



Free Trade Agreements, Private Courts and Environmental Exploitation: Disconnected Policies, Denials and Moral Disengagement

Nigel South

Essex University, United Kingdom; Queensland University of Technology, Australia

Abstract

Although there is strong scientific consensus that climate change and environmental degradation are occurring, there is also a significant body of opinion that is sceptical about, or denies the validity of, evidence for this. However it is not solely the nature of differing views about global warming or ecological disaster that is being contested but the case for or against intervention and regulation in the market. At an international level, gestures toward 'sustainability' are (i) compromised by combining them with declarations of the need for continued economic growth, and (ii) undermined by the arrangements put in place by existing and new transnational trade agreements. The paper examines these views and developments, and the patterns of denial, disconnection and fragmentation they display.

Keywords

Denial, power; free trade agreements; private courts; environment; climate change; north-south relations.

Please cite this article as:

South N (2016) Free trade agreements, private courts and environmental exploitation: Disconnected policies, denials and moral disengagement. *International Journal for Crime, Justice and Social Democracy* 5(4): 45-59. DOI: 10.5204/ijcjsd.v5i4.307.



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Introduction

In his book *States of Denial*, Cohen (2001: 5) observes that:

The psychology of 'turning a blind eye' or 'looking the other way' is a tricky matter. These phrases imply that we have access to reality, but choose to ignore it because it is convenient to do so. ... 'Knowing', though, can be far more ambiguous. We are vaguely aware of choosing not to look at the facts, but not quite conscious of just what it is we are evading. We know, but at the same time we don't know.

The discussion that follows starts from 'knowing' about a particular 'problem'. The problem can be divided into two parts. First, the planet is suffering the consequences of various forms of environmental degradation and over-exploitation; notable among these is the process of climate change. About this proposition there is a high degree of consensus among natural and social scientists (Huwart and Verdier 2013; Royal Society 2012) and yet – to identify the second part of the 'problem' – despite this knowledge and related awareness that the economics of growth are not helpful to aims of achieving environmental sustainability, the international institutions charged with responsibility for global wellbeing consistently fail to agree on sufficiently radical or powerful remedial responses. In fact, in various ways, these bodies are gearing up for a new phase of increased transnational trade and stimuli to growth. The aim here is to question how and why this is happening – what forms of denial, disconnection and disengagement are at work?

The first section introduces the irony of dependence on goods which we consume, produced by activities which are consuming our planet. It discusses the disconnections between narratives that underpin awareness of this, as well as lack of willingness to address it. The second section examines forms of transnational trade agreements to illustrate this tension in practice but also to expose some of the workings and implications of these agreements and their secret dispute resolution mechanisms. The third part of the paper reviews explanations for denial and the rejection of scientific evidence, and how this way of looking at the world also often embraces a view of the market in keeping with neo-liberal principles. The paper concludes by applying Bandura's (2016) notion of moral disengagement and Ruggiero's (2015) analysis of the neutralization of the 'legitimacy of collective claims' against dominant interests.

Conflicting narratives, fragmentation and disconnection

On an international scale, the ongoing, ecological impacts of global 'business as usual', serving corporate and state interests and both creating and responding to the power and patterns of everyday aspiration and consumption, all occur despite well-known evidence of consequences (Brisman and South 2014; South 2010). There is inconsistency and fragmentation in our thinking, whether as individuals or on the international stage.

Double meanings, ambiguous messages, double binds and conflicting narratives are commonly found in relation to our simultaneous dependence on and domination of nature or the environment. Naomi Klein (2014) suggests that humans are engaging in cognitive dissonance on a planetary scale. As she puts it, at this 'jarring moment in history, when a crisis we have been studiously ignoring is hitting us in the face ... we are doubling down on the stuff that is causing the crisis in the first place' (Klein 2014: 3). Her examples of 'irony laden snapshots of a climate increasingly inhospitable to the very industries most responsible for its warming' (Klein 2014: 2) include historic floods in 2013 in Calgary forcing the closure of the head offices of oil companies mining the tar sands of Alberta in Canada; drought affecting the Mississippi River in the USA leaving levels so low that coal and oil barges could not move for days; and closure of coal-fired power plants because waterways that were relied on for coolant were either too dry or too hot.

