södertörns högskola

SÖDERTÖRN UNIVERSITY

Co-producing the Anthropocene?

Welcome to an extended Environmental Science and Development seminar dedicated to questions of how to co-produce the Anthropocene in research and what difference it might make in environmentalism. Debate on topics which arise in conjunction to this as well as possible cooperation (special issue in a renowned journal?) is on the agenda. An informal post-seminar session with snacks is also on the agenda. We encourage brief paper or project presentations of about 20 min, in which case you are welcome to email an abstract to Jonas by 1 February 2012.

29 March 2012, 13:00–17:00, room ME 358, at Södertörn University, Flemingsberg.

Organizer: Jonas Bylund, School of Life Sciences, Södertörn University, email: jonas.bylund@sh.se

Co-organizer: Jonathan Metzger, School of Architecture and the Built Environment, KTH Royal Institute of Technology

Limits to growth rebound

About a decade ago, the Anthropocene was proposed by Crutzen and Stoermer (2000) to designate the current state of the Earth. Although heralding *The Age of Man*, the Anthropocene does not entail a peaceful reign by humanity but a planetary environment prone to uncertain and dramatic events. It is contrasted to the Holocene, the current official epoch, which has for the last 10,000 years provided a 'plateau' of a relatively calm global environment compared to preceding era and considered to be one reason for humanity's development into an agricultural species. Proponents of the Anthropocene stress that unless humanity changes its behaviour according to Earth System rules, there will be no more Holocene-type relative stability and even the sustainability of the Earth's life support systems are threatened (Steffen et al., 2007). Consequently, the Anthropocene reiterates common environmentalist concerns of an uncertain world where humans are neither mere observers of nor 'unable participants' in a 'natural' dimension. Humanity is now on centre stage: anthropocentric with a twist in acting truly globally as a geological force and an influence to take into account in Earth System Science (ESS).

During the past decade the proposition has been promoted by several distinguished ESS-researchers, who aim to establish a scientific knowledge corpus and to explicate the conditions of (human) life in it (see e.g. Ibid.; Zalasiewicz et al., 2008, 2010; Steffen, 2010). Recently it was proposed to the International Commission on Stratigraphy to formally designate an epoch in the geological time-scale, decision still pending (Zalasiewicz et al., 2011). A growing awareness of the proposition almost coincides with the 'death of environmentalism' (Nordhaus and Shellenberger, 2004; Latour, 2009) and recent disheartening events at COP 15. Noteworthy is that not only 'big science' but also 'big newspapers' embrace the notion. Mass-media actors such as *The Economist* (2011), *BBC* (2011), *The New York Times* (2011), *National Geographic* (2011), recently brought the notion to other audiences than the intra-scientific debate.

A main characteristic of the Anthropocene is a shared core argument and resurrection of the limits to

growth position (Meadows, 1972). For instance, one of the current defining activities is the effort to define the planetary boundaries of a safe operating space within which humans can experience a Holocene-type stability (Rockstrom et al., 2009). Indeed, a common assumption seems to be how to ensure a Holocene-type of environment. The safe operating space could, it is argued, be maintained by a rapid transition in industrial metabolism – although what this entails and how to achieve it is left to the social sciences and politics to sort out.

How to co-produce the Earth? Democracy, uncertainty, and institutions

While the Anthropocene, if we agree to the basic proposition, leaves no doubt that humanity is (un)intentionally re-scripting the 'hardwired' code of the planet's geosphere, many appropriate labels to characterize this may still be controversial. Indeed, an ontological discussion on how to characterize it is needed (Latour, 2010). Nevertheless, co-production is here to be understood in a quite unspecified manner, so as to keep the seminar as open as possible.

