoting their talents not to amassing wealth for themselves but to the service of the masses in an altruistic spirit, they will end either by destroying the masses or being destroyed by them. As Gandhi's remark reveals, social inequality resides not in access to electric light and other accoutrements of modernity, but in a world order that places efficiency and wealth above life-affirming ways of life. This is our social problem, our energy problem, our ecological problem, and, generally, our political-economic problem. The challenge of a social inquiry into energy-society relations awaits.

#### Third, fiat is illusory - their framework produces worse policy making

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Having conceded where Nye has a point, let’s now consider the ways in which he may simply be wrong. His assumption is that the academic should be, needs to be, policy-relevant. As indicated above, this can be a very pernicious assumption. As an invitation to academics to contribute to discussions about the direction of society and policy, no one could reasonably object: those who wished to contribute could do so, while others could be left to investigate topics of perhaps dubious immediate ‘relevance’ that nonetheless enrich human understanding and thus contribute to the accumulation of knowledge and general social progress (and, quite probably, to those scholars’ research communities and their students). As an imperative, however, it creates all sorts of distortions that are injurious to academic freedom. It encourages academics to study certain things, in certain ways, with certain outcomes and certain ways of disseminating one’s findings. This ‘encouragement’ is [end page 127] more or less coercive, backed as it is by the allure of large research grants which advance one’s institution and personal career, versus the threat of a fate as an entirely marginal scholar incapable of attracting research funding – a nowadays a standard criteria for academic employment and promotion. Furthermore, those funding ‘policy-relevant’ research already have predefined notions of what is ‘relevant’. This means both that academics risk being drawn into policy-based evidence-making, rather than its much-vaunted opposite, and that academics will tend to be selected by the policy world based on whether they will reflect, endorse and legitimise the overall interests and ideologies that underpin the prevailing order. Consider the examples Nye gives as leading examples of policy-relevant scholars: Henry Kissinger and Zbigniew Brzezinski, both of whom served as National Security Advisers (under Nixon and Carter respectively), while Kissinger also went on to become Secretary of State (under Nixon and Ford). Kissinger, as is now widely known, is a war criminal who does not travel very much outside the USA for fear of being arrested à la General Pinochet (Hitchens, 2001). Brzezinski has not yet been subject to the same scrutiny and even popped up to advise Obama recently, but can hardly be regarded as a particularly progressive individual. Under his watch, after Vietnam overthrew the genocidal Khmer Rouge in 1978, Washington sent tens of millions of dollars to help them regroup and rearm on Thai soil as a proxy force against Hanoi (Peou, 2000, p. 143). Clearly, a rejection of US imperialism was not part of whatever Kissinger and Brzezinski added to the policy mix. In addition to them, Nye says that of the top twenty-five most influential scholars as identified by a recent survey, only three have served in policy circles (Jordan et al, 2009). This apparently referred to himself (ranked sixth), Samuel Huntington (eighth), and John Ikenberry (twenty-fourth).2 Huntington, despite his reputation for iconoclasm, never strayed far from reflecting elite concerns and prejudices (Jones, 2009). Nye and Ikenberry, despite their more ‘liberal’ credentials, have built their careers around the project of institutionalising, preserving and extending American hegemony. This concern in Nye’s work spans from After Hegemony (1984), his book co-authored with Robert Keohane (rated first most influential), which explicitly sought to maintain US power through institutional means, through cheer-leading post-Cold War US hegemony in Bound to Lead (1990), to his exhortations for Washington to regain its battered post-Iraq standing in Soft Power: The Means to Succeed in International Politics (2004). Ikenberry, who was a State Department advisor in 2003-04, has a very similar trajectory. He only criticised the Bush administration’s ‘imperial ambition’ on the pragmatic grounds that empire was not attainable, not that it was undesirable, and he is currently engaged in a Nye-esque project proposing ways to bolster the US-led ‘liberal’ order. [end page 128] These scholars’ commitment to the continued ‘benign’ dominance of US values, capital and power overrides any superficial dissimilarities occasioned by their personal ‘conservative’ or ‘liberal’ predilections. It is this that qualifies them to act as advisers to the modern-day ‘prince’; genuinely critical voices are unlikely to ever hear the call to serve. The idea of, say, Noam Chomsky as Assistant Secretary of State is simply absurd. At stake here is the fundamental distinction between ‘problem-solving’ and ‘critical’ theory, which Robert Cox introduced in a famous article in 1981. Cox argued that theory, despite being presented as a neutral analytical tool, was ‘always for someone and for some purpose’. Problem-solving theories ultimately endorsed the prevailing system by generating suggestions as to how the system could be run more smoothly. Critical theories, by contrast, seek to explain why the system exists in the first place and what could be done to transform it. What unifies Nye, Ikenberry, Huntington, Brzezinski and Kissinger (along with the majority of IR scholars) is their problem-solving approach. Naturally, policy-makers want academics to be problem-solvers, since policies seek precisely to – well, solve problems. But this does not necessarily mean that this should be the function of the academy. Indeed, the tyranny of ‘policy relevance’ achieves its most destructive form when it becomes so dominant that it imperils the space the academy is supposed to provide to allow scholars to think about the foundations of prevailing orders in a critical, even hostile, fashion. Taking clear inspiration from Marx, Cox produced pathbreaking work showing how different social orders, corresponding to different modes of production, generated different world orders, and looked for contradictions within the existing orders to see how the world might be changing.1 Marxist theories of world order are unlikely to be seen as very ‘policy relevant’ by capitalist elites (despite the fact that, where Marxist theory is good, it is not only ‘critical’ but also potentially ‘problem-solving’, a possibility that Cox overlooked). Does this mean that such inquiry should be replaced by government-funded policy wonkery? Absolutely not, especially when we consider the horrors that entails. At one recent conference, for instance, a Kings College London team which had won a gargantuan sum of money from the government to study civil contingency plans in the event of terrorist attacks presented their ‘research outputs’. They suggested a raft of measures to securitise everyday life, including developing clearly sign-posted escape routes from London to enable citizens to flee the capital. There are always plenty of academics who are willing to turn their hand to repressive, official agendas. There are some who produce fine problem-solving work who ought to disseminate their ideas much more widely, beyond the narrow confines of academia. There are far fewer who are genuinely [end page 129] critical. The political economy of research funding combines with the tyranny of ‘policy relevance’ to entrench a hierarchy topped by tame academics. ‘Policy relevance’, then, is a double-edged sword. No one would wish to describe their work as ‘irrelevant’, so the key question, as always, is ‘relevant to whom?’ Relevance to one’s research community, students, and so on, ought to be more than enough justification for academic freedom, provided that scholars shoulder their responsibilities to teach and to communicate their subjects to society at large, and thus repay something to the society that supports them. But beyond that, we also need to fully respect work that will never be ‘policy-relevant’, because it refuses to swallow fashionable concerns or toe the line on government agendas. Truly critical voices are worth more to the progress of human civilisation than ten thousand Deputy Undersecretaries of State for Security Assistance, Science, and Technology.

