Reflections on the Following Quote in the Context of Anthropogenic Climate Change …and Nathan from Brisvegas

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"*...de-carbonization of the economy and human life will only be achievable if current consumption patterns, methods and lifestyles are also subject to profound change. Consumption in general needs to become more de-materialized and de-carbonized, as well as determined by appropriate and more conscious purchasing decisions. According to a recent UNEP global survey on sustainable lifestyles, "creating sustainable lifestyles means rethinking our ways of living, how we buy and what we consume but, it is not only that. It also means rethinking how we organize our daily life, altering the way we socialize, exchange, share, educate and build identities. It is about transforming our societies towards more equity and living in balance with our natural environment*" (Hoffmann, 2011, p. 8)

Abstract

In this essay I provide research contrary to that of Hoffman (2011) that asserts that an aggressive decarbonisation of the world economy is possible utilising currently available wind, water and solar technologies. Optimistic as this sounds, I temper this within the main body of my work that highlights that the problems we face are not technical, they are informational and political. In reference to a comment posted on an ABC blog from "Nathan from BrisVegas" I draw this theme out through personal reflection, in an Australian context, of the overwhelming evidence of climate change, and the barriers that are preventing the transformation that Hoffman so rightly points out is critical to reduce the risk of the worst impacts of anthropogenic climate change to an acceptable level.

Introduction

Nathan from BrisVegas :
31 Oct 2013 7:04:04pm

Don't forget how willing we are to swallow the garbage fed to us by the Murdochracy.

Denial is central to the Australian culture - it suits our propensity for exaggeration, over-consumption, self-aggrandisement and ignorance.

Even in the face of overwhelming evidence, Aussies just can't give up the grease-ball burgers, asset worship and mindless consumption.

It's a measure of our cultural and intellectual deficits; a measure of our character failings and lack of integrity as individuals and a society.

Reply Alert moderator

The above comment was posted on the ABC news website in response to an article titled “Reporting climate Change in Australian papers” (Aedy, 2013). I’ll be straight, I agree with much of it. Having spent many hours supporting climate change advocacy groups in Canada and Australia, it’s hard not to. Also as a trained Chartered Accountant I’m risk averse. And as the father of a six year old, the pit in my stomach drops ever deeper as I witness what I would consider woefully inadequate climate change policy in both these countries retract up the proverbial miner’s shaft.

But does my opinion have any basis? Cognitive barriers can filter out communication inconsistent with one’s own world view (Festinger, 1957). Perhaps my relatively recent fatherhood and risk averse nature exposes me to some sort of warmest religion, blinding me to the societal perils of taking meaningful climate change action, and making me particularly susceptible to conspiracy theories about the undue influence in our political system of right wing media and mining magnates.

By decomposing Nathan’s comment into its main themes the purpose of this paper is twofold: to explore whether there’s any basis in his accusations and to briefly explore what this means in the context of the Hoffman’s quote.

The garbage fed to us by the Murdochracy

I assume that "Murdochcracy" refers to Rupert Murdoch, the global media mogul. Mr Murdoch and his family hold 39% of the voting rights of News Corp (News) that owns 23% of newspaper titles sold in this country (Flew, 2013). This includes Australia's only nationally circulated daily, The Australian. With a weekly circulation of over seventeen million copies (59% market share) it's safe to assume that News entertains a fair level of political influence (Flew, 2013).

Recently implicated in a phone tapping scandal in the United Kingdom (BBC, 2012) Mr Murdoch represents a controversial figure, but how do his papers stack up with respect to climate change?

A recent review of climate science in Australian newspapers compared reporting of the issue between February and April of 2011 and 2012 (Bacon, 2013). In the whole it found an increasing bias of reporting towards non-scientific commentators sceptical of the science. Only a small proportion of articles actually referred to peer-reviewed publications and where they did they were often disputed with unsubstantiated counter-argument. At the forefront of scepticism was Andrew Bolt, a commentator and daily talk show host with no scientific training. He has received much coverage from News. News' papers also lead the scepticism trend with New South Wales's Daily Telegraph, Victoria's Herald Sun and the Northern Territory News devoting 73%, 81% and 62% of climate related article words to rejection of the science and carbon policy. Although prima facie Nathan's accusations appear to have merit, this is only so if the Murdochracy scepticism has none.

