

# Green Men? Exploring Industrial-, Ecological-, and Ecomodern Masculinity.

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## Abstract

The research on environmental issues show that gender configurations matter. As gender scholars dealing with environmental issues are all very aware of; men are the big problem. Especially white, middle-class, middle-ageish, fairly rich men are those who travel too much, eat too much meat and live in energy consuming buildings. Simultaneously these are the same persons enacting masculinities around the world participating in climate negotiations, as top managers in global companies and designers of geo-engineering planetary solutions of environmental problems. A large field called masculinity studies has from 1990s and onwards been evolving around the issue of different configurations of materiality, values and practises among men. Few scholars have thus been interested in continuing the analysis of masculinities and environment that Carolyn Merchant and R.W Connell started in the 1980s (e.g Connell & Pearse, 2014).

This conceptual paper is based on more than a decade long research into three different empirical materials from climate change, environmental history and energy politics fields respectively. Masculinities are understood as always-in-the-making and part of material-semiotic antagonistic discourses which are embodied nature of knowledge, materiality and meaning. It analyse situated forms of masculinities introducing the concepts of industrial-, ecological-, and ecomodern masculinities.

## Keywords

Industrial masculinity, Ecological masculinity, Ecomodern masculinity, Masculinity Studies, Environmental Humanities

## Introduction

As gender scholars dealing with environmental issues are all very aware; men are the big problem. Especially white, middle-class, middle-aged, fairly rich men who travel too much, eat too much meat and live in energy intensive buildings. The truth is that if we quantitatively analyse per capita emissions and per capita ecological footprints, it is these particular men who are the problem (Rätty & Carlsson-Kanyama, 2010). They are leaders in climate negotiations, hold top management positions in global companies and design geo-engineering planetary solutions to environmental problems (Anshelm & Hansson 2014).

This paper explore historically situated and contemporary enacted forms of masculinities in rich, western, countries with high per capita emissions. Configurations of industrial-, ecological-, and ecomodern masculinities is found in examples from global nature-culture issues such as climate change, ecologically sustainable entrepreneurship and energy politics.

## Gender and environment

Overall gender analysis in the broader field of Environmental Studies has become increasingly important in recent years. Gender as an analytic source of inspiration has opened up the possibility of interdisciplinary analysis that includes research on identity issues as well as bodies.

Ecofeminism has a long and important history of making visible different forms of environmental injustices connected to gender (e.g Shiva, 1996). Another linked and influential tradition is that of feminist political ecology (e.g. Arora-Jonsson, 2013). Moreover, fifteen years of feminist technoscience has made important interventions in the field, displaying the gender-technology-environment nexus (e.g Haraway, 1988; Alaimo 2010). In recent years, gender-related research has gradually turned even more vital, even though feminist research in this field still has a big untapped potential (MacGregor 2009). The bulk of the research centered on gender has been carried out in poor nations with low emissions per capita highlighting situations for women (Arora-Jonsson 2014). Of much less interest has been the male aspect of environmental politics, especially the question of how different masculinities enhance or influence environmental issues (Gaard, 2014). While there has been research of gender roles and gender inequity in relation to environment and development goals there has been little concern with constructions of hegemonic masculinity to examine how masculinity is embedded in and through environmental policy (Connell & Pearse, 2014). This gap is curious, but not unexpected as hegemonies tend to present themselves as the 'normal'. It is thus troublesome, not least because men have dominated environmental politics heavily for many years, but much needed to conceptualize.

## Masculinities and environment made visible

Even though gender analysis of masculinities within the environmental fields is largely absent, we should of course remember that the environmental historian Carolyn Merchant's classic book *The death of nature: women, ecology, and the scientific revolution* (1980) had identified nature-destructive masculinity as a prime cause of environmental problems. That perspective has since been somewhat lost, taken for granted or even suppressed (Gaard, 2014). Thus, the first studies in which the influential concept of 'hegemonic masculinity' was used that started the blooming field of masculinity studies, dealt with men and masculinity in environmental social movements (Connell 1990). Raewyn Connell's study discussed how certain powerful ideas and practices within, for example, the environmental political field, were sustained through actions connected to 'hegemonic masculinity', (which has similarities to what I call industrial masculinity in this chapter, more about that later). I will not be able to describe the development of masculinity studies in its entirety in this chapter, but I do agree with Hearn et.al (2012), Messersmidt (2012), Mellström (2014), and

Christensen and Jensen (2014) that it is important to find new subject positions beyond the normative and binary gender order. This paper, then, is a humble attempt to research bodies as material-semiotic figurations (e.g. Hearn, 2014). My suggestion is to look at different, always-in-the-making, masculinities within and part of material-semiotic discourses which embody nature of knowledge, materiality, power and meaning.

A large field called masculinity studies has from the 1990s onwards been evolving around the issue of different configurations of materiality, values and practises among men. Few scholars, however, have so far been interested in continuing the analysis of masculinities and environment that Merchant and Connell started. There are some historical studies made on 'hegemonic masculinity' and environment for example on colonialization in India, (Sramek, 2006) and the environmental movement of the 1960's (Rome, 2003; Melosi, 1987; Hazlett 2004), but few studies are trying to understand contemporary masculinities in regards to energy and environment questions (Connell & Pearse, 2014; Dymén, Andersson & Langlais; 2013).

