

# Socio-technical gender analysis of energy

Associate professor

Martin Hultman

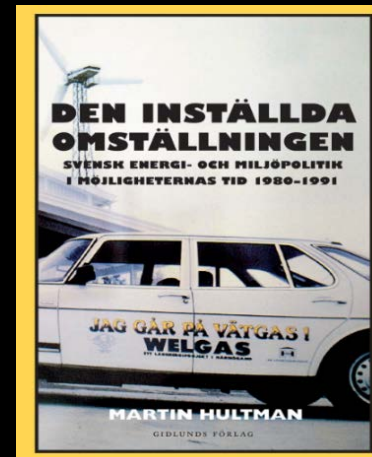
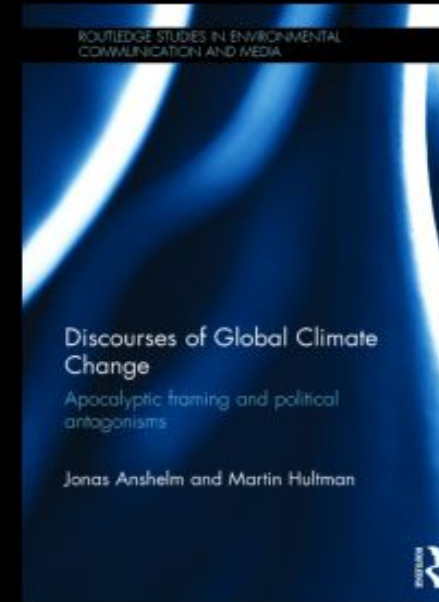
Tema Technology and Social Change

Linköping University

Sweden

# Martin Hultman

- Associate Professor in science, technology and environmental studies
- PhD in Social and Technological Change and Energy System Analysis
- Deep knowledge in Cultural studies, Environmental history, Energy politics and Science and Technology Studies;
- Research projects: Energy/Environmental technopolitics, Ecopreneurship, Masculinities+Environment, Climate
- Examples of articles: "A Green fatwā? Climate change as a threat to the masculinity of industrial modernity", "The Making of an Environmental Hero: A History of Ecomodern Masculinity, Fuel Cells and Arnold Schwarzenegger"
- Yesterday we sent in the manuscript *Ecological Masculinities* to Routledge.



# Overview

- 2010 PhD in Social and Technological Change and Energy System Analysis, Linköping
- 2011-2012 Postdoc, Umeå, Massey and Canterbury
- 2013-2014 Researcher, Umeå
- 2015- Lecturer, Linköping
- 2016 Associate Professor (Docent) in science, technology and environmental studies
- Deep knowledge in Environmental history, Energy politics, Science and Technology Studies, Cultural studies, Posthumanities

# Research projects

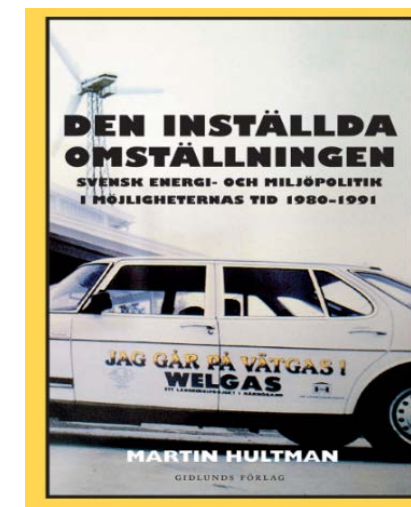
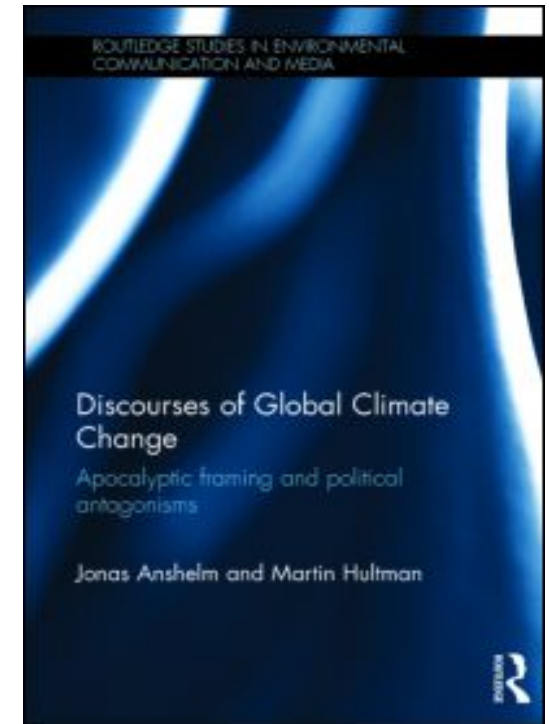
- PhD- Energy & Environmental history of Sweden 1978-2005
- **Principal Investigator:** Formas, 2-år (2013-2014) 100% forskning  
“Ecopreneurship and small scale energy technology Historical and contemporary comparisons between WELGAS, EgenEL and Powerhouse Ltd”
- **Part of application:** Vetenskapsrådet, 3 år, (2015-2017), Den svenska gruvpolitikens omvandling - Aktörer, möjliga världar och kontroverser, 75% forskning
- **Part of application:** Energimyndigheten, 4 år (2015-2018), Vägen till omställning? Genusanalys av energi- och miljöpolitik 1971-1991, 80% forskning
- **Principal Investigator:** Formas, 3-år (2018-2020). Ecopreneurship and social entrepreneurship in a Circular Economy.