Ideas of 'denial' and 'contestation' have been applied elsewhere to human engagement with the challenges of environmental degradation and damage (Brisman and South 2015a, 2015b; South 2016) but the ideas of 'fragmentation' and 'disconnection' in relation to international levels of law and environmental policy can be explored further.

Fragmentation is not necessarily used here in the senses found in psychiatry or psychology (Campbell 2009: 392; Psychology Dictionary n.d.) although these have perhaps been influential in shaping sociological understandings. So, for example, Fuchs (2007: 385) refers to Richard Sennett's (1998) observations on some of the characteristics of a post-modern society, which Sennett sees as corrosive of 'qualities of character which bind human beings to one another and furnishes each with a sense of sustainable self' (Sennett 1998: 27). Thus, for Sennett, the experience of time has now become 'disjointed' and threatens 'the ability of people to form their characters into sustained narratives' (Sennett 1998: 31); this makes us 'pliant' personalities that represent 'a collage of fragments', 'suited to short-term work experience, flexible institutions, and constant risk-taking' (Sennett 1998: 133). Increasingly, as Fuchs (2007: 385) remarks, 'individuals ... "compartmentalize" their lives, their relationships and their attitudes, without striving for coherence. *Simultaneously or successively, they live in very different worlds that are not related to one another*' (emphasis added).

This last point is what I mean by 'disconnection'. In fact we do all share one real, physical, material world – and, like it or not, we are all 'connected' to it. But in relation to understanding and agreeing on the nature of its *endangered* status there is considerable 'disconnection' from reality, from science, and from the facts and process of change. Appreciation of the inevitability of change, the significance of temporality and the need to take a long-term view, instead of the consumerist short-termism we are conditioned into (Brisman and South 2015b), are important features of the attempt to re-build sustainable coherence in our own fragmented lives as well as motivate and guide us to see why we need to respond to global issues like environmental degradation and climate change. As Norgaard (2006: 362) observes:

Environmentalists have described how Western societies' failure to think on a longer time scale is part of why we have created long-term environmental degradation such as nuclear waste. In contrast, the Iroquois nation is reputed to make decisions from the perspective of how they would affect people living 7 generations in the future.

Temporality is relevant to the rights of future generations (Bell 2012; Brisman and South 2015b) but also to the choices made now in order to protect those rights and enable future generations to have some choices left (for example, Shue 2014). But at present, the problems of fragmentation and disconnection do not help us address either the future agenda or current dilemmas. As Grear and Gearty (2014: 2) observe:

The fractious dynamics and pressures accompanying interactions between socio-economic and environmental rights are all too familiar to scholars, policy-makers and others confronting the tendencies of law and rights discourse to separate issues into conceptual and institutional silos, while the powerful tendencies of a globalized juridical and economic order present complex and paradoxical challenges to the search for a climate-friendly structural direction.

One key disconnect representing paradox and short term thinking is that found between what are arguably two of the dominant global narratives of the moment: on the one hand, calls to ease the mechanisms of international trade and, on the other hand, calls to control and reduce climate change harms. As an example of this, consider the position (and indeed job remit) of the UK Secretary of State for Energy and Climate Change. As Dyke (2015) points out, the *Infrastructure Act* (2015) makes reference to 'maximising economic recovery of petroleum in

the United Kingdom' which means that in future the Minister will 'be legally obliged to promote the extraction of fossil fuels, while also being legally obliged to reduce emissions as a consequence of the 2008 Climate Change Act'.

De Schutter (2014), a former UN Special Rapporteur on the Right to Food, recognises the characteristics of fragmentation and disconnection affecting trade law and climate discourses, which combine to subvert the prospect of international law managing to be coherently unified in relation to both. Commenting on this, Grear and Gearty (2014: 2) point out that '[t]hese two regimes have separate negotiation fora, separate enforcement regimes, separate dispute resolution methods and remain largely autonomous from general international law'.

