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Denying Bogus Skepticism in Climate Change and Tourism Research

Skepticism is integral to scientific endeavour. However, the commentaries by Shani and Arad (2014a, b) reflect what Wilson (2008) has described as "pseudo" or "bogus" skepticism in which the language of rational inquiry is appropriated for an otherwise irrational analysis. As Wilson (2008) notes 'there is a meaningful difference between being a "sceptic" and being in denial. The genuine sceptic forms his [sic] beliefs through a balanced evaluation of the evidence. The sceptic of the bogus variety cherry-picks evidence on the basis of a pre-existing belief, seizing on data, however tenuous, that supports his position, and yet declaring himself "sceptical" of any evidence, however compelling, that undermines it'. Such an approach has become typical of those who deny the scientific consensus on anthropogenic climate change and devolve quickly into conspiracies instead (Dunlap 2013; Friel 2010; Hoggan 2009; Hulme 2009; Manne 2012; Oreskes & Conway 2010). We cannot deny evidence of anthropogenic climate change just because we do not like it, with the disingenuous claims of an 'academic witch-hunt' (Shani & Arad 2014b), though of course we can debate vehemently about what to do about it.

There is not enough space available to cover all the inaccuracies, misinformation and errors in Shani and Arad's commentaries (see Hall et al. 2014a, 2014b). In addition to the utter lack of balanced representation of climate change science and tourism-related research we identified a least 19 misrepresentations of the literature in our initial response to Shani and Arad (2014a). None of these misrepresentations or errors are addressed in their reply. Instead, their response has mostly devolved into a litany of conspiracy, derogatory innuendo and reconstruction of textual content. We therefore assume they agree to have made these errors. This reply emphasises a number of key points. First, with respect to the Shani and Arad commentaries and our response. Second, in relation to some of the new arguments presented in Shani and Arad (2014b).

The initial reply by Hall et al. (2014a) was not a 'petition'. It was an appropriate scientifically grounded response by many of the researchers on climate change in tourism studies whose work, together with others who study climate change, has been maligned and misrepresented by Shani and Arad. The number of authors also reflects the strength of the scientific consensus with respect to anthropogenic climate change and its seriousness, as assessed by the Intergovernmental Panel on Climate Change (IPCC 2013) and endorsed by every country in the world and every relevant major national and disciplinary scientific organization (Science 2001; Anderegg et al. 2010; AAAS 2014).

We contend that Shani and Arad's commentaries should not have been published because to engage in this exchange may be seen to give them scientific credence where it is not warranted. Their commentaries are based on a highly selective reading of limited scientific and other literature including some lobby group and pseudo-scientific papers (some of which are identified in Brulle 2014) and are not research notes. As the Committee on Publication Ethics recommend, 'Scholarly reviews and syntheses of existing research should be complete, balanced, and should include findings regardless of whether they support the hypothesis or interpretation being proposed. Editorials or opinion pieces presenting a single viewpoint or argument should be clearly distinguished from scholarly reviews' (Wager & Kleinert

2011: 3.1; other recommendations may also be relevant; see also Elsevier 2014). We are entirely open about our contention that all of the papers in this exchange, including the initial "research note", should be rescinded. Given that this is not the case we therefore quickly highlight Shani and Arad's (2014b) further highly selective readings.

Shani and Arad (2014b) do not counter any of our findings of misrepresenting the climate change and climate and tourism literature in their original paper. Yet, in a manner characteristic of those involved in climate change denial, again strongly misrepresent the various approaches, events and organisations involved in scientifically grounded climate change research (Manne 2012). To call "Climategate" a scandal, is not consistent with the conclusions of independent UK (House of Commons' Science and Technology Committee; University of East Anglia) and US inquiries (Department of Commerce Inspector General; Environmental Protection Authority; National Science Foundation; Pennsylvania State University) that released University of East Anglia Climate Research Unit scientists from false accusations of scientific misconduct, nor does it recognise that private correspondence was accessed illegally (see Malbach et al. 2012 for a review and Scott 2011 for a discussion in a tourism context). Similarly, stressing the Himalaya-mistake in the 2007 IPCC report does not jeopardize the overall science nor the work of the IPCC or even the arguments in Hall et al. (2014a) and elsewhere, as is clearly shown by the Netherlands Environmental Assessment Agency (2010) no errors were found that would undermine the main conclusions in the 2007 IPCC report. Shani and Arad's (2014b) discussion on IPCC as a scientific organisation is again misleading. The IPCC does not do science but assessment, and does not solely rely on models (Hall et al. 2014b). Moreover, their conclusions by their consensus nature are conservative (Brysse et al. 2013).