# Theory and method

- Discourse (Laclau & Mouffe, Foucault and Fairclough)
  - Actor-Network Theory (Latour, Serres, Callon)
  - Feminist Technoscience (Barad, Haraway, Mol)
  - Material Feminism (Alaimo, Strangers, Hird)
  - Posthumanities
- Discourse analysis
  - Actor-Network studies
  - Archive analysis
  - Interviews
  - Some participatory observations

# Selected publications

- Published in History, Gender, Natural Science and Env.Humanities journals
- Most attention: "A Green fatwā? Climate change as a threat to the masculinity of industrial modernity" and "The Making of an Environmental Hero: A History of Ecomodern Masculinity, Fuel Cells and Arnold Schwarzenegger"
- Three books and one manuscript *Ecological Masculinities* on contract with Routledge.
- Book chapter "Exploring industrial, ecomodern, and ecological masculinities" in Routledge Handbook of Gender and Environment ed. Sherilyn MacGregor
- Editor for two special issues TGV and Small Business Journal;
  - Hultman, Martin & Kall, Ann-Sofie (2016), Genus och miljö - en fruktbar symbios. Introduktion till specialnummer om genus och miljö,
  - Hultman, M., Bonnedahl, K. J., & O'Neill, K. J. (2016). Unsustainable societies–sustainable businesses? Introduction to special issue of small enterprise research on transitional Ecopreneurs.



# Organizer of conferences and research networks

- Convener of *Environmental Posthumanities Network* funded by RJ. Forth meeting in Järna Gotland 3-5 of May 2017
- Initiator and organizer of the first meeting of *SweMineTechNet* in Storuman 2015 funded by RJ
- Host and organizer of the first ever international conference specialising in *Ecopreneurship* in Umeå 2014 funded by RJ
- Host and organizer of the first ever international conference specialising in climate denial in Norrköping 2016 funded by Formas

# Selected teaching and keynotes

- Course co-ordinator and initiator of:
- Gräsrotsinitiativ för ett hållbart samhälle (2016), 7,5 hp,
- Analytical Frameworks (2015-2017) 15 hp
- PhD-course: Theorizing Posthumanities (2015), 15 hp
- PhD-course: Making Public(s) (2016) 7,5 hp
- ARCHITECTURE & FEMINISMS Ecologies, Economies, Technologies 13th international AHRA conference, (2016) KTH Stockholm November 17–19,
- Rachel Carson Centre (2016) Men and Nature: Gender, Power, and Environmental Change 26–28 February, Rachel Carson Center for Environment and Society Munich Germany
- Klima braucht Wandel. Climate needs change: fostering the potential of gender research (2016), March 1, in Berlin, Germany.  
<http://gendercc.net/our-work/current-projects/gendernetclim.html>
- Climate Change, Gender and Work in Rich Countries / (2015) A Work in a Warming World and Simon Fraser University Event Harbour Centre, Simon Fraser University, Vancouver, BC, June 24-26, 2015:  
<https://www.sfu.ca/climategender/2015-workshop/conference-program1.html>
- Konstfack, Beyond Humanism, 23 oktober 2015 kl 14:00 - 15:30  
<https://www.konstfack.se/sv/Aktuellt/Kalender/2015/Friday-LectureBeyond-Humanism---Cecilia-Asberg/>
- Folkbildarforum (2015), 22 november,  
<http://www.folkbildarforum.se/tag/martin-hultman/>
- Seminar: Gender and Climate Change, 24 November (2015), Swedish Society for Nature Conservation/Naturskyddsföreningen and Men for Gender Equality Sweden/Män för Jämställdhet.  
<http://www.naturskyddsforeningen.se/vad-du-kan-gora/kalender/seminar-gender-and-climate-change>