De Schutter (2014) recognises that current patterns of trade reflect north-south relations of exploitation, based on a history of colonialism, but argues that these patterns will change as the market itself becomes a tool to enforce compliance with climate-friendly requirements such as use of clean technologies, support for south-south trade, and diversification of developing economies away from over-reliance on fossil-fuel production processes. So, what are the prospects for this?

There are some problems with the assumption that 'clean technologies' do not have their own paradoxical downsides, not least the reliance of most new e-technologies on metals that are extracted from the earth in these same over-exploited nations and regions, accompanied by profiteering, human rights violations and conflicts (Brisman and South 2013a; Brisman and South 2015c). Furthermore, while there is at least some sense of a forward looking vision here that attempts to bring the ideas of economic growth and climate mitigation together, as many have argued, these two aims are not readily compatible (Washington 2015).

Bandura (2016) shows how people and organizations can employ distortions of moral argument and manipulation of language to disengage from the harmful possibilities of their activities. In a different way but with a similar outcome, Rayner (2012: 112) has described how 'diverse principles' and 'constructive ambiguities' can co-exist in various ways that enable different organizations to work alongside each other by finding grounds for compromise and agreement rather than questioning motives, agendas and worldviews. This is a form of 'satisficing' behaviour that in economic theory describes how choices are made in a rational way within certain constraints that involve limited or simplified knowledge and compromise (Scott 2014: 662).

To illustrate, consider the meeting of 28 April 2015 concerning trade and environment, held to mark the twentieth anniversary of the World Trade Organisation (WTO). On this occasion the WTO Director-General Roberto Azevêdo shared the platform with the Executive Director of the United Nations Environment Programme (UNEP), Mr Achim Steiner. According to the WTO Press Release (WTO 2015), both 'emphasized the need to redouble efforts at all levels to ensure that trade and environmental policies go hand in hand' and the Director-General of the WTO argued that:

20 years ago the founders of the WTO saw clearly that the well-being of habitats, societies, and economies are not separate. Rather, they are inextricably linked. Their vision was of global cooperation in trade as a means to unleash growth, alleviate poverty, raise living standards and ensure full employment, while also protecting the environment.

In the 20 years since then, the connections between trade and the environment have grown significantly. We must therefore do more to ensure that trade and environmental policies work better together, both at national and international levels.

How, then, do recent proposals to, as the Director General puts it, further ‘unleash growth’, measure up to this aspiration?

First, this shared platform brings together what may seem antithetical positions to declare a united ambition to solve all the worlds’ problems – but *without having to change* any of the causes of these. This reflects three key points related to fragmentation and disconnection: a desire to preserve ‘business as usual’; the imperative that any need for fundamental change is downplayed; and, the final element, that all of this represents an assurance that *when necessary*, the fragmentation of positions on policy and practice, speaking and acting in contradictory ways, can all be made coherent through the articulation of higher level declarations of ‘common interest’, proving that ‘something is being done’.

This fits perfectly with Ruggiero’s (2015: 99-100) analysis of how the powerful can justify detrimental or criminal activities. As Ruggiero says:

The crimes of the powerful ... may be seen as the result of proximity among actors, mutual trust, imitation, and the desire to perpetuate bonds, values and group interests. ... Proper philosophical and political justification requires that partial concerns and factional gains be depicted as beneficial to the collectivity; therefore it entails agreed upon definitions of the common good and the identification of higher common principles.

In terms of current global developments, this analysis can be extended to examination of the Transatlantic Trade and Investment Partnership (TTIP) – in which the USA faces toward Europe – and the Trans-Pacific Partnership (TPP) in which the USA faces toward Asia. These proposed ‘partnerships’ are promoted as trade agreements but, unlike agreements of the past that have been aimed at easing the flow of trade and overcoming the barriers of protectionism, these are new systems that are building up secretive mechanisms of private justice and protection of corporate interests.

