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Vulnerability in the making? How intersectionality and masculinity theory can bring light to climate injustice in urban climate policy

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Abstract This paper focuses on urban climate policy. Drawing on poststructural feminist theories, it examines whether an awareness of intersectionality and norms of masculinity can improve urban climate policy in terms of climate justice. Research on intersectionality and masculinity in relation to climate change and climate policy is reviewed, followed by an analysis of climate change related policies in Helsinki in Finland and Johannesburg in South Africa. The focus of analysis is on gender, but other social lenses (poverty, ethnicity, age) are also identified. While neither of the cities' climate policies explicitly includes gender, Johannesburg has a limited acknowledgement of intersecting social issues in which the factors ethnicity, poverty and age are most present. The article draws on claims that the "ecomodern masculinity" is hegemonic in climate change policy-making today. Norms of ecomodern masculinity can be found in both the policies of analysis. All in all, the paper aligns with literature arguing that there is a lack of gender-awareness in urban climate policy, risking to accelerate climate injustice. The paper concludes that an awareness of norms of masculinity as well as intersecting social structures of domination, is a first step to designing urban climate policies that contribute to climate justice.

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Introduction

When gender is highlighted in relation to climate change, what is often presented is the picture of a woman of the Global South, harvesting crops in a scarce landscape, seemingly without any agency of her own but dependent on the mercy from help organisations. The analysis often ends here, building on simplified and stereotyped assumptions: women are vulnerable, and climate change is affecting only the

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Interdisciplinary Perspectives on Equality and Diversity
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Volume 4, Issue 1. 2018

Global South. However, there is a growing body of literature on gender and climate change stretching beyond such tropes that, for example, discusses intersectionality and masculinity (e.g. Lykke 2009; MacGregor 2010; Kaijser and Kronsell 2014; Anshelm and Hultman 2014). It is generally accepted that the Global South sees the worst impacts of climate change and also that women in general are worse affected by these impacts than men. However, this is not due to any essential aspect of being a woman. Further, not all women or only women are affected. Vulnerability is created by intersecting social structures of power, which if unaddressed risk making vulnerability seem natural.

Climate justice is the recognition of the difference in responsibility for climate change; those historically most responsible for the problem should take the lead in actions to curb (their own) further emissions as well as to adapt to ongoing climate change impacts (Bruno, Karliner and Brotsky 1999; Klinsky *et al* 2017). The concept of climate justice further recognises the unequal impacts of climate change: those who are least responsible for the problem are generally worst affected by its consequences (Chatterton *et al.* 2013, 603-606). Achieving climate justice therefore requires that social inequalities be understood and acknowledged. Climate change is causing material damage on people's homes, cities and lands. Understanding why some people are left more vulnerable to these damages while others benefit more from the strategies meant to limit them, involves bringing in new norms and asking different questions.

To do so, this paper focuses on the question of whether an awareness of intersectionality and norms of masculinity improve urban climate policy in terms of climate justice. To answer this question, this article analyses research on urban climate policies in different parts of the world. To further concretize discussions of intersectionality and masculinity two relevant policy-documents are analysed, one for Helsinki in Finland and one for Johannesburg in South Africa.

The article draws on poststructural feminist theories arguing that masculine norms are deeply embedded in climate policy-making institutions, leading to strategies that mainly benefit those fulfilling these norms. Adding an intersectional lens to the analysis, however, acknowledges that not all men benefit from dominating masculine norms, but that one's relation to climate change and climate policy is created by intersecting social structures of power.

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The first section covers a brief background of masculinity and intersectional theory, followed by a review of research done on urban climate policies in different parts of the world, looking at what social lenses have been used. The third part contains an analysis of climate change related policies in Helsinki in Finland and Johannesburg in South Africa, with the purpose to gain an understanding of how these documents relate to *hegemonic masculinites* and whether they contain an awareness of intersecting structures of domination. Lastly, drawing on reviewed research as well as analysed documents, the article discusses what intersectionality and masculinity theory could bring to urban climate policy in terms of addressing climate injustice.

Masculinity and intersectionality

In order to design urban climate policy for all residents within a city, it is crucial to be able to look beyond normalised inequalities. For this, both masculinity theory and intersectional theory are useful tools and help answer questions such as: whose travel patterns are considered normal, whose unpaid work is taken for granted in order to achieve environmental benefits? Are mitigation strategies designed to benefit all, or only those with capital to invest in them?

Masculinity theory is adapted to locate any norms of masculinity in the climate policy documents of analysis. Drawing on studies claiming that ecomodernism is hegemony in climate change debates and politics (e.g. Hultman 2013; Anshelm and Hultman 2015), norms of ecomodern masculinity are likely to be found in climate change policy documents and thus theories of ecomodernism is adapted to some extent. Intersectional theory is used to discuss how different social structures of power are acknowledged in the different documents.