# Citizen Humanities

- Workshop om maskuliniteter och klimatkris på Röda Sten hösten 2016:  
<https://vimeo.com/186431502>
- Had a leading role in artist/academic collaboration 2016 ending with a concert:  
"Framtiden börjar idag – ett musikaliskt möte för en hållbar värld". <https://liu.se/liu-nytt/arkiv/nyhetsarkiv/1.669476?l=sv>
- Spring 2016 I took the lead on creating a popular science platform making possible meetings between environmental movements politicians, publics and academics in Linköping called **Café Planet**: "Café Planet lyfter miljöfrågorna" <https://liu.se/liu-nytt/arkiv/nyhetsarkiv/1.672069?l=sv>
- SR Östergötland (2015), about Discourses of Global Climate Change:  
<http://sverigesradio.se/sida/artikel.aspx?programid=160&artikel=6062066>
- SR Västerbotten (2015) about **SweMineTechNet** möte i Storuman:  
<http://sverigesradio.se/sida/artikel.aspx?programid=109&artikel=6115549>
- Keynote under **Run For Your Life**, 2015 22 november,  
<http://www.folkbildarforum.se/tag/run-for-your-life/>

# Socio-technical gender analysis of energy: two research projects

- On our way to transition? Gender analysis of energy- and environmental politics 1971-1991
  - Personal archives of Birgitta Hambræus (C) and Birgitta Dahl (S)
  - 16\*2 meters of personal notes, letters, internal pm:s and more.
  - One life interview each and one together
  - Biographies
  - Massmedia
  - State investigations
- Masculinities of Global Climate Change
  - Letters to editors (3500)
  - Books (20)
  - Previous research projects

# On our way to transition? Gender analysis of energy- and environmental politics 1971-1991 – some results

- Hambræus and Dahl had big influence, but both were dismissed by men enacting ecomodern or industrial modern masculinities as shown in the Energikommisionen (Hambræus) and sidestepping as energy minister 1990 (Dahl).
- Creating two forms of feminist energy politics, one gender binary with women as the ideal for change because of biological and social reasons (Hambræus) and one gender equal with women also as the ideal for change because of understandings of social power relations (Dahl).
- Had the knowledge of global climate change already late 1970:s and proposed a decentralised and small scale system based on renewable energy (Hambræus earlier than Dahl).



”When energi becomes a  
contested and important issue  
it is taken over by men”

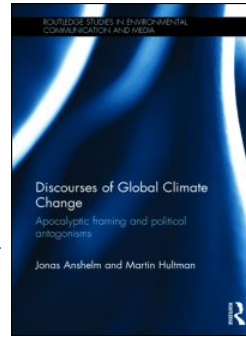
*Birgitta Hambræus*

”Energy in 1980:s was a  
stronghold for macho  
ideals”