Note here, four points that are central to my argument. First, the faster flow of trade is intended to stimulate economic growth which, as noted, is a serious contributor to environmental degradation and climate change. Second, secrecy and private justice are all undermining of, and actually opposed to, transparency. Third, the proposed removal of barriers to trade will also entail (formally or informally, legally or illegally) removal of various protections of forest and water resources as well as rights of Indigenous peoples. Fourth, in this sense, these agreements can be seen not so much as forms of ‘neo-colonialism’ but re-invented ‘old colonialism’ and distortions of ‘justice’ (Mondaca 2017; Rodríguez Goyes and South 2016, 2017).

Neo-liberal trade deals and private courts

Shultz (2015) points out that ‘The system of closed-door trade tribunals has been around for decades now’ but ‘was virtually unknown except among a small cadre of international lawyers and trade specialists’.

The mechanism of ISDS – Investor-State Dispute Settlement – provides the legitimate and formalised means by which corporations can sue governments when they introduce – or even seek to introduce – laws that might affect the profitability of ‘business as usual’. ISDS provides a parallel justice system, an alternative to the (relatively more) transparent normal justice system of courts, operating secret offshore tribunals (Crouch 2014; Monbiot 2015). At present in Australia and Uruguay the tobacco company Phillip Morris is suing because of measures introduced to discourage smoking; in El Salvador, a Canadian-Australian mining company is suing for \$300 million because of the prevention of toxic mining operations; while Germany is facing ‘a demand of Euro 700 million from a nuclear energy company because, in the aftermath

of the Fukushima disaster, popular movements won a moratorium on new nuclear power plants in the country' (Shultz 2015).

By examining the experience of South America, which has provided a number of testing grounds for the neo-liberalization of economic sectors, several indicators and predictors of the impact of ISDS can be found. Shultz (2015) argues that the case that 'brought the system into broad public view' was the 'water revolt' in Cochabamba, Bolivia, in protest against the privatization of public water supply and take-over by the Californian firm of Bechtel. This well-known episode of callous exploitation is described elsewhere (for example, in McClanahan et al. 2015) but in ways that tend to focus on the contest around the period of privatization and conflicts between military and police and protestors. However the origins of the deal are pertinent here and lie in conditions imposed by the World Bank in 1997 which, in return for investment in the nation's water service, required Bolivia 'to offer a 40-year lease to Bechtel with a guaranteed annual profit of 16 per cent'. When Bechtel withdrew as a result of protests and bad publicity, it then sought to use a World Bank trade court to claim US\$1 million it argued it had invested in Bolivia as well as a further US\$50 million that it calculated as foregone future profits. In response, further counter campaigns followed nationally and internationally and eventually Bechtel withdrew from the process. What the case drew attention to was not merely the fact that Bechtel had not given up and believed it could still extract enormous profits from the privatization of water but that a mechanism existed that might enable it to do this.

The promotion of these partnerships also presumes and implies that the relationship between 'Trade and Environment' is, without question, positive but as Gerstetter (2013) points out, this is not so (see also Gerstetter and Meyer-Ohlendorf 2013). In the case of Peru, the former Vice-Minister for the Environment (Echave 2015) has described the experience of that country following the 2007 bilateral Free Trade Agreement with the USA, suggesting this is relevant to debate about the TPP today.

Echave (2015) writes that 'President Barack Obama *claims* that the TPP would be the first U.S. agreement with enforceable labor and environmental standards' (emphasis in original) and 'thus provide "protections that have been absent in previous agreements"'. He then points out that key provisions in the Peru FTA also prohibited the 'rollback of environmental and worker protections. But last year, the Peruvian government enacted a package of laws ... that did just that. The agreement made no difference ...' (Echave 2015).

According to Echave (2015) much of the damage done and promises broken, relate to resource extraction and the exploitation of the environment:

The U.S.-Peru FTA also had a special annex on forestry. As is now being promised for similar conservation rules in the TPP, these terms were supposed to counter 'illegal logging, and illegal trade in wildlife, including wildlife trafficking'. But six years later, Peru's Amazonian forests face an illegal logging crisis with 'major violations' suspected in almost 70 percent of all logging concessions.