Ecomodern masculinity

Gender and climate change has mainly been addressed through themes of pro-environmental opinions of women and vulnerability of women in the global South (Arora-Jonsson 2011); however, there is a growing field of research on how climate change relates to gender in broader terms than the woman-man binary, discussing for example intersectionality and masculinity (e.g. Lykke 2009; MacGregor 2010; Anshelm and

Submitted on the 09 January 2017
Accepted on the 14 September 2017

Hultman 2014; Kaijser and Kronsell 2014). Another gender aspect that is often acknowledged is the disproportionately low number of women in decision-making. Work for gender equality is therefore at times reduced to improving the nominal inclusion of women in policy-making. Research, however, has shown that merely a nominal inclusion of women does not lead to gender-sensitive policies or strategies gaining women per se (Magnusdottir and Kronsell 2015). This lack of gender-sensitivity can be explained by structural inequalities and norms that are so deeply embedded in decision-making institutions that people of all genders within them have to adapt to these norms. For example, in Scandinavia, which has a reputation of being gender equal, norms of masculinity within policy-making institutions have led to the invisibility of gender, a so called "gender-blindness" (*ibid.*).

Anshelm and Hultman (2015) describe the prevalent discourse of climate change as a result of the so called *ecomodern masculinity* which they argue is hegemonic, dominating, in the global climate change discourse and thus entwined with climate policy-making. This masculinity combines traditionally masculine values with ideas of *ecological modernisation* to explain preferences for embracing science, large-scale technologies and economic growth rather than life-style changes as solutions to climate change. 'Solutions' advocated by ecomodern masculinity are for example large-scale technologies such as geoengineering and nuclear power, 'green' technologies such as electric cars, or market based mechanisms , which in turn are strategies that often lead to greenwashing rather than real environmental benefits (Hultman 2013; Anshelm and Hultman 2015). Since globally women on average have less access to resources than men do, and women constitute a disproportionately high number of the world's poor (Nelson *et al* 2002; UNFCCC 2016), policies promoting market-based mechanisms for sustainable development such as Clean Development Mechanism (CDM) are less benefitting to or even disfavour many women (Terry 2009). Therefore, policies based on ecomodern masculine values may risk contributing to further climate and gender injustices.

Intersectional theory

Intersectional theory was introduced in the late 1980s, developed by Crenshaw who primarily described how race and gender interact in the contexts of violence against women of color (Crenshaw 1991). In

Submitted on the 09 January 2017
Accepted on the 14 September 2017

short, intersectional theory describes how different power structures based on for example race, gender or age, are interacting in individual people's lives as well as in institutions, and the power relations that these interactions lead to (Kaijser and Kronsell 2014).

Intersectionality can describe how political, social and cultural factors work together to create vulnerabilities to climate change impacts and differences in capacities to cope with them. Not only can climate change impacts reinforce existing inequalities, but strategies for adaptation and mitigation can do the same if not carried out sensitively (*ibid.*). As an example, Sherry (2016) describes how disaster responses are often inaccessible to people of different abilities; for instance in Miyagi Prefecture in Japan many hearing impaired people died during the earthquake and tsunami in 2011 because the warning system was in the form of only sirens. Another example is found in transport policies within the affluent North: Kaijser and Kronsell (2014) suggest that "a predominantly middle-class, white, male car owner has taken precedence as the norm bearer in the transport sector", which could be one explanation of the focus on "clean" cars rather than curbing car use. Similarly, a study in Great Britain showed that people from so called "BAME groups" (black, asian and minority ethnic) have lower access to cars than white people do and also tend to express higher concerns to use public transport, where one reason is a fear of racial abuse (Titheridge *et al.* 2014). The car-ownership norm carried forward by ecomodern masculinity is thus not representing men's interests, but a certain group of men's interest. A third example is found in a study of two Swedish residential areas, in which Bradley (2009) describes how the typical life-style of Swedish-born middle-class people was considered more sustainable than that of foreign-born people with low incomes, even though people within the first group in general have much larger ecological footprints than those within the second group. This discourse is mirrored in policies directed at "teaching" the second group to be more sustainable, for example by encouraging waste recycling, while the much greater climate change impacts from the first group is left unaddressed.

Research on urban climate policy

Having discussed the relevance of looking at norms of masculinity and using an intersectional lens on climate policy, this section reviews the current state of the field. When it comes to policy-making, there

Submitted on the 09 January 2017
Accepted on the 14 September 2017

has been little impact on environmental policies overall by the gendered and intersectional dimensions of climate change (Pease 2016). Research shows that patterns of injustice and vulnerability are intensified by climate change impacts (Esmailian 2015), and in specifically some low- and middle income countries there is an awareness that this has to be addressed in climate policy (Anguelovski and Carmin 2011). Although, not all aspects of injustice and vulnerability are considered; while poverty is commonly acknowledged (see e.g. Carmin *et al.* 2012) for example gender aspects other than man-woman binaries tend to be ignored (Kaijser and Kronsell 2014). Further, what seems to be missing in much of the considerations of vulnerable groups - may it be poor people, women or other social categories - is a critical analysis of *why* these groups are vulnerable in the first place, and how to address the underlying causes of their vulnerability rather than just "empower" or "train" them.