There has been intense discussion on the 97% consensus reported by Cook et al. (2013) (see also Bedford & Cook 2013; Doran & Zimmerman 2009). Even Tol's (2014) analysis of Cook et al. (2013) acknowledges the consensus: 'There is no doubt in my mind that the literature on climate change overwhelmingly supports the hypothesis that climate change is caused by humans. I have very little reason to doubt that the consensus is indeed correct. Cook et al., however, failed to demonstrate this.' In response Cook et al. (2014) show that Tol's (2014) claims of a slightly lower consensus resulted from a basic calculation error and that running the same tests using appropriate consensus statistics shows no evidence of inconsistency and confirmed that the consensus is robust at $97\pm 1\%$. The fact that Tol stepped down as an author of the *Summary for Policy Makers*, but stayed on as the lead chapter author, was misrepresented by some sections of the media (*Mail on Sunday*, FOX and the *Financial Times*) that the IPCC was alarmist. The IPCC press release in response to the Mail on Sunday puts this clearly in context (IPCC 2014).

The discussion of the hiatus, in which the observed global-mean surface temperature has shown a much smaller increasing linear trend over the past 15 years than over the past 30 to 60 years, by Shani and Arad (2014b) is also extremely limited and selective and ignores recent findings. The oceans and especially the Pacific Decadal Oscillation (PDO) play an important role. Over a period of 10-20 years the PDO either releases or takes up heat. As the ocean's heat capacity is large, this rapidly influences the temperature in the atmosphere. The hiatus is real, but is not directly

linked to changes in atmospheric CO₂. The system is more complex (see Nature Geoscience (2014) for an excellent summary of the issue and links to relevant papers). Nevertheless, it is important to re-stress, and as Shani and Arad (2014b) ignore, 'the average rate of warming at the Earth's surface is only one piece in the climate change puzzle' (Nature Geoscience 2014: 157).

As noted in Hall et al. (2014a) we openly welcome and encourage important debates with respect to tourism and its relationships to climate change adaptation and mitigation as well as broader issues of environmental change. We envisage tourism's sustainable future whilst Shani and Arad present denial and a clarion call to follow the path of fossil fuelled growth. Sustainability is concerned with more than just 'wealthy is healthy' (Shani & Arad 2014b). The promotion of the beliefs of the Ayn Rand Institute on climate change is suited to op-eds, not an academic journal. It is to be hoped that the obfuscation of scientific research and consensus on anthropogenic climate change by Shani and Arad does not have long-term negative consequences for further understanding the implications of climate change and climate policy for tourism and creating confusion and delay in developing and implementing tourism sector responses (Ding et al. 2011; Maibach et al. 2014). The tourism sector is at greater risk and less prepared to respond to climate change than most other major economic sectors (KPMG 2008). The business case for responding to climate risk has only strengthened in the interceding years (Carbon Disclosure Project 2013; IPCC 2013). More particularly, Shani and Arad's commentaries highlight the need for greater understanding of the politically charged nature of climate change research and publishing, including lending scientific credibility to those who do not deserve it. This exchange reflects the old dictum of never letting the facts get in the way of a good argument. Unfortunately, in Shani and Arad's case they deliberately choose to ignore both the facts and the scientific arguments.

References

- American Association for the Advancement of Science (AAAS) (2014) *The Reality, Risks and Response to Climate Change*. Washington DC: AAAS.
- Anderegg, W.R.L., Prall, J.W., Harold, J. and Schneider, S.H. (2010) 'Expert credibility in climate change', *Proceedings National Academy of Science*, 107, 12107–12109.
- Bedford, D. & Cook, J. (2013) Agnotology, scientific consensus, and the teaching and learning of climate change: A response to Legates, Soon and Briggs. *Science & Education*, 22(8), 2019-2030.
- Brulle (2014) Institutionalizing delay: foundation founding and the creation of US climate change counter-movement organizations. *Climatic Change*, 122, 681-694.
- Brysse, K., Oreskes, N., O'Reilly, J. & Oppenheimer, M. (2013) Climate change prediction: Erring on the side of least drama? *Global Environmental Change*, 23(1), 327-337.
- Carbon Disclosure Project (2013) *Investment, transformation and leadership: CDP S&P 500 Climate Change Report 2013*. London: Carbon Disclosure Project.
- Cook, J., Nuccitelli, D., Green, S.A., Richardson, M., Winkler, B., Painting, R., Way, R., Jacobs, P. & Skuce, A. (2013) Quantifying the consensus on anthropogenic global warming in the scientific literature. *Environmental Research Letters*, 8(2), 024024.