Echave (2015) describes how protests have been met by force; for example:

On June 5, 2009, Peruvian security forces attacked several thousand indigenous Awajun and Wambis protestors, including many women and children, who were blocking the 'Devil's Curve', a jungle highway near Bagua, 600 miles north of Lima. The protestors were demanding revocation of decrees providing new access to exploit their Amazonian lands for oil, gas and logging that had been enacted to comply with the FTA's investor rights requirements. ... What has become known as the 'Amazon's Tiananmen' brought the realities of the U.S.-Peru FTA into sharp relief. Rather than being a new trade agreement model, as it

was sold, at its heart were the same extreme investor rights that animated the North American Free Trade Agreement (NAFTA).

Foreign corporations have used these investor-state dispute settlement (ISDS) powers, both explicitly and behind the scenes, to pressure the Peruvian government to pardon polluters and to strong-arm mining concessions in areas of the country where indigenous communities continue to rise up in opposition to environmentally damaging projects. ... And Renco, a U.S. firm, sought to evade its contractual commitment to remediate environmental and health problems caused by its toxic metal smelting operation that had poisoned children in the community of La Oroya, by launching an \$800 million ISDS claim against Peru's government.

Former Vice-Minister Enchave (2015) concludes that, 'Peru's story suggests that it is time to rethink how we approach trade agreements before "Fast Tracking" more of the same via the TPP'. 'More of the same' will undoubtedly increase the types, and levels, of activity that are known to be contributors to climate change and environmental damage. As Monbiot (2015) puts it, they will 'promote the interests of transnational capital by downgrading the defence of human health, the natural world, labour rights, and the poor and vulnerable from predatory corporate practices'. These deals to accelerate economic transactions and growth are encouraged by bodies like the World Trade Organisation, the organisation that in 2015 shared the platform with the United Nations Environment Programme, with both acknowledging the need to 'do more to ensure that trade and environmental policies work better together'. Action and stated aspiration would seem to be disconnected, the implications of one for the other denied. In the next section of the paper I explore these problems of disconnection and denial further.

Consensus and dissensus about climate change and environmental degradation

There is very strong scientific consensus and a heavy weight of evidence supporting the argument that climate change is occurring, that the rate of change is increasing, and that this is bad for the planet and its populations, human or non-human (IPCC 2013; Klein 2014; Royal Society and US National Academy of Sciences 2014). Furthermore, this is occurring at the time when other signals of local and global environmental damage are being recorded as serious (Milman 2015; UNEP 2016). However, there are also powerful and influential sources of opinion – scientific, political, cultural – that variously argue that climate change is *not* occurring, or at least not at a rate that cannot be remediated by technology, or that some version of it *is* but this is actually a *good* thing (Non-Governmental Panel on Climate Change 2013; Ridley 2013; Robinson 2008a; and see discussion in Brisman and South 2015a).

Criminology and climate change

From a criminological point of view, it has been argued that a range of criminal and environmental offences will be among the consequences of climate change that we should anticipate, and some of these will be directly caused by, arise from, or be subject to, attempts to regulate, mitigate, adapt and enforce laws (Agnew 2012; Farrall et al. 2012; Fussey and South 2012; Kramer 2013; South 2012: 99-102; White 2012a, 2012b: 4-5). Among future effects of climate change we could expect and predict environmental conditions that result in scarcity, which can be criminogenic in encouraging corruption, illicit markets, profiteering, trafficking in human beings as environmental refugees, and riots.

If the evidence regarding climate change is credible and convincing, as the scientific consensus would seem to show, what are we to make of varieties of disbelief and denial? One starting point would be to draw upon insights from the social psychology of denial as explored in studies of public opinion and belief in science. But, in addition, at this point it is worth flagging a further

factor at the heart of the contest about whether or not climate change or other serious environmental threats are 'real' and whether or not there should be a response – and this is also a key concept for criminology – this is the matter of *power*.