*Birgitta Dahl*



# Masculinities of Global Climate Change



Climate change



Industrial



Energy- environmental history



Ecomodern



Transition Movement



Ecopreneurship



Ecological

# Men are the big problem...

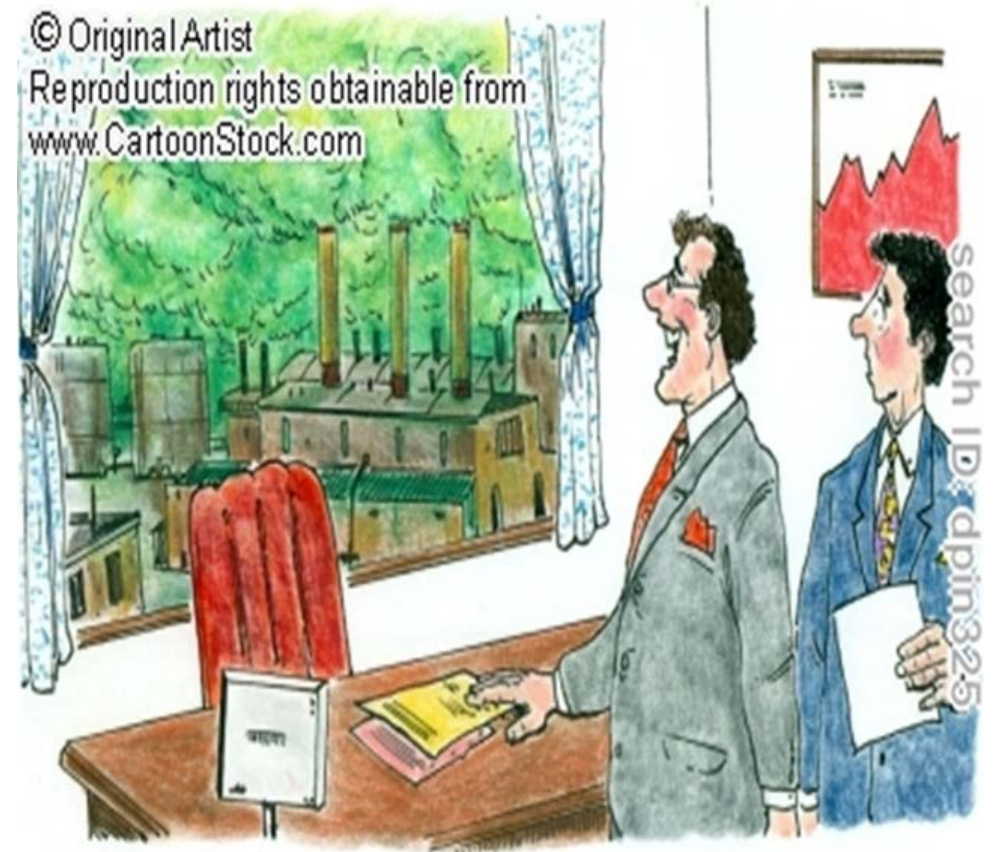
- 10% of the wealthiest are responsible for 45 % of the global greenhouse gas emissions; reaches a four digit factor when move to extreme incomes (Chancel & Piketty, 2015)
- 8 richest men own same wealth as rest of the world (Oxfam, 2017)
- Especially white, middle-aged, rich men who travel too much, eat too much meat and live in energy intensive buildings if quantitative binary research is done (e.g Rätty & Carlsson-Kanyama, 2010).
- 'the conservative white male effect' (McCright and Dunlap, 2015 ).
- Paradoxical situation: Men care less about environment and are the perpetrator (in general), still have leading positions in climate negotiations, hold top management positions in global companies and design geo-engineering planetary solutions (e.g Anshelm & Hansson 2014; Buck et al. 2014; Fleming 2007).





# ...but which masculinities?

- Discussed earlier for example by (Connell, 1990) and many strands of ecofeminist research (Merchant 1980; Plumwood 1993; Grosz 1994; Shiva 1996).
- More is needed (Connell & Pearse, 2014; Gaard, 2014; Buckingham, 2015).
- Intersectionality as starting point (Kronsell & Kaijser, 2014; Hearn et.al 2012; Christensen and Jensen, 2014).
- Plural materialsemiotic foundation, understanding men as an unstable changeable entity, but at the same time researchable category of different configurations (inspired by e.g Hearn, 2014).