### Empirics

This conceptual paper is based on more than a decade of research into three different empirical studies of climate change, environmental history and energy politics respectively, in which I have had the opportunity to make in-depth case studies. It is based on an extensive study of debating global climate change published in the book *Discourses of Global Climate Change*. A set of 3,500 articles found in the database Artikelsök, using keywords such as climate change\* was studied. The database contains articles published in all Swedish newspapers, all major regional newspapers and the vast majority of magazines (Anshelm and Hultman, 2014). This study brought to life especially the climate skeptics industrial masculinity. What I term industrial masculinity has in previous research been coined 'breadwinner masculinity', 'hypermasculinity', or 'cowboy masculinity' when the studies involved have dealt with, for example, everyday consumption, work, sport, movies or farming (e.g. Holt & Craig 2004; Stacey, 1993; Parrott & Amos, 2003; Donald, 1992). I believe all of those terms have advantages to them, but I prefer industrial masculinity because of its clear connection to the industrial modern discourse. This term also makes broader connection to societal hegemonies and not only pinpoint a certain role for men within that society.

Secondly, my PhD thesis finalised in 2010 explored energy politics with competence from environmental history and cultural studies between 1978 and 2005. I followed the change from a diversity of proposed utopias environmental utopias in the 1980s to a neo-liberal ecomodern utopia in the beginning of 21st century. I grounded my analysis on extensive reading of over 2000 journal articles, archive studies and interviews (Hultman, 2013). I draw on my PhD thesis work especially when discussing 'ecomodern masculinity'. The final empirical material that underpin this chapter and the configurations of masculinities that I discuss is a study of ecological sustainable entrepreneurship. The study is based on over forty interviews and field work in New Zealand and Sweden (Hultman, 2014b;c; forthcoming). The conceptualisation of 'ecological masculinity' is explained with examples from that study.

Overall, this paper introduces gender aspects in environmental politics and situates the configurations of, 'industrial masculinity', 'ecological masculinity' and 'ecomodern masculinity' historically within the current environmental debate. These configurations of masculinities display the intertwining of discourses in actors and of actors in discourses of contemporary environmental politics. Exploring different configurations of masculinity might shed further light on how gender is constructed.

## Industrial masculinity

Industrial modern masculinity is the first example of masculinity in the field of environmental politics that I will discuss. This figuration has a strong foothold in industrial modernisation as shown by, for example, Merchant (1980, 1996). Industrial masculinity is a figuration that evaluates nature as dead man as the chosen dominator, and engineering as the method of creating wealth for all humans. I will draw on the analysis made earlier on the climate change debate in which climate sceptics in particular enact industrial masculinity. The mere talk about a vulnerable earth transformed by anthropogenic emissions is handled with denial or strong scepticism by those enacting industrial masculinity since in their ontology the world is dead from the beginning and primarily there for humans to conquer and extract resources from.

### *Making modernity*

Industrial masculinity contains values from engineering and classical/neo-classical economics, favouring large-scale and centralised energy technologies and the practise of patriarchy. Examples are large scale hydropower or nuclear power plants as well as all kind of fossil fuel technologies (Öhman, 2007). In relation to nature the most important idea is to separate it from humans and value it as a resource for human extraction.

Situating industrial masculinity, we see that from the colonisation era up until the middle of the 1960s, there was a strong dominant belief in the environmental political field that industrial modernity, with its large scale, engineering focus, centralisation and fossil/nuclear based economic base, would take care of its own environmental problems (Nye, 1994; Cohn, 1997). There was an almost complete faith among the elites that economic growth and a rationalization of production could fulfil both energy and environmental policy requirements. When pollution created problems such as smog, the solution was to build higher chimneys (McNeil, 2000). Industrial modernization was presented simultaneously as a cause of environmental problems and as a tool for overcoming them (Anshelm, 2010).

### *Climate scepticism*

In the 21st century, this form of industrial masculinity forms the basis for climate skepticism. When industrial modernization once again was truly challenged in the wake of climate change debate, the industrial masculinity, this time in form of climate skeptics, reappeared on the environmental political scene (Anshelm and Hultman, 2014a). Climate skepticism at its core is created by a small group of men who tap into industrial masculinity. McCright and Dunlap (2003) identify the neo-conservative political movement in the US as a central actor which is turn influenced by a small group of “dissident” or “contrarian” scientists who lend credentials and authority to conservative think tanks. Climate skepticism is not a social movement; it is a project of a few influential men (Lahsen, 2005). In research based on Gallup surveys in the US, McCright and Dunlap (2011), who take gender into account, have found a correlation between self-reported understanding of global warming and climate change denial among white men with conservative values. This suggests that climate change denial is a form of identity-protective cognition; or rather part of an identity process. In US, as in Sweden, this skepticism is articulated by a small, homogeneous group of, almost exclusively, men and conservative think tanks. These men have successful careers in academia or private industry, strong beliefs in a market society, and a great mistrust of government regulation. A few voices return again and again with virtually the same dystopian predictions. The skeptics’ arguments are strengthened by references to the authority of their own titles and positions found in a variety of natural science academic disciplines and thereby demonstrate a general belief in the positivistic industrial modern science underpinning these disciplines. In relation to climate science, but only here, these skeptics adopt a constructivist position. They dismiss climate-science, but only this

natural science knowledge, as a mix of science and politics so entwined that they can no longer be distinguished (Anshelm and Hultman, 2014b).