Sorting the out the 'how' question – how humanity is to co-produce the planet from here on – is addressed by Earth System Governance (ESG). Here, the Anthropocene is 'in essence a crisis of societal governance', the latter which is inefficient and insufficient at all levels, and badly understood from a social scientific point of view (Biermann and Zondervan, 2010). ESG seems to have learnt a lesson by Jasanoff (2004), that the abstracted view of the planet from a satellite may make global politics blind to local and particular pertinent issues. Not a mere 'global layer' of governance, it is to take on anything under the sun concerning human societies' relationship with the planet when ESG is defined as the 'system of formal and informal rules, rule-making systems and actor-networks at all levels of human society (from local to global) that are set up to steer societies towards preventing, mitigating and adapting to environmental change and earth system transformation' (Biermann and Zondervan, 2010, p. 273).

However, two quite different approaches with relevance to the Anthropocene as to what kind of institutions are deemed necessary are emerging, with very different implications for how we understand democratic achievements in global and local issues. On the one hand, and claiming a presence in ESG, is a focus on the links between societies and ecologies, the coupled social-ecological systems (SES), and the overarching issue of how to make societies adaptive to uncertainty and risk in various ways (e.g. Duit et al., 2010; Janssen and Ostrom, 2006; Folke, 2006). On the other hand, in and around Science and Technology Studies (STS) there is a growing literature on the politics of how to compose a common world (e.g. Braun and Whatmore, 2010; Callon et al., 2009; Jasanoff, 2007; Stengers, 2005; Latour, 2004). While not always explicitly addressing the Anthropocene and global climate change, it contains a discussion on what kinds of democracy and the quality of institutions necessary for complex issues on uncertainty.

In the light of these two (and other connecting thoughts), what are the political institutional and ideas on democracy here? Particularly the question of what it might mean for humans in various parts of the world to shoulder the responsibility of being 'co-responsible', 'co-operatives', 'co-designers', 'co-compositioners', etc, seems pertinent. On a related note, may a wave of 'ecology of matter' roughly along the line of Bennett's (2004) 'thing-power' emerge? Or a designated human playground with limited risk (rather than uncertainty) as an effect of a safe operating space? Or, if three of the nine boundaries are already transgressed but they are connected in yet unknown ways (Steffen, 2010; Rockström, 2011), is it game over and any further search for a safe operating space is actually meaningless? Could this generate 'Dr. Strangelove' types of solutions? E.g., Lovelock recently stated that 'it may be necessary to put democracy on hold for a while' as 'climate change may be an issue as severe as war' (Guardian, 2010). What then of a 'new' ethics of 'Gaian democracies of a global scale' (Lövbrand et al., 2009)? A more concrete line of enquiry is whether or to what degree research and problem solving in the Anthropocene can or should be 'wild' or 'secluded' (Callon et al., 2009)?

References

Braun, B. and Whatmore, S. (Eds.) (2010) *Political Matter: Technoscience, Democracy, and Public Life* (University of Minnesota Press, Minneapolis, London).

BBC (2011) Anthropocene: Have humans created a new geological age?, BBC, 10 May, at http://www.bbc.co.uk/news/science-environment-13335683?p, accessed 2011-06-15.

Bennett, J. (2004) The Force of Things: Steps toward an Ecology of Matter, *Political Theory* 32(2), pp. 347–372.

Biermann, F. and Zondervan, R. (2010) Editorial, *International Environmental Agreements: Politics, Law and Economics* 10(4), pp. 273–276.

Callon, M., Lascoumes, P. and Barthe, Y. (2009) *Acting in an Uncertain World: An Essay on Technical Democracy* (The MIT Press, Cambridge MA, London).

Crutzen, P.J. and Stoermer, E.F. (2000) The 'Anthropocene', *IGBP Newsletter* 41, pp. 17–18.

Duit, A. et al. (2010) Governance, complexity and resilience, *Global Environmental Change* 20(3), pp. 363–368.

Folke, C. (2006) Resilience: The emergence of a perspective for social-ecological systems analyses, *Global Environmental Change* 16(3), pp. 253–267.