The rejection of science: Climate change, authoritarianism, contrarianism and conspiracy

Kuehne (2014: 492) notes that there are various reasons why people might 'deny that climate change is occurring or express skepticism about aspects of it' and takes the case of Australian farmers as a category of interested parties, facing particular financial, psychological and social stresses and uncertainties related to climate change, to illustrate the basis for such responses. In this case it can be shown that 'skepticism is not the same as denial' and the scepticism of the farmers 'can be understood and addressed by recognizing that other issues may be of more immediate concern to them, such as their business viability'. Thus, matters of personal investment in identity, land, community and friendship networks, alongside psychological and cultural interpretations of climate change threats and challenges, need to be factored into messages calling for change, not just 'scientific facts'. If the latter were sufficiently persuasive, it might be assumed that 'deniers' simply need to be convinced that climate change is real and they will then support action. But changing minds so easily may actually be an 'unlikely' prospect or 'take too long' because these beliefs are based 'on ideological positions, not on scientific evidence' (Bain et al. 2012).

As Lefsrud and Meyer (2012: 1478) have pointed out, while there is 'broad consensus' among climate scientists about global warming and its related impacts, there is also a degree of scepticism within the scientific literature that needs to be noted. In terms of the 'proportion of papers found in the ISI Web of Science database that explicitly endorsed anthropogenic climate change' there was a fall 'from 75 [per cent] (for the period between 1993 and 2003)' at 2004, to 45 per cent for the period between 2004 to 2008, while 'outright disagreement' rose from 0 per cent to 6 per cent – which is still a small percentage but significant compared to zero. The authors suggest this may be interpreted in the following ways: for example, on the one hand, as a 'manifestation of increasing taken-for-grantedness ... of anthropogenic climate science' or, on the other hand, the 'rise in disagreement may be a result of increased funding of sceptics by fossil fuel industries, conservative foundations and think tanks' (Lefsrud and Meyer 2012: 1478). But importantly, they also note that 'apart from discussions among scientists, public concern over climate change is also waning' (Lefsrud and Meyer 2012: 1478).

Data on public opinion changes, of course, and it is unwise to rely on surveys from several years ago but trends do not seem to be dramatically reversing (see also Hamilton 2013: 16-17). Furthermore, if votes for politicians and political positions are an indicator, substantial numbers of citizens in Australia, the UK, the rest of Europe, and the USA are not seeing green issues as a major priority for their governments. Green parties may have grown but with only a few exceptions, they are not being voted into positions of power.

It has to be emphasised that the lobby representing scepticism or rejection regarding climate change evidence is powerful and influential but it is also quite diverse. It does not represent only the voices of the fossil fuel energy industry. It is also supported by other interest groups as well as those 'ordinary voters' who – socially, politically and culturally – strongly support the status quo and who are troubled by the idea that there are sources of disruptive change 'out there' that cannot be avoided or ignored.

At this point, I suggest that it is interesting for criminologists who are primarily concerned with the deeply *social* questions at stake here, to also take a look at what studies of the psychology of political orientation can tell us about public opinion and reaction regarding climate change. A good illustration of this is presented by Lewandowsky et al. (2013) who have examined trends regarding belief in the credibility and findings of science among the US population.

The background to this study was the observation that '[t]he US public has become increasingly polarized in their attitudes towards science' and that since the 1970s, 'Conservatives – unlike Liberals or Moderates – have become increasingly sceptical and distrustful of science' with 'Polarization ... particularly pronounced with respect to climate change'. The key proposition – and one of significance for present purposes – is that '[p]eople who embrace a laissez-faire vision of the free market are less likely to accept that anthropogenic greenhouse gas emissions are warming the planet than people with an egalitarian-communitarian outlook' (Lewandosky et al. 2013; see also Lewandowsky 2011; Heath and Gifford 2006).¹ Or, put another way, 'Endorsement of free markets in combination with other streaks of "hierarchical" or "authoritarian" thinking are statistically associated with rejection of climate science' (Lewandosky 2011). Lewandosky et al. (2013) therefore argue that the 'driving psychological force that is underlying the rejection of science' in relation to climate change 'is "system justification"; that is, a person's need to perceive the current political and economic system as fair, legitimate, and stable'. Stability is a particularly important dimension for this view as it also sees disruption to the status quo as unwelcome.