In Sweden skeptics have connections to associations where representatives of business, and scientific and technological research meet. One clear example is of Per-Olof Eriksson, a former board member of Volvo and former president of Sandvik. He wrote an article in the leading Swedish business paper *Dagens Industri* declaring his doubts that carbon emissions affect the climate and stating that the Earth's average temperature has risen due to natural variations (Eriksson 2008). Ingemar Nordin, professor of philosophy of science, posited that the IPCC's selection and review of scientific evidence was consistent with what politicians wanted. Nordin claimed that politics shaped basic scientific research, and that scientists who produced politically acceptable truths were awarded funding (Nordin 2008). Professors in neoclassic economy Marian Radetzki and Nils Lundgren claimed that the IPCC deliberately constructed their models "in an alarmist direction" using feedback mechanisms that gave the impression that significant climate change was taking place (Radetzki and Lundgren 2009). Later on fifteen Swedish professors in various natural science disciplines, all men, proclaimed themselves as climate skeptics (Einarsson et al. 2008).

Religion and emotions play a central role here as well. Climate skeptics often use religious metaphors even as they accuse climate scientists and politicians of being eco-terrorists who are driven by religious fervour to destroy civilisation (Dunlap and McCright, 2010). It is easy to make use of these metaphors, because faith-based religious conservative rhetoric has a long tradition among industrial engineers, economists and scientists (overwhelmingly male fields) as witnessed in the debate over nuclear power in which the coming nuclear age was described as a Garden of Eden. In Sweden the first reactor was named Adam and the second Eve; engineers even told it as a story of religion in which Eve was created from the rib of Adam (Anshelm 2010). This way of thinking is found within industrial society and, in fact, has been a pillar of energy and environmental politics, not least nuclear energy, but electricity overall (Nye, 1994). This rhetoric follows a typical patriarchal line in which men, particularly those with engineering and/or science backgrounds, claim to have the knowledge to care for an ill-educated working class and developing nations (Anshelm 2010). The connection between Christian faith and the masculine control of nature goes back several hundred years. This rationality of domination over nature, instrumentality, economic growth, and linearity has been hegemonic throughout the industrial modern era (Merchant, 1996).

### Ecological masculinity

Above I have looked at the anti-nature qualities of industrial masculinity and will later on be presenting the win-win pictured, caring-violent configuration of the ecomodern man. What has, and would thus, a form of masculinity look like which is formed in opposition to the industrial and ecomodern masculinity? Historically, industrial masculinity was challenged in the 1970s by what I term 'ecological masculinity'. The terminology comes from on the one hand my own work on ecological discourse which gained presence at this period in history as well as previous research on masculinity which has used this term (Pulé, 2013; Gaard, 2014). This form of masculinity has a long history and has taken shapes as the earth god Kokopelli in New Mexico (Gaard, 2014) or later in the history the Green Man (Basford, 1978). The Green Man is found in variations in many cultures throughout the world spanning almost all of history. It is a figure visible in Europe for example in cathedral carved heads from the twelfth to the sixteenth centuries. They manifest a heterogeneous variety of features, but the Green Man is often a face or head sprouting, surrounded by, or even entirely made from, leaves and foliage. He is found carved in wood or stone usually interpreted as a symbol showing the cycle of rebirth (Basford, 1978; Anderson, 1990). This is an intriguing figure leaving traces of history visible for us.

In the 1960s ecological masculinity was enacted in antagonism to the industrial masculinity. Now practices of localization of economies, use of small scale technologies, creation of renewable energy, decentralized power structures as well as living with nature was seen as part of everyday practices needed to be connected to enactments of masculinity. The importance of discussing how an ecological masculinity might be is of much significance as Greta Gaards put it in her article in the volume *Ecofeminisms: Feminist Intersections with Other Animals and the Earth* “neither ecocriticism, nor men’s studies, nor queer ecologies, nor (to date) ecofeminism has offered a theoretical sophisticated foray into the potentials for eco-masculinities” (Gaard, 2014). I will give example of ecological masculinity from my research about ecological sustainable entrepreneurship, so called ecopreneurship.