#### AND questioning underlying assumptions makes policy analysis significantly better – they can’t sever out of the critique

John **DIXON** Public Management @ Plymouth **AND** Rhys **DOGAN** Politics @ Plymouth **‘4** “The Conduct of Policy Analysis: Philosophical Points of Reference” *Review of Policy Research* 21 (4) p.

The proposed fifth methodology requires policy analysts to be philosophically reflective, and thus able not only to identify their own and others epistemological and ontological predispositions, but also to understand and accept the strengths and weaknesses of the contending methodologies for their performance as policy analysts. In essence, this requires them to embrace the following propositions. First, adept policy analysts would be epistemologically and ontologically sophisticated enough to accept that what constitutes “good” policy analysis is an essentially contested concept, clarifiable through constructive discourse. Thus, they would actively seek insights into what might work in particular policy situations by engaging with those who hold different philosophical dispositions. They therefore would see such constructive discourse as normal, even if it has the propensity to create conflict, and, most certainly, as necessary, in order to create creative opportunities for policy analysts to engage with those holding contending philosophical perspectives to find solutions to policy problems and issues. Second, adept policy analysts would be skeptical of any empirical generalizations about the causation and consequences of, and solutions to, policy problems and issues. These they would treat only as preliminary working hypotheses. They would thus seek to deepen their understanding by engaging in acts of ideation with those who hold different philosophical dispositions, which would allow the perspectives reciprocity needed for a reflexive interpretation to emerge that would ensure an appropriate contextualization of meaning. Third, adept policy analysts would learn how to comprehend and evaluate the intended meaning of the contending arguments based on a diversity of epistemological and ontological perspectives. They would settle in their own minds competing epistemological and ontological truth-claims with consistency and without recourse to intentional activities and motivated processes that enable self-deception or self-delusion. They would thereby confront unpleasant truths or issues rather than resort to the mental states of ignorance, false belief, unwarranted attitudes, and inappropriate emotions (Haight, 1980). They would accept that the best policy outcomes that can be expected from constructive discourses are sets of achievable policy aspirations, implementable strategies, and a tolerable level of policy conflict. They would see view good policy analysis as an iterative process that involves learning-by-doing and learning-from-experience about what is the right thing to do and how to do things right. Conclusion In a world characterized by profound diversity of opinion grounded in equally profound philosophical differences, the interrogation of the social world requires a series of conceptual and analytical tools. These relate not only to epistemology and ontology, but also to methodology, and thus theory and method of inquiry. Furthermore, these various tools are logically interconnected: epistemology shapes ontology, epistemology and ontology together shape methodology, and methodology shapes both theory and method. Adept policy analysts must be critically reflective before they seek to describe, explain, understand, judge, and address policy problems and issues by drawing upon theories and methods grounded in only one of these contending (fundamentally flawed) methodological families. The broad conclusion drawn, then, is that policy analysts need: • to avoid epistemological and ontological arrogance; • to seek out and engage with those who disagree with their philosophical dispositions; • to treat all truth-claims skeptically, accepting that there are multiple standards by which they could be justified, particularly if they come from any ascendant epistemic community (whether grounded in naturalism or hermeneutics); and • to settle competing epistemological and ontological asseverations with consistency and without recourse to the self-deception or self-delusion that permits them to avoid unpleasant truths about their informing intellectual discipline.