What is being contested here is not so much the nature of differing views about global warming or climate change, or environmental issues in general, but the merit or otherwise of markets operating according to principles of regulation versus neo-liberalism (see also Ruggiero and South 2013). As Lewandowsky (2011) suggests, '[i]f emissions must be cut, then markets must be regulated or at least "nudged" towards alternative sources of energy – and any possibility of regulation is considered a threat to the very essence' of the worldview of those 'for whom the free market is sacrosanct'.

An extension of this view would pose the question 'whether, even if there is genuine evidence of damaging climate change, governments can be trusted to act effectively when applying either market instruments or other policies?' (Robinson 2008b: 62). As noted above, governments may say they 'know' there is a challenge and promise 'appropriate responses' but instead, as Robinson observes, 'give priority to *appearing* to be doing something'. However, the main objective of Robinson's critique is to deride collective political efforts, as across the European Union, for example, and the value of any role played by centralised state authorities. Instead, from this position, it is argued that greater benefits – in this case as in others – would follow from 'reliance on market responses, which permit gradual and flexible adjustment to perceived problems', because 'well-functioning markets with appropriate institutions tend to produce benign reactions to emerging problems' (Robinson 2008b: 63).

More generally, the appeal of denial or the rejection of science resonates with political dislike of 'being told what to do' and populist criticism of advice and guidance concerning 'what is good for you'. This is a political trait with some similarities to the Authoritarian Personality Type presented by Adorno et al. (1950, cited on the *Psychologist World* website at http://www.psychologistworld.com/influence_personality/authoritarian_personality.php), the elements of which include:

Blind allegiance to conventional beliefs about right and wrong; Respect for submission to acknowledged authority; Belief in aggression toward those who do not subscribe to conventional thinking, or who are different; A negative view of people in general – i.e. the belief that people would all lie, cheat or steal if given the opportunity; A need for strong leadership which displays uncompromising power; A belief in simple answers and polemics – i.e. The media controls us all or The source of all our problems is the loss of morals these days; Resistance to creative, dangerous ideas.

One further point of interest here is that a 'striking feature of the opposition to climate science', based on the data of Lewandowsky et al. (2013), is that this is not grounded on any 'deficit of knowledge or ability' but instead seems to reflect a particular cognitive *style*.

As the authors elaborate:

One cognitive style that has been repeatedly implicated in science denial is conspiratorial thinking ..., also known as conspiracist ideation. Denial of the link between HIV and AIDS frequently involves conspiracist hypotheses, for example that AIDS was created by the U.S. Government. Popular books critical of climate science routinely refer to global warming as a 'conspiracy' or 'hoax', and conspiracist themes have been identified in climate media coverage and in people's affective imagery evoked by climate change.

All of this may reflect some of the evidence available regarding a decline in public understanding of, or interest in, *real* science (at least in the USA, although similar trends may be found elsewhere). For example, a 2014 USA National Science Foundation report indicated a growing belief in the USA in the credibility of astrology. This occurred most obviously where correlated with 'less science education' and 'less factual knowledge' (Mooney 2014). Where science is dismissed or not understood, then scientific topics, no matter how significant, will not engage attention or meet with calls for action. However, even among the scientifically literate and those knowledgeable about climate change, other forms of stakeholder priorities may be dominant (Kuehne 2014). So in Norgaard's (2006: 347) study of a rural community in Norway, findings showed that there was a 'significant population' who certainly *do* 'know about and express concern for global warming' but where the study data indicated that 'non-response' to climate change was 'at least partially' based on socially organized denial and collective self-interest, because 'Norwegian economic prosperity is tied to oil production' and hence 'collectively ignoring climate change maintains Norwegian economic interests'.