In the beginning of the 1970s, a number of Swedish public intellectuals together with an awakening environmental movement challenged economic growth as a measure of prosperity and nuclear power as a panacea for environmental problems (Anshelm, 2000). A vision of another society was formulated and practised; these visions, challenging the dominant modern industrial energy and environmental politics, were seriously discussed throughout the 1980s. The transformative power of the ecological discourse was evident in public opinion, the election of Green Party members to parliamentary assemblies in different parts of the world, debates in the mass media, new regulations, and small-scale renewable energy projects (Hultman, 2014a). In Connell’s study mentioned earlier, the men who dominated and ran industrial modernization were described as a hegemonic form of masculinity up until 1990s (Connell, 1990). This industrial modern masculinity was an important factor in influencing energy and environmental politics in industrialized society, and it was a masculinity that men and women within the environmental movement in the 1970s and 1980s needed to challenge as they tried to create another worldview (Connell 1990).

The green wave in the 1980s not only proposed a recycling of old technologies and old values, it created a vision of eco-socialist-based intentional communities of alternative modernity. These change agents did not shut themselves off from society, but created alternative projects amidst the dominant model. Their models and experiments were part of a mighty international peak in environmental consciousness in the mid-1980s (Hultman, 2014). During this period, a changed form of masculinity of a more caring, humble and sharing sort was presented as being more appropriate in an ecologically sound society. Part of this ecological discourse is what I call ‘ecological masculinity’. I have thus found this form of masculinity today when researching ecopreneurship. This masculinity, created among other places within the environmental movement, challenged the hegemony of what has been called cowboy, industrial, or hegemonic masculinity (e.g. Connell 1990; Jeffords, 1993).

#### *Vibrant matter as entangled nature-culture*

I have interviewed quite a few men who could be understood as enacting an ecological masculinity. These are men who by their examples of environmental practices act as important change agents and influence others towards sustainability. An ecological masculinity is characterized by green-green values meaning both recognizing bigger environmental questions as well as the personal responsibility for them, and being part of a transition towards societies within the planetary boundaries. Theoretically this is connected to ideas of posthumanities. Feminist materialists such as Stacy Alaimo and Susan Heckman insist that with the latest medical understanding of our bodies we need “[...] a way to talk about the materiality of the body as itself and active, sometimes recalcitrant, force” (Hekman & Alaimo, 2008). This is an understanding long proposed by eco-feminists thereby making possible reconceptualise Nature away from the mechanics and dead matter as it was presented by men at the Renaissance (Merchant, 1980; Bennet, 2009). Unpredictability is neither completely unpredictable, nor completely predictable, but rests on a combination of stability and

contingency as vibrant matter (Bennet, 2009). One example is how an organic permaculture farmer both produces crops without any pesticides as well as re-uses the energy put into the farm. Innovation is the creation of solutions that meet new requirements, needs or values. The innovative side is that these people put their bread and soul into developing something unique, inspiring and potentially disrupting for the hegemony as it now stands.

#### *Localization of the economy*

One ecopreneur practising ecological masculinity is Pete Russell who lives in an eco-village on Waiheke Island, New Zealand and runs a distribution network of organically home-grown food called Oooby. He explains how he supports the local economy by shortening the supply chain, thereby challenging the bulk food market controlled by supermarkets: “the people, who we are supporting are those making another food system possible”. A pivotal moment for Pete was becoming a father and moving to Waiheke Island where he had conversations with people that opened up his eyes to how he was connected in the world. He realized that he was part of a destructive capitalism that he would never sign up to if knowing it, instead “as human animals, we need to fulfil a sense of place, familiar with the space, relationships you evolve”. Having a rootless modern lifestyle, moving from one place to another, never allows relationships to evolve. Common to the calls for a different politics and an ecological masculinity is the implication that extensive social structural change is needed and that this is not something that could be achieved through voluntary, individual consumer choices and market solutions. It requires a powerful public engagement and politicians who assume long-term responsibility for the biosphere, even if it means interference in citizens’ consumption habits and behavior. Local experiments of eco-villages, organic food and zero-energy housing can be included in a network of transitions inspired by the ‘Transition Town’ movement in the UK and Blockadia of the world (Bradley & Hédren, 2014).

#### *Transitional agency*

Another of the ecopreneurs I have interviewed in New Zealand is the architect and Māori entrepreneur Rau Hoskins who is the CEO of designTRIBE. Hoskins is well-known in New Zealand as a catalyst for an emerging Māori group of architects and as a prominent Māori spokesperson. Hoskins’ inspiration and how he practices architecture is connected to a holistic worldview on how to integrate new technologies with old traditions: “My practice of architecture is certainly connected to alternative practice, to energy, to waste, and to water. As a family, we had to go from very simple technologies to alternative energy. We have photovoltaic panels. We integrated these into the Maori lifestyle and this means we do not have to burn candles or fossil fuels for lamps like we used to”. Hoskins talked in our exchange about a way of sharing and caring in a distributed system in which the resources in his land are understood as common: “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”.

I have given a few glimpses of how ecological masculinity can be enacted, there are many more in our world and further research might help to highlight them. Researching certain environmental questions with help of gender analysis needs to recognise and beware of different forms of masculinity. This may give us the possibility of making more in-depth critical studies as well as finding positive examples for the future.