Overwhelming Evidence

The latest International Panel for Climate Change (IPCC) report informs us that the evidence of climate change is unequivocal and that it is extremely likely that human activity is the predominant causal factor (IPCC, 2013). This terminology maintains an evolution of increasing assuredness since the Institute's First Assessment Report in 1990. It reflects a mounting body of evidence, which is predicated on empirical observation and model hindcasting

that fails to reflect the past without a fingerprint of industrial activity (Stott et al., 2006). Observation is varied comprising increasing global terrestrial and aquatic temperatures; a melting cryosphere, at both of the poles and the glaciers; sea level rise; and a multitude of biological behaviour such as earlier breeding, migration pattern changes and movement of heat sensitive species pole ward and to higher altitudes (Root et al., 2003; IPCC, 2013).

But Mr Bolt advises us that the IPCC's findings are highly contested in the field (e.g. see Bolt (2013)). Evidence very much contradicts this assertion. Five studies conducted between 2004 and 2013 (Oreskes, 2004; Doran & Zimmerman, 2009; Anderegg et al., 2010; Cook et al., 2013; Powell, 2013) examined climate change related papers and researchers to determine the degree of agreement amongst scientists concerning a changing climate and humanity as the main causal factor. Although each applied slightly different criteria they all found at least 95% consensus of both assertions. Consensus was so complete in Powell's study that one commentator quipped that "*your odds of knowing someone who believes aliens walk amongst us disguised as humans are twenty times greater than finding a climate sceptic in a group of climate scientists*" (Wagner, 2012).

Exaggeration, Over-Consumption, Self-Aggrandisement and Ignorance

Whilst each of the above traits contains the propensity to influence climate change action, it's beyond the scope of this paper (and the author's courage) to deal with them all. Given its relationship with environmental degradation and our current economic system, I will challenge Nathan's accusations of "over-consumption" and "ignorance".

Like so many other countries, consumption is encouraged in Australia. Consumer confidence and Gross Domestic Product (GDP) is wielded from the political pulpit and nightly news as a sign of economic progress. A poor proxy for standard of living, GDP measures how much we as a society consume and invest. Little regard is applied to the quality of that consumption or

investment, how it is distributed, or societal and economic costs incurred to drive it.

As a necessary factor of capitalism consumerism is king. It transforms our political system into a homogenised landscape obsessed with job and economic growth, determined by our propensity to consume. But do we over-consume and what does this term mean? Over-consumption refers to a condition where consumption has exceeded sustainable ecosystem capacity (Princen, 2001). From a national perspective, due to our small population and large landmass, we are well within our limits. In 2012 we barely consumed half of our biocapacity on a per capita basis (GFN, 2012). From a global perspective the picture is not so rosy. If the rest of the world consumed like Australians we'd need 3.76 planets to sustain us (GFN, 2012). As climate change is a global issue, I'd say chalk up another to Nathan.

Ignorance can be measured in many ways. In keeping with the theme however what do Australians know about climate change? There appears little current research that explores to what extent Australians understand this topic. If our politicians are any indication it would appear that they understand little. Our current prime minister has famously called the science "crap" (Rintoul, 2009) and Clive Palmer, whose party will soon wield much power in our senate can't see what all the fuss is about. After all "*we know that 97 per cent of the world's carbon comes from natural sources. Why don't we have money to look at how we can reduce the overall carbon signature by reducing it from nature, not just from industry*"[1] (White, 2014).

A proxy for understanding may be attitude. Although this metric tends to bounce around, latest polls indicate that climate change concerns are increasing (e.g. see EMC, 2014). We don't have enough information to call Nathan on this one but we can forgive his exuberance given our current leading politicians' performance.

[1] This statement is so nonsensical and off the planet that it's difficult to even associate it with a misinterpretation of any scientific understanding beyond consensus figures as discussed above. Pre-industrial times the carbon cycle was in balance with CO_2 moving between ocean, land and atmosphere (Eggleton, 2013). That's no longer the case and that of course is the problem.

Failings and Lack of Integrity as Individuals and a Society

A former prime minister called climate change the "great moral, environmental and economic challenge of our age" (Rudd, 2009) and for good reason. It seems nonsensical and extremely unjust that those who contributed less than 5% of accumulated GHG emissions are the most vulnerable to climate change affects (Huq & Ayers, 2007). It's the developing nations and the poor, due to lack of access to resource and often geographical disadvantage, that will constitute the first climate change victims (Stern, 2007). Additionally, should those currently capable of decision fail to address this issue, it's our children and future generations who will bear the consequences.