*Good, I see we're finally going green.*

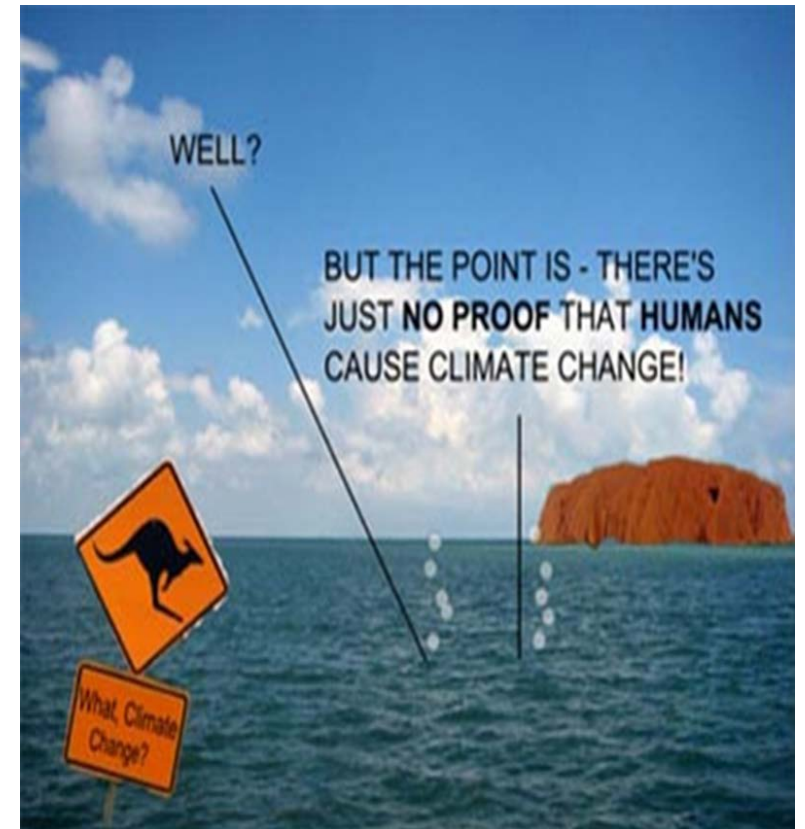
# Industrial masculinities





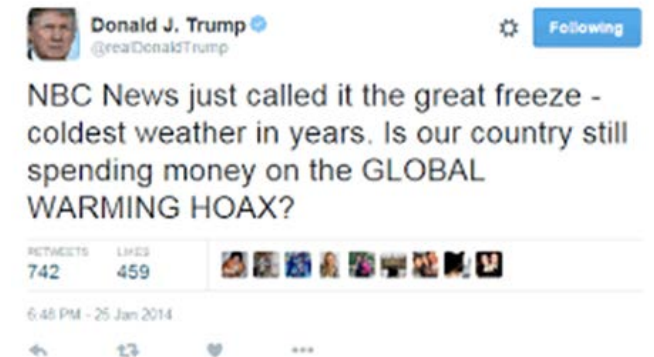
# Industrial masculinities – Climate denialism

- Long tradition among feminist scholars to discuss destructive behavior towards environment by men (Merchant, 1980; Shiva, 1993; Buckingham, 2004)
- McCright and Dunlap climate change denial among conservative white males, identity-protective cognition (2011)
- Organised right-wing denialism (e.g Dunlap and McCright, 2011; Hoffman, 2011; McKewon, 2011).
- Industrial masculinities (Anshelm and Hultman, 2014)



# Industrial masculinities – Climate denialism

- Group of publically climate denialists in Sweden, men 55+ elite group
- Right wing lobby groups Timbro, Captus, and Eudoxa
- Stockholm Initiative network
- Great mistrust of government
- Claim climate science is a political tool to create socialist planned economies
- Described themselves as marginalized, banned, and oppressed dissidents at the same time using their academic or business titles
- 2010 onwards neo-fascist political party Sverigedemokraterna joined in. Voted no to Paris agreement 2016.
- 2016 Donald Trump

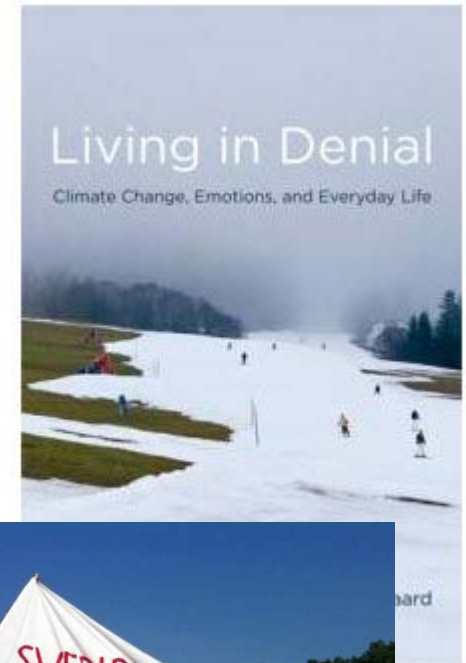


Trump's official campaigning platform (in line with ideas of republicans dominating Senate & House) states:

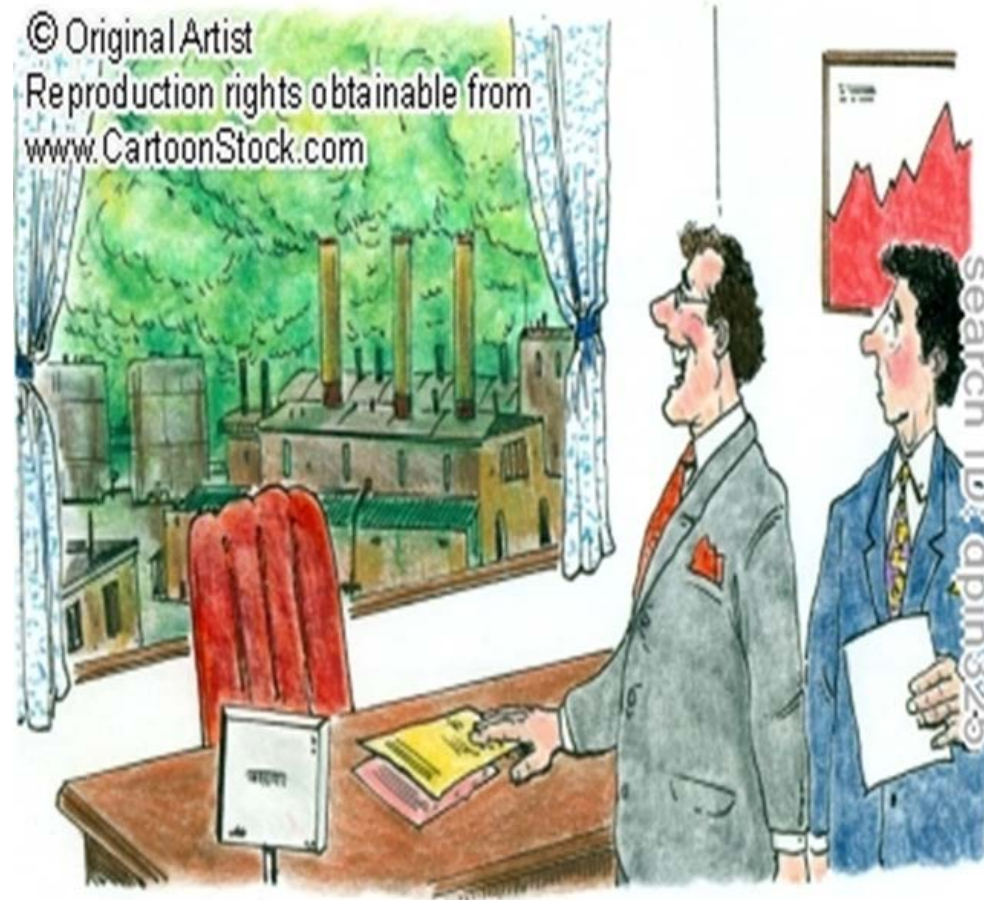
- "Unleash America's \$50 trillion in untapped shale, oil, and natural gas, plus hundreds of years in clean coal reserves"

# Discussion: The merge of Industrial Masculinities, Climate denialism and Neo-fascism

- Not a marginal phenomena, connections and supported by the center of industrial modern capitalism in concrete ways as well as sharing arguments.
- Around 10 per cent of Swedes (different sources weight together) climate denialists
- States with high climate political status (Norway, Sweden) sign Paris Agreement but at the same time encourage extractive industries by laws and subsidies.  
State nationalism create climate denialism?