Janssen, M.A. and Ostrom, E. (2006) Resilience, vulnerability, and adaptation: A cross-cutting theme of the Interntional Human Dimensions Programme on Global Environmental Change, *Global Environmental Change* 16(3), pp. 237–239.

Jasanoff, S. (2004) Heaven and Earth: The Politics of Environmental Images, In Jasanoff, S. and Martello, M.L. (Eds) *Earthly Politics: Local and Global in Environmental Governance,* (The MIT Press, Cambridge Mass.), pp. 31–52.

——— (2007) Technologies of humility, *Nature* 450(1), pp. 33.

Latour, B. (2004) *The Politics of Nature: How to Bring the Sciences into Democracy* (Harvard University Press, Cambridge Mass, London).

——— (2009) Will non-humans be saved? An argument in ecotheology, *Journal of the Royal Anthropological Institute* 15, pp. 459–475.

——— (2010) A Plea for Earthly Sciences, In Burnett, J., Jeffers, S. and Thomas, G. (Eds) *New Social Connections: Sociology's Subjects and Objects,* (Palgrave Macmillan, Houndmills, New York), pp. 72–84.

Lövbrand, E., Stripple, J. and Wiman, B. (2009) Earth System governmentality: Reflections on science in the Anthropocene, *Global Environmental Change* 19(1), pp. 7–13.

Meadows, D.H. (1972) *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (Universe Books, New York).

NG (2011) Enter the Anthropocene – Age of Man, National Geographic, March, at http://ngm.nationalgeographic.com/print/2011/03/age-of-man, accessed 2011-06-30.

Nordhaus, T. and Shellenberger, M. (2004) The Death of Environmentalism: Global warming politics in a post-evironmental world, Break Through Institute, at http://thebreakthrough.org/PDF/Death_of_Environmentalism.pdf, accessed 2011-09-30.

NYT (2011) Embracing the Anthropocene, The New York Times, 20 May, at http://www.nytimes.com, accessed 2011-06-27.

Rockström, J. (2011) The social challenge of tipping towards sustainability, Keynote and welcome adress at the 10th NESS, Nordic Environmental Social Sciences conference, Stockholm, Sweden, June 2011, at http://www.stockholmresilience.su.se/seminarandevents/otherseminars/ness2011/videoarchive.4.1f74f76413071d337c380005790.html, accessed 2011-06-30.

Rockstrom, J. et al. (2009) A safe operating space for humanity, *Nature* 461(7263), pp. 472–475.

Steffen, W. (2010) The Anthropocene, TEDxCanberra 2010, at http://www.youtube.com/watch?v=ABZjlfhN0EQ&list=PLF1DF2AECAB627487&index=16, accessed 2011-08-03.

Steffen, W., Crutzen, P.J. and McNeill, J.R. (2007) The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature, *Ambio* 36(8), pp. 614–621.

Stengers, I. (2005) The cosmopolitical proposal, In Latour, B. and Weibel, P. (Eds) *Making Things Public – Athmospheres of Democracy,* (Engelhardt & Bauer, Karlsruhe), pp. 994–1003.

The Economist (2011) A man-made world: The Anthropocene, The Economist, 26 May, at http://www.economist.com/node/18741749, accessed 2011-06-27.

The Guardian (2010) James Lovelock: Humans are too stupid to prevent climate change, Leo Hickman, 29 March 2010, at http://www.guardian.co.uk/science/2010/mar/29/james-lovelock-climate-change, accessed 2011-09-20.

Zalasiewicz, J. et al. (2011) The Anthropocene: a new epoch of geological time?, *Philosophical Transactions of the Royal Society* 369(1938), pp. 835–841.

Zalasiewicz, J. et al. (2008) Are we now living in the Anthropocene?, *GSA Today* 18(2), pp. 4–8.

Zalasiewicz, J. et al. (2010) The New World of the Anthropocene, *Environmental Science & Technology* 44(7), pp. 2228–2231.