## Ecomodern masculinity

In this example I will draw from my dissertation work and exemplify 'ecomodern masculinity' with Arnold Schwarzenegger's way of enacting identity in the late 1990s and early 21st century. I argue that ecomodern masculinity is the dominant configuration of masculinity around the globe today when handling environmental issues broadly and more specific such as climate change (Anshelm & Hultman, 2014), environmental utopias (Hultman, 2014a) and energy (Hultman, 2013). Ecomodern masculinity has been part of the shift towards the recognition of environmental issues as an intrinsic part of politics from the 1990s onwards. It can be defined as an asymmetric combination of the determination and hardness of industrial modernity with appropriate moments of compassion and even sense of care for a vulnerable environment from environmental movement. The end result is just merely "green wash".

### *Merge of neo-liberalism and light green*

The result of the intense clash between industrial and ecological discourses in the 1970s and 1980s had far-reaching implications for society's entire structure and gave way to an ecomodern discourse (Adler et. al., 2014). It began to dominate international policies on energy and sustainable development based on the premise that economic growth needed to be the basis for a transition of energy and environmental policies toward a sustainable future (Hultman & Yaras, 2012). The ecomodern discourse, or ecological modernization as it has been called elsewhere, emphasizing a continuum from industrial modernization instead of a hegemonic shift (Adler et. al., 2014). The descriptions of environmental problems changed from being threats to civilization – which demanded radical system-wide changes – to being characterized as mostly under control and soon to be solved (Hultman, 2015). In Sweden, as elsewhere, this ecomodern discourse enabled economic growth to be placed squarely at the centre of the environmental debate, without acknowledging the negative consequences from economic growth creating environmental problems (Hultman & Nordlund, 2013). Conservative politicians and industry actors pushed this discourse that paved the way for market solutions and a belief that competition would create 'green' jobs. In a concerted move with other neo-liberal politics, the electricity grid was privatized, and research money was increasingly directed to private/public organizations. In addition, environmental organizations participated in this shift by running several campaigns favoring eco-friendly consumption patterns without questioning the total volume of the products consumed. These changes meant that the focus shifted to finding specific technologies to reduce emissions, describing them in a new way, and creating new coalitions of discourses (Anshelm and Hansson, 2011).

At the beginning of the 1990s, a related shift occurred in hegemonic masculinity from industrial modernity to an ecomodern masculinity in which toughness, determination, and hardness were mixed with appropriate moments of compassion and care. Ecomodern masculinity demonstrated an in-depth recognition of environmental problems, especially climate change, while at the same time supporting policies and technologies that conserve the structures of climate-destroying systems. One example of this masculine configuration is Arnold Schwarzenegger particularly when he promoted fuel cells and hydrogen technology (Hultman, 2013).

### *Zero emissions making system aspects invisible*

In 2003, Arnold Schwarzenegger ran for the governorship of California. In his campaign, he promised to 'terminate' his opponents and say 'hasta la vista' to California's budget problems. Within energy and environment politics, Schwarzenegger thus had quite an image problem not to be easily combined with his earlier industrial masculinity. He had been involved closely in Republican relationships with Enron and was the advertising pillar for the energy inefficient Hummer sport utility vehicle (SUV). The Hummer symbolized a combination of violence and lack of respect towards

natural boundaries. This image was a problem for Schwarzenegger, and the solution he found was a Hummer with fuel cell and hydrogen technology. In his political performances as governor, Schwarzenegger aligned himself with the high expectations for clean technology in the form of fuel cells and hydrogen. With his hydrogen-powered car, Schwarzenegger could describe himself as ecomodern. The energy-inefficient Hummer was no longer portrayed a problem when the fuel consisted of hydrogen and the exhaust from the car was next to nothing. Schwarzenegger's Hummer was marketed as a combination of an aggressive violent technology and simultaneously caring towards the environment. The water vapor as the only emission from the pipe made it possible to brand these giant cars with an image of care and affection for the environment, but at the same time the carbon dioxide emissions from gas powered electricity plants in California needed to produce the hydrogen was displaced from the front stage. In this way, both the ecological modernization discourse and ecomodern masculinity can be understood as attempts to incorporate and deflect criticism in order to perpetuate hegemony; in other words, to ensure that practices remain in effect industrial modern. Schwarzenegger presented himself as a symbol of ecomodern masculinity, someone who made a serious effort for the environment while not forsaking the epitome of industrial society, the big car (Hultman, 2013).

A similar displacement strategy and therefore an important clue as to how the ecomodern discourse won hegemony during the beginning of the 1990s was the argument that economic growth did not destroy the environment; on the contrary, economic growth was claimed to be essential to address various environmental problems. Hence, environmental sociologists have commonly described the large gap between the promises of the ecomodern discourse and its outcome (York et. al., 2010; Jorgenson & Clark 2012). This national slight relative effect, however, cannot be considered a meaningful dematerialization because the overall carbon (or more comprehensively, the ecological) footprint of for example Sweden continues to rise substantially if air travel and consumption are included (Hysing, 2014; Berglund, 2011). One consequence of the ecomodern discourse is that established structures of automobility (which is deeply gendered, Carlsson-Kanyama, et.al. 1999) and dominated by industrial masculinity no longer was said to be changed, and the increase in the

The popularity of Schwarzenegger as an environmental hero, very clearly expressed in the documentary *Years of Living Dangerously* (2014), it shows both the hegemonic character of the ecomodern discourse within the climate change debate as well as the problematic content of ecomodern masculinity. Climate change is presented as an industrial problem which can be solved with industrial methods, and even if technologies such as fuel cells and hydrogen have fallen out of favour; solutions such as electric cars, geo-engineering and CO2 markets are picked up by actors who are also performing what can arguably be understood as ecomodern masculinities. When the industrial masculinity portrays nature as dead and works with it accordingly, the ecomodern masculinity is able to depict nature as alive and in need of care. In both cases nature becomes thus something out there, possible to dominate with industrial masculine practices.