#### AND their arguments are too optimistic

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Although the film is clearly sympathetic to Zubrin and his ideas, to filmmaker Gill’s credit he also interviewed people at NASA who splashed some cold water on Zubrin’s early claims, even while they acknowledged that the core concept was sound. When they actually started crunching the numbers on the Mars Direct proposal they found a number of flaws. For instance, Zubrin’s team had apparently dramatically underestimated the amount of water and food that a crew would need on such a long journey—they’d die of starvation, assuming that they did not die of dehydration first. They also found Zubrin’s launch mass numbers to be too low, and his proposal for a four-man crew was also too small, especially for a very long surface stay. One might suspect that this is a typical bureaucratic not-invented-here reaction, but the people saying this were actually the enthusiasts within the space agency. It is also hard to argue about proper crew size and water requirements with the only people who actually put humans into space on a regular basis. One NASA official commented—with barely-hidden snarkiness—that although it is easy to propose theoretical human spaceflight missions, the people who actually have to make the nuts and bolts fit together have found them to be much harder to do.

#### Combining electric propulsion and chemical rockets speeds up journey time and enables human missions to Mars.

Jeremy Hsu, 8/21/2012. Astrobiology Magazine Contributor. “How a Mars Sample Return Mission Can Go Electric,” Astrobiology Magazine, http://www.space.com/17209-mars-sample-return-electric-power.html.

Solving the mystery of life on Mars requires robots to collect Martian samples for a return to Earth — a mission that may come with the astronomical price tag of $5 billion to $10 billion. That round trip to the Red Planet could become cheaper by using electric propulsion.

The [Mars sample return](http://www.space.com/7625-protect-mars-samples-earth.html) (MSR) mission would require powerful electric thrusters and efficient solar panels which are presently under development worldwide or even already existing. Such technology would allow the [Mars](http://www.space.com/47-mars-the-red-planet-fourth-planet-from-the-sun.html) mission to lighten the load of chemical propellant carried by traditional rockets and spacecraft — and it's within reach for a mission to try recovering Martian rocks and soil in the next decade or two.

"The chances of having a reliable technology available for MSR in the timeframe beyond 2020 appear good," said Wolfgang Seboldt, a physicist at the German Aerospace Center (DLR).

Having electric propulsion could also speed up the round trip to Mars. The total mission time could prove especially helpful for any eventual human missions to Mars because of the risk that, for example, high-energy cosmic rays pose to astronauts during the journey. [[Boldest Mars Missions Ever](http://www.space.com/16851-most-audacious-mars-missions-ever.html)]

Harnessing the power of sunlight

Most space missions burn chemical propellants to get a big boost up front that lasts as long as the propellant supply. Such chemical propulsion has allowed the huge Apollo rockets and the retired space shuttle fleet to escape Earth's gravity and get into orbit, and would serve a similar purpose for launching any [mission to Mars](http://www.astrobio.net/flvideo/Videocast_95.flv).

The Mars mission could switch over to using electric propulsion once it reaches Earth orbit and begins the journey to Mars, Seboldt said. That would start off slowly by converting xenon gas propellant into a stream of [electrically-charged ion particles](http://www.astrobio.net/pressrelease/609/ion-drive-to-the-moon), but build up to high speed over time with a practically unlimited supply of electricity from solar panels.