- Cook, J., Nuccitelli, D., Skuce, A., Jacobs, P., Painting, R., Honeycutt, R., Green, S.A., Lewandowsky, S., Richardson, M. & Way, R.G. (2014) Reply to 'Quantifying the consensus on anthropogenic global warming in the scientific literature: A re-analysis'. *Energy Policy*, in press corrected proof, DOI: 10.1016/j.enpol.2014.06.002
- Ding, D., Maibach, E.W., Zhao, X., Roser-Renouf, C. & Leiserowitz, A. (2011) Support for climate policy and societal action are linked to perceptions about scientific agreement. *Nature Climate Change*, 1(9), 462-466.
- Doran, P.T. & Zimmerman, M.K. (2009). Examining the scientific consensus on climate change. *Eos, Transactions American Geophysical Union*, 90(3), 22-23.
- Dunlap, R.E. (2013) Climate change skepticism and denial: An introduction. *American Behavioral Scientist*, 57(6), 691-698.
- Elsevier (2014) Ethics Publishing responsibilities of authors, <http://www.elsevier.com/journal-authors/ethics>
- Friel, H. (2010) *The Lomborg deception: Setting the record straight about global warming*. New Haven: Yale University Press.
- Hall, C.M., Amelung, B., Cohen, S., Eijgelaar, E., Gössling, S., Higham, J., Leemans, R., Peeters, P., Ram, Y., Scott, D., Aall, C., Abegg, B., Araña, J.E., Barr, S., Becken, S., Buckley, R., Burns, P., Dawson, J., Doran, R., Dubois, G., Duval, D., Fennell, D., Gill, A., Gren, M., Gronau, W., Guiver, J., Hopkins, D., Huijbens, E.H., Koens, K., Lamers, M., Lemieux, C., Lew, A., Long, P., Koens, K., Melissen, F.W., Nawijn, J., Nicholls, S., Nilsson, J-H., Pomeroy, A., Reis, A.C., Reiser, D., Richardson, R.B., Rogerson, C.M., Saarinen, J., Sæþórsdóttir, A.D., Steiger, R., Upham, P., van der Linden, S., Visser, G., Wall, G., Weaver, D. (2014a). No time for smokescreen skepticism: A rejoinder to Shani and Arad. *Tourism Management*, in press.
- Hall, C.M., Amelung, B., Cohen, S., Eijgelaar, E., Gössling, S., Higham, J., Leemans, R., Peeters, P., Ram, Y. & Scott, D. (2014b) XXXX. *Journal of Sustainable Tourism*, accepted.
- Hoggan, J. (2009) *Climate cover-up: The crusade to deny global warming*. Vancouver: Greystone Books.
- Hulme, M. (2009) *Why we disagree about climate change: understanding controversy, inaction and opportunity*. Cambridge: Cambridge University Press.
- Intergovernmental Panel on Climate Change (IPCC) (2013). Summary for Policymakers. In *Climate change 2013: The physical science basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex & P.M. Midgley (eds.)]. Cambridge & New York: Cambridge University Press.
- IPCC (2014) *IPCC Statement [With reference to an article that appeared on 6 April 2014 in the Mail on Sunday]*. Berlin, 6 April. http://ipcc.ch/pdf/press/140406_statement_mail_online_statement.pdf
- Maibach, E., Leiserowitz, A., Cobb, S., Shank, M., Cobb, K.M. & Gullett, J. (2012) The legacy of climategate: undermining or revitalizing climate science and policy? *Wiley Interdisciplinary Reviews: Climate Change*, 3(3), 289-295.
- Maibach, E., Myers, T. & Leiserowitz, A. (2014) Climate scientists need to set the record straight: There is a scientific consensus that human- caused climate change is happening. *Earth's Future*, 2(5), 295-298.
- Manne, R. (2012) A dark victory: How vested interests defeated climate science. *The Monthly*, August, No. 81.

<http://www.themonthly.com.au/issue/2012/august/1344299325/robert-manne/dark-victory>

- Nature Geoscience (2014) Editorial. Hiatus in context. *Nature Geoscience*, 7, 157.
- Netherlands Environmental Assessment Agency (PBL) (2010) *Assessing an IPCC assessment. An analysis of statements on projected regional impacts in the 2007 report*. The Hague: PBL.
- Oreskes, N. & Conway, E.M. (2010) *Merchants of doubt*. London: Bloomsbury.
- Science (2001) The science of climate change. *Science*, 292(5520): 1261.
- Scott, D. (2011) Why sustainable tourism must address climate change. *Journal of Sustainable Tourism*, 19, 17-34.
- Shani, A. & Arad, B. (2014a) Climate change and tourism: Time for environmental skepticism. *Tourism Management*, 44, 82-85.
- Shani, A. & Arad, B. (2014b) There is always time for rational skepticism: Reply to Hall et al. *Tourism Management*, in press.
- Tol, R. (2014) Quantifying the consensus on anthropogenic global warming in the literature: A re-analysis. *Energy Policy*, in press corrected proof, DOI: 10.1016/j.enpol.2014.04.045
- Wager E. & Kleinert S. (2011) Responsible research publication: international standards for authors. A position statement developed at the 2nd World Conference on Research Integrity, Singapore, July 22-24, 2010. In T. Mayer & N. Steneck (eds) *Promoting Research Integrity in a Global Environment* (pp. 309-316). Singapore: Imperial College Press / World Scientific Publishing. Available: <http://publicationethics.org/international-standards-editors-and-authors>
- Wilson, R. (2008) Against the evidence. Richard Wilson on the crucial difference between doubt and dogmatism. *New Statesman*, 18 September, www.newstatesman.com/ideas/2008/09/evidence-sceptic-hiv-bogus