Climate change, global warming, environmental effects that are 'out of control', and so on, are *disruptors*. Although in one respect they are 'natural' (even though they are anthropogenic and largely caused by human actions), for those who are opposed to the science and the message, these disruptors are by definition not part of the traditional 'natural order' of things. The 'natural order' in this sense is not a reflection of environmental matters but of the historic status quo and distribution of power, underpinned by imperial colonisation, racist hierarchies, and the stratification systems of social class (Carrington et al. 2016).

Lewandowsky (2011) argues that the climate change narrative represents a source of subversion of conventional and conservative beliefs. It poses:

... [a] deep psychological threat that in part explains the hyper-emotionality of the anti-science discourse: the fear of Obama as an alien 'other'; frenetic alarmism about a 'world government'; the rhetoric of 'warmist' or 'extremist' leveled at scientists who rely on the peer reviewed literature; the ready invocation of the spectre of 'socialism'.

Climate change and the calls for remedial action – such as curtailing growth – are perceived as a 'threat so fundamental that even crazed beliefs constitute an alluring antidote' (Lewandowsky 2011). The counter responses can range from the relatively modest desire to maintain the status quo and respect for existing hierarchies, through the promotion of authoritarian views, to a belief that there *is no problem* or, if there is, then solutions will be delivered by higher forces – whether from '*our kind of science* (delivering magic-bullets)', or astrology, or divine or other-worldly intervention (Brisman and South 2013b).

Conclusion

I began by quoting Cohen (2001) on 'denial'. Recently, Bandura (2016) has explored some similar questions in his book *Moral Disengagement: How People Do Harm and Live With Themselves*. In the final chapter to this book, Bandura considers the challenge of climate change and threats to environmental sustainability – 'the most urgent issue facing humankind this century' (Bandura 2016: 372). The discussion highlights the problem of moral disengagement which allows the persistence of harmful environmental policies and practices on the basis that they have legitimate purposes, justified for political and popular consumption in 'sanitized, convoluted and innocuous language' (Bandura 2016: 399).

Such justifications and use of language are one set of means by which challenges to the dysfunctional and damaging operations of a 'free market', under-controlled, under-regulated and now moving toward achievement of even greater non-accountable freedoms, are diffused. Ruggiero's (2015: 101) discussion of resistance to power and the 'total commodification of life' is relevant here, as he argues for 'the defence of nature, ecological justice between generations, political participation and control of economic initiative'. For Ruggiero, the interests of the powerful will mean the pursuit and defence of the status quo, with the aim of 'neutralizing the legitimacy of collective claims' against the dominant narratives and uncontrolled enactments of growth, exploitation and commodification. Along similar lines, Monbiot (2015) asks whether '[i]n an age of ecocide, food banks and financial collapse, do we need more protection from predatory corporate practices or less?' (see, for example, Higgins et al. 2013). Trade agreements, as proposed in TTIP and TTP, will accelerate not only growth but also, as Monbiot (2015) puts it, the 'reckless, unjustified destruction of our rights'.

The tragedy is that, when compared to the urgency of actually dealing with the challenge of climate change and global environmental degradation, all the disputes about evidence, the differences in human politics, and the demands for more growth and more profit, are trivial and unsustainable. The world is not as it was. Looking ahead – as Friedrichs (2015: 116) warns – '[t]he failure to adopt policies and practices that would minimize the harmful consequences of global warming' or climate change 'may well at some future time be regarded as a crime of monumental consequences'.

Correspondence: Professor Nigel South, Department of Sociology, University of Essex, Wivenhoe Park, Colchester CO4 3SQ, United Kingdom; Adjunct Professor, School of Justice, Faculty of Law, Queensland University of Technology, 2 George Street, Brisbane 4000 QLD, Australia. Email: soutn@essex.ac.uk

¹ Climate change is not the only issue examined in this study which also explores correlations between political worldviews and rejection of certain scientific findings concerning genetically modified foods and vaccinations but these are not the focus here.

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