### Towards understanding natures of masculinities

In this chapter/article I have proposed a novel analytical framework drawing inspiration from developments in feminist technoscience, posthumanities, masculinity studies and discourse theory, and based on more than a decade of empirical research. My suggestion is that there is more than one masculinity within the environmental field, but less than many, in a similar way as Mol and Law has discussed illnesses (Mol & Law, 1994).

The industrial modern masculinity figuration proclaim nature as dead, human as the chosen dominator, and engineering as the method of creating wealth for mankind. Within the climate change debate this position is no longer possible to take up, if not denying the whole, or most of, the

research findings. Therefore industrial masculinity is now found explicitly with those denying climate change research. With the ecomodern figuration, environmental problems such as climate change are handled with a slightly revised industrial take, but not a complete overhaul. Even though the ecomodern discourse is made up of an industrial attitude, such a discourse is still troublesome for industrial masculinity because it opens a debate over, for example, climate change as a societal issue that needs to be addressed by industry, politicians, and the public. This alone is claimed to threaten the material and social well-being of industrial modernity.

Ecomodern masculinity which is characterized by a combination of toughness, determination, and hardness which go hand in hand with well-chosen moments of compassion, vulnerability and eco-friendly technology appears to be the ultimate win-win figuration for extractivism societies such as for example Sweden, USA, Canada, Australia and so forth. But looking into it more closely it shows itself more as a cover up to enable these economies to continue down the same modern industrial path that created the problems in the first place. When the industrial masculinity portrays nature as dead and works with it accordingly, the ecomodern masculinity is able to depict nature as alive and in need of care of the market. In both cases, however, nature thus becomes thus something out there possible to dominate with masculine practices.

Ecological masculinity does present itself both historically and in our times as a different kind of possibility historically and in our times of much needed ideas of how to find paths to a livable earth, in contrast. It is in antagonism both to the industrial- and ecomodern masculinity. An ecological masculinity would be part of remaking the economy and facilitate the transition towards a more environmentally benign way of worlding. Firmly proposing a localization of economies, use of small scale technologies, creation of renewable energy, decentralized power structures as well as living with nature are part of everyday practices where transformational change of the extractivism ideology is the of main focus. Actors are seeking ways to transform the extractive industries, elites and countries making wealth from it to another state-of-earth.

I suggest there is a need for more research seeking to understanding the values and practices of men, not least because of the large importance men play in shaping, formulating and deciding about environmental issues globally. The figurations of industrial-, ecomodern- and ecological masculinities are firmly connected to historical discourses. Intra-actions between discourses and actors within the field of environmental politics might be better understood by a closer reading of identities and figurations in the forms of different types of masculinities.

## References

- Adams, C. J., & Gruen, L. (Eds.). (2014). *Ecofeminism: feminist intersections with other animals and the earth*. Bloomsbury Publishing USA.
- Adler, Frank; Beck, Silke; Brand, Karl-Werner; Brand, Ulrich; Graf, Rüdiger; Huff, Tobias; & Krüger, Timmo, 2014. *Ökologische Modernisierung: zur Geschichte und Gegenwart eines Konzepts in Umweltpolitik und Sozialwissenschaften*. Frankfurt:Campus Verlag
- Alaimo, Stacy. 2010. *Bodily Natures: Science, Environment and the Material*. Bloomington: Indiana University Press
- Anderson, W. and Hicks, C., 1990. *Green man: The archetype of our oneness with the earth*. HarperCollins.