So how has Australia fared in this plight to protect the voiceless? In one word: poorly. Total annual GHG emissions increased 36%[2] from 1990 to 2011 with per capita emissions up 7%[2]. Emissions per capita as at 2011 were over four times the global average, 35%[3] higher than the USA and 250%[4] greater than China. A G20 pledge to reduce fossil fuel subsidies has fallen flat (Morris, 2014). Whilst the elephant in the climate room is undeniably China, Australia's track record hardly affords it the high road. Despite positive policy in recent years by way of renewable energy targets and carbon pricing (currently at risk with a new government), Nathan once again gets a tick. Collectively there is little doubt that Australia lacks climate change integrity.

What it all means

In a generalised context, Nathan appears close to the mark. A biased press perverts a critical message to an ignorant populace, ensconced in a consumption culture, with little regard or knowledge of ethical consequence. Indeed, it's a theme that could be applied to many other countries of the North. Since the majority of the countries formally recognised the gravity of climate change through agreement of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, annual global GHG emissions have increased by 37%[5]. This despite agreements such as the

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[2] Calculation based on data sourced from WRI (2014).
[2-5] Ibid.

Kyoto Protocol, four IPCC Assessment Reports and numerous international meetings including nineteen Conferences of the Parties.

Atmospheric concentration of CO_2 are now at 401.30 ppm (NOAA, 2014). A level not apparent in ice core samples that date back 800,000 years and in 15 million years' worth of shells once buried in deep sea sediment (Tripati et al., 2009; IPCC, 2013). Paleoclimatic analysis indicates that the last time GHG concentrations mirrored current levels temperatures were 3°C to 6°C higher and the sea level was 25 to 40 metres higher than present times (Tripati et al., 2009).

This hardly seems consistent with the 2°C "guardrail" adopted in the Copenhagen Accord (C2ES, 2009): a figure that has evolved more through political expedience than rigorous science and one that evidence indicates may be insufficient to prevent climate catastrophe (Climate Commission, 2011).

Hope?

Studies by Jacobson and Delucchi (2011) and BZE (2011) argue that requisite technologies currently exist to aggressively decarbonise our energy systems. While BZE's study is Australian centric, Jacobson and Delucchi (2011) assert decarbonisation could be achieved on a global scale by 2030 based on water, solar and wind power for the same cost as a continuation of fossil fuel based infrastructure. Decarbonisation at this rate would reconfigure GHG emissions on a trajectory commensurate to averting catastrophic climate change. The problem they assert is not the technology but the political will.

Oreskes and Conway (2010) claim that the bedrock of much of this will has been eroded by "merchants of doubt". Initially comprised of a key group of influential and respected scientists and later by a bevy of public relation experts they emphasise a recurring theme that has stymied policy related to smoking, acid rain, climate change and many others. These merchants sow doubt in the public sphere regarding science that they consider to threaten an agenda of "free market fundamentalism", an ideology that confers total faith in markets and economic growth to generate prosperity for all.

Empirically, market faith is misplaced generating societal costs not considered nor borne by market participants. These externalities or market failures arise in many guises including inequitable distribution of wealth and environmental degradation. Climate change is “the greatest market failure the world has seen” (Stern, 2007).

Conceptually perpetual growth is also misplaced. In congruence with Hoffman’s quote, Daly and Cobb (1994) assert that by its very definition growth must culminate in ‘grown’ at which point if the health of a system is to be maintained it must transform to a steady state. They argue along Malthusian lines for limits to not only consumption but controversially to births. Our current economic and political system is millennia away from these concepts. And if vested interests have their way will remain so.

Imposed limits to consumption and energy technologies implicit in each of the above have negative impacts on certain industries. In particular the fossil fuel industry would ultimately bear societal costs that it currently evades and relinquish US$28 trillion in non-burnable carbon assets (Kepler Cheuvreux, 2014). Allegations are aplenty of this industry’s involvement in funding the merchants of doubt (e.g. see Greenpeace USA (2013)). After all, a uniformed, docile proletariat resembles little risk to a profit model’s status quo.

Summary

Hoffman lays out the outcomes required to attain a climate friendly world. Nathan lays out the initial challenges. Against a backdrop of an economic system that clearly favours some to the detriment of many, that motivates behaviour contrary to that required and that is favoured by powerful vested interests, there are glimmers of hope. The system, as for our changing climate, has been derived from anthropogenic factors and as such, short of climate tipping points, can be changed by these. This is not a comet hurtling to earth over which we have no control. Strangely I take comfort in that. If things are to change then Nathan’s challenges must be met. This will require a paradigm shift every bit as significant as Hoffman’s outcomes. In the absence of an impartial press and knowledgeable populace, it is incumbent on us as climate change students to help set the record straight. Quite frankly

if we don’t act, who will? At the risk of sounding corny and clichéd the words of Albert Einstein come to mind, “those who have the knowledge have the responsibility to act”.

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