# Ecomodern masculinities



*Good, I see we're finally going green.*



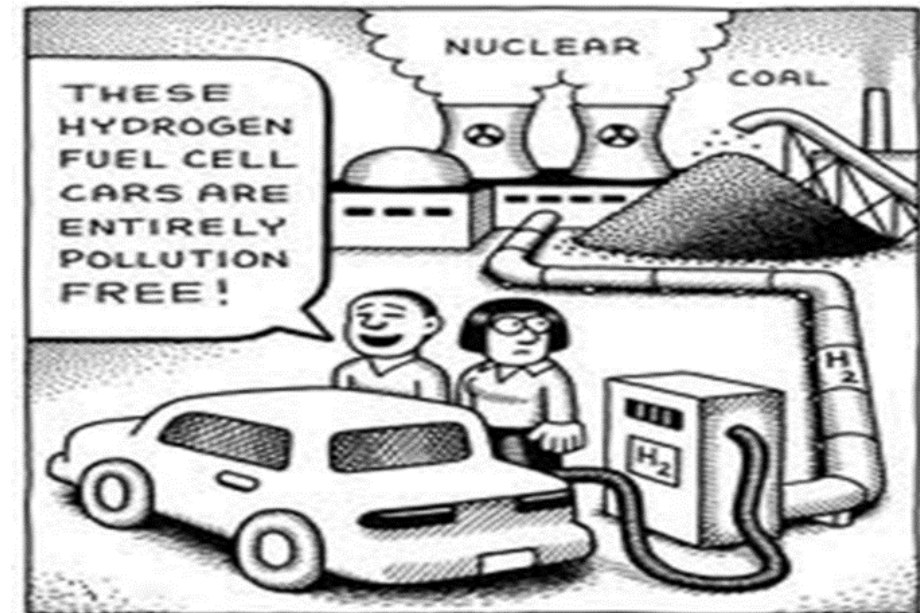
# Ecomodern masculinities – dominating the Environmental Politics

- Asymmetric combination of determination and hardness with appropriate moments of compassion and even vulnerability
- Recognition of environmental problems simultaneously supporting policies and technologies that conserve the structures of nature/human destroying systems
- Climate crisis serious but under control
- Market opportunity
- Large scale solutions such as nuclear, CCS+Hydrogen, geoengineering, BECCS
- Carbon markets and carbon compensation



# Ecomodern masculinities – Arnold Schwarzenegger

- Asymmetric combination of determination and hardness with appropriate moments of compassion and even vulnerability
- Recognition of environmental problems simultaneously supporting policies and technologies that conserve the structures of nature/human destroying systems
- Fuel cells and Hydrogen as silver bullet technology without socio-technical system change



# Ecological masculinities



# Ecological masculinities – transitional agency

- Interdependent and interwoven view of nature~culture
- Nature as vibrant matter
- Localization of economy
- Small scale energy technologies
- Care
- Indigenous knowledge
- Permaculture
- Community of nature and people that really matter
- Walk the talk on reducing fossil fuel extractivism





# Ecological masculinities - Rau Hoskins

- Catalyst for an emerging Māori group of architects and a prominent Māori spokesperson.
- Integrate new technologies with old traditions: “connected to alternative practice, to energy, to waste, and to water.”
- “The land up there has had an ancestral spring. That has remained constant, and good quality water goes to a holding tank and is then distributed around to the other houses. Each house has its own tank in a distributed network.”
- For Hoskins, Eurocentric architecture alienates humans from the environment. One of his primary goals with architecture is “Making people spend more time outdoors. Our ancestors only retreated inside when it was dark”.
- For him, permaculture is a Western way of understanding the interconnectedness with the earth in the same way as the Māori do: “permaculture and Māori have synergy [...] Māori and greens come together so they can be a significant block”.

- <http://www.designtribe.co.nz/>



# Future research

- More than one masculinity, but less than many
- Need for historical as well as contemporary case studies
- Industrial-, ecomodern- and ecological masculinities connected to historical discourses
- Understanding figurations firmly oppose those who do not fit
- Encourage those humans who are part of a transition towards a better world.

# Related publications:

- Hultman & Pulé (2018), *Ecological Masculinities*. Routledge:London
- Hultman, M. and Anshelm, J. (2017). "Masculinities of climate change. Exploring industrial-, ecomodern-, and ecological masculinities in the age of Marjorie Cohen ed. Climate Change and Gender in Rich Countries. examples of Anthropocene" in London: Routledge.
- Hultman, M (2016) Gröna män? Konceptualisering av industrimodern, ekomodern och ekologisk maskulinitet, i *Kulturella Perspektiv* specialnummer om miljöhumaniora
- Hultman & Kall "Klimatskepticismen frodas på högerkanten." (2014). *Sydsvenskan*
- Anshelm, Jonas, and Martin Hultman 2014. A green fatwā? Climate change as a threat to the masculinity of industrial modernity. *NORMA: International Journal for Masculinity Studies* 9, no. 2 : 84-96.
- Hultman, Martin (2013)"The Making of an Environmental Hero: A History of Ecomodern Masculinity, Fuel Cells and Arnold Schwarzenegger", *Environmental Humanities* 2: 83- 103.