- Anshelm, Jonas and Hansson, Anders. "The Last Chance to Save the Planet? An Analysis of the Geoengineering Advocacy Discourse in the Public Debate." *Environmental Humanities* 5 (2014): 101–23.
- Anshelm, Jonas and Martin Hultman (2014b), "A Green fatwā? Climate change as a threat to the masculinity of industrial modernity", *Norma*, (2)
- Anshelm, Jonas and Martin Hultman. 2014a. *Discourses of Global ClimateChange*, London:Routledge
- Anshelm, Jonas. 2010. Among Demons and Wizards: The Nuclear Energy Discourse in Sweden and the Re-Enchantment of the World. *Bulletin of Science, Technology & Society* 30(1),43-53.
- Arora-Jonsson, S. (2014, December). Forty years of gender research and environmental policy: Where do we stand?. In *Women's Studies International Forum* (Vol. 47, pp. 295-308). Pergamon.
- Arora-Jonsson, Seema (2013). *Gender, Development and Environmental Governance: Theorizing Connections*. London:Routledge
- Barad, K. 2007. *Meeting the universe halfway. Quantum physics and the entanglement of matter and meaning*, Duke University Press
- Barrett, F. J. 1996. The organizational construction of hegemonic masculinity: The case of the U.S. Navy. *Gender, Work and Organization* 3 (3): 129-42.
- Basford, K., 1998. *The green man*. DS Brewer.
- Berglund, M. (2011) *Green Growth? A Consumption Perspective on Swedish Environmental Impact Trends. Using Input–Output Analysis* (Uppsala: Uppsala University, Department of Global Energy Systems), (ISSN 1401–5765)
- Bird, S. R. 1996. Welcome to the men's club: Homosociality and the maintenance of hegemonic masculinity. *Gender & Society* 10 (2): 120-32.
- Bradley, K. & Hedrén, J. (2014) *Utopian thought in the making of green futures*. In Bradley, K. & Hedrén, J. (eds.) *Green Utopianism: Perspectives, politics and micro-practices*. New York: Routledge.
- Carlsson-Kanyama, Annika, Linden, Anna-Lisa och Thelander, Åsa. (1999) "Insights and Applications Gender Differences in Environmental Impacts from Patterns of Transportation-A Case Study from Sweden." *Society & Natural Resources* 12.4: 355-369.
- Christensen, A. D., & Jensen, S. Q. (2014). Combining hegemonic masculinity and intersectionality. *NORMA: International Journal for Masculinity Studies*,9(1), 60-75.
- Connell, Raewyn W and Pearse, Rebecca (2014), *Gender: In World Perspective*, 3rd Edition, Polity Press
- Connell, Robert W. 1990. A whole new world. Remaking masculinity in the Context of the Environmental Movement, *Gender & Society* 4, 452-478

- Dunlap, Riley and McCright, Aron. 2010. Climate change denial: sources, actors and strategies. In Lever-Tracy, C. (Ed.), *Routledge Handbook of Climate Change and Society*. Routledge, London, 240–259.
- Dymén, Christian, Måns Andersson, and Richard Langlais. "Gendered dimensions of climate change response in Swedish municipalities." *Local Environment* 18.9 (2013): 1066-1078.
- Elmhirst, Rebecca (2011). "Introducing new feminist political ecologies." *Geoforum* 42.2: 129-132
- Eriksson, Per-Olof: "Jorden går inte under av utsläpp och uppvärmning", *Dagens Industri* 4/6 2008.
- Gaard, Greta "Towards New EcoMasculinites, EcoGenders, and EcoSexualities" in Adams, C. J., & Gruen, L. (Eds.). (2014). *Ecofeminism: feminist intersections with other animals and the earth*. Bloomsbury Publishing USA.
- Hajer, Maarten A. (1995). *The politics of environmental discourse: ecological modernization and the policy process*. Oxford: Clarendon
- Hansson, Anders & Anshelm, Jonas "Climate change and the convergence between ENGOs and business: on the loss of utopian energies", *Environmental Values*,
- Haraway, Donna. 1988. "Situated knowledges: The science question in feminism and the privilege of partial perspective", i *Feminist Studies*. vol. 3, s.575–599.
- Hazlett, Maril, "'Woman vs. Man vs. Bugs': Gender and Popular Ecology in Early Reactions to Silent Spring," *Environmental History* 9 (2004)
- Hearn, Jeff, and David Hopcraft John Morgan, eds. *Men, masculinities and social theory*. Routledge, 2014.
- Hearn, Jeff, Marie Nordberg, Kjerstin Andersson, Dag Balkmar, Lucas Gottzén, Roger Klinth, Keith Pringle, and Linn Sandberg (2012) "Hegemonic masculinity and beyond: 40 years of research in Sweden." *Men and masculinities* 15(1): 31-55.
- Hultman, M (forthcoming), *Towards Flourishing Societies. Ecopreneurship as Transformative Enactment Within Planetary Boundaries*
- Hultman, M. (2014a). *Transition Delayed. The 1980s Ecotopia of a Decentralized Renewable Energy Systems*. In Bradley, K. and Hedrén, J., *Green Utopianism: Perspectives, Politics and Micro Practices*, London:Routledge
- Hultman, M. (2014c), *Ecopreneurship within planetary boundaries: Innovative practice, transitional territorialisation's and green-green values*. Paper at *Transitional green entrepreneurs: Re-thinking ecopreneurship for the 21st century Symposium at Umeå University June 3rd - 5th, 2014*
- Hultman, M., (2014), "How to meet? Research on Ecopreneurship with Sámi and Māori", paper presented at the international workshop: *Ethics in Indigenous Research – Past Experiences, Future Challenges*, Umeå, March 3-5, 2014

- Hultman, Martin and Ali Yaras. 2012. The socio-technological history of hydrogen and fuel cells in Sweden 1978–2005: Mapping the innovation trajectory,” *International Journal of Hydrogen Energy* 37(17), 12043–12053.
- Hultman, Martin, O’Neil, Kirstie & Bonnedahl, Karl (forthcoming), “Introduction”, in *Transitional Ecopreneurs – new ecopreneurial activities in the 21st Century*, Special Issue, *Small Enterprise Research*
- Hultman, Martin. 2013. The Making of an Environmental Hero: A History of Ecomodern Masculinity, *Fuel Cells and Arnold Schwarzenegger*. *Environmental Humanities* 2
- Hysing, Erik. 2014. “A Green Star Fading? A Critical Assessment of Swedish Environmental Policy Change”. *Environmental Policy and Governance*, vol. 24:4, s. 262-274.
- Laclau, Ernesto, Mouffe, Chantal (1985), *Hegemony and socialist strategy*, London: Verso
- Lomborg, Björn: ”Varningar för katastrof hjälper inte världen”, DN 13/2 2007.
- MacGregor S. “A Stranger Silence Still: The Need for Feminist Social Research on Climate Change.” *Sociological Review* 57 (2009): 124-140
- Macgregor, S. (2013). *Only Resist: Feminist Ecological Citizenship and the Post-politics of Climate Change*. *Hypatia*. vol. 29, no. 3
- Magnusdottir, Gunnhildur Lily, and Annica Kronsell. "The (in) visibility of gender in Scandinavian climate policy-making." *International Feminist Journal of Politics* ahead-of-print (2014): 1-19.
- Marino, Elizabeth, and Jesse Ribot. "Special issue introduction: adding insult to injury: climate change and the inequities of climate intervention." *Global Environmental Change* 22.2 (2012): 323-328.
- McCright, Aron and Dunlap, Riley. 2011. 'Cool dudes: The denial of climate change among conservative white males in the United States'. *Global Environmental Change* 21(4), 1163–1172
- McNeil, John. *Någonting är nytt under solen – Nittonhundratalets miljöhistoria*. Stockholm: SNS förlag, 2003
- Melosi, Martin V., “Lyndon Johnson and Environmental Policy,” in *The Johnson Years: Vietnam, the Environment, and Science*, ed. Robert A. Divine (Lawrence: University Press of Kansas, 1987), 119-20.
- Merchant, Carolyn (1980). *The death of nature: women, ecology, and the scientific revolution*. 1. ed. San Francisco: Harper & Row.
- Merchant, Carolyn (1996). *Earthcare: women and the environment*. New York: Routledge.
- Mol, Annemarie & Law, John (1994), “Regions, Networks and Fluids: Anaemia and Social Topology”, *Social Studies of Science*, Vol.24, No.4 (Nov.1994), 641-671
- Neumayer, Eric and Thomas Plümper. 2007. The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981–2002, *Annals of the American Association of Geographers* 97(3), 551-566
- Nordin, Ingemar: ”Klimatdebatten – en röra”, *Östgöta Correspondenten* 9/6 2008.

- Painter, James and Teresa Ashe. 2012. Cross-national comparison of the presence of climate scepticism in the print media in six countries, 2007–10. *Environmental Research Letters* 7(4)
- Parrott, Dominic J., and Amos Zeichner. "Effects of hypermasculinity on physical aggression against women." *Psychology of Men & Masculinity* 4.1 (2003): 70.
- Radetzki, Marian och Lundgren, Nils: "En grön fatwa har utfärdats", *Ekonomisk debatt* 2009:5, s 58-59  
 Einarsson, Göran, Lars G. Franzén, David Gee, Krister Holmberg, Bo Jönsson, Sten Kaijser, Wibjörn Karlén, Jan-Olov Liljenzin, Torbjörn Norin, Magnus Nydén, Göran Petersson, CG. Ribbing, Anders Stigebrandt, Peter Stilbs, Anders Ulfvarson, Gösta Walin, Tage Andersson, Sven G Gustafsson, Olov Einarsson, Thomas Hellström LTH "20 toppforskare i unikt uppdrag: koldioxiden påverkar inte klimatet", *Newsmill*, 17/12 2008
- Räty, Riitta, and A. Carlsson-Kanyama. "Energy consumption by gender in some European countries." *Energy Policy* 38.1 (2010): 646-649.
- Rome, Adam, "'Give Earth a Chance': The Environmental Movement and the Sixties," *Journal of American History* 90 (September 2003): 534-41.
- Shiva, Vandana (2006), *Earth democracy: justice, sustainability and peace*. Zed Books
- Sramek, Joseph. "Face Him like a Briton:" Tiger Hunting, Imperialism, and British Masculinity in Colonial India, 1800-1875." *Victorian Studies* 48, no. 4 (2006): 659-680.
- Terry, Geraldine. "No climate justice without gender justice: an overview of the issues." *Gender & Development* 17.1 (2009): 5-18.
- York, R. & Rosa, E.A., 2003. Key Challenges to Ecological Modernization Theory: Institutional Efficacy, Case Study Evidence, Units of Analysis and the Pace of Eco-Efficiency. *Organization Environment* 16, 273-288
- Öhman, May-Britt, (2007), *Taming Exotic Beauties: Swedish Hydro Power Constructions in Tanzania in the Era of Development Assistance, 1960s-1990s*, PhD Thesis, KTH, Sweden