When it comes to high-income countries, any social lens on climate policy-making is often lacking. Even though climate change impacts in these countries tend to be less direct than in many of the low- and middle-income countries, research on natural disasters shows how marginalised groups are the worst affected by disasters also in so called "developed" countries (Fothergill *et al.* 1999). Injustices do of course exist also in these countries, and in many of them in fact to an increasing extent. For example, OECD countries saw a growth in income inequalities between 1980 and 2012, and Finland was among the nations with the highest increase (Cingano 2014), which is relevant for the next section where a climate policy-document from Helsinki will be analysed.

Chandra Russo and Andrew Pattison (2016) published one of the few intersectional reviews of urban climate policy and climate action plans (CPAs) in cities in the United States.

They found that most common mitigation strategies actually contribute to deepened inequalities, where groups who already have low access to resources - such as many poor communities of colour and some groups of women - face heightened economic injustices due to the climate policies (*ibid*, 250-251). For example, policies directed at increasing renewable energy generation have raised energy costs for consumers while large companies shifting to renewable energy sources have got discounts, a strategy that has the worst impact on poor people who tend to spend a higher part of their income on energy (*ibid.*).

Submitted on the 09 January 2017
Accepted on the 14 September 2017

For transportation policy, economic incentives for electric or hybrid cars benefit those with access to capital, while groups with less economic resources cannot afford these cars even with subsidies (*ibid.*). The only positive example in this study was found in strategies to build urban environments consisting of high density and mixed-use urban spaces with employment, housing and shopping positioned closely together and near public transportations (*ibid.*). The study is therefore an example of how intersectionality can be used when looking at urban climate policies. However, since policies as well as power intersections vary in different parts of the world, it is important to look at the power structures that are most prevalent in each city.

Awareness of intersectionality, gender or masculinity seems to be low in urban climate policy research. However, while such awareness is lacking in some cities' policies, some social lenses have been used in others, mostly within the low- and middle-income part of the world. The cases presented in the next sections therefore contribute to ongoing research on urban climate policy by using intersectionality and masculinity theory. The aim of the two case studies explored here is to contribute to the theoretical discussions on intersectionality and climate change. The choice of cities - one in an upper-middle income country and one in a high-income country (World Bank 2017a; 2017b) - fortify the understanding that social injustices within cities and countries of all income levels are of high relevance when addressing climate change in policy-making.

Urban climate policies in Helsinki and Johannesburg

This section analyses climate change related policies in two different cities: Helsinki in Finland and Johannesburg in South Africa. The focus of the analysis is on gender, but other social lenses are also identified. Rather than making an assessment or grading the policies, the purpose here is to gain an understanding of how the documents relate to the ecomodern masculine discourse that has been claimed is steering climate policy-making. The section explores whether or not the policies consider intersecting social factors which could affect one's vulnerability and power, and how the awareness of social issues might differ between the cities. Throughout the analysis examples of questions are given that could be

Submitted on the 09 January 2017
Accepted on the 14 September 2017

asked to understand aspects of intersecting power structures and how such aspects could be addressed in further research or policy-making.

Since research on gender and climate change so far has mainly been focused on low-income countries, this article looks more into the role of middle- and high-income countries. When looking at gender and masculinity, Finland is an interesting example to study since they are usually ranked as one of the top countries for global gender equality measures (see e.g. World Economic Forum 2016). Is this mirrored in their climate policies, or are there signs of the Scandinavian gender-blindness described by Magnusdottir and Kronsell (2015)?

Important to consider is the fact that global warming has different consequences for the cities of study. Comparing climate change impacts between cities and countries is difficult, considering variances in methods and reports of measurements and projections as well as the complexity of the climate system (Fatti and Vogel 2011). Also, the effects of climate change have mainly been studied in relation to rural areas in the global South (e.g. Thomas *et al.* 2007; Bryan *et al.* 2009). However, looking at the Fifth Assessment Report by the Intergovernmental Panel on Climate Change (IPCC) one can generalise differences between areas. In Europe, the main risks are concluded to "increased damages from river and coastal floods", "increased water restrictions" and "extreme damages from extreme heat events and wildfires" (IPCC 2014, 14). In Africa, the main risks are generalised to "compounded stress on water resources", "reduced crop productivity and livelihood and food security" as well as "vector- and waterborne diseases" (*ibid.*). Differences in climate change impacts between the areas of study mean that the following analysis of policy documents should be read with sensitivity to the different settings.

Further, cities choose diverse ways of organising and presenting their climate change strategies, some focusing on adaptation, some on mitigation and others on both. Also between Helsinki and Johannesburg the types of policy-documents vary. The analysed documents are a climate roadmap (Helsinki) and a climate change adaptation plan (Johannesburg). Naturally this means that these documents cannot be fully compared and the analysis should be considered a pilot study.

Helsinki climate roadmap

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Accepted on the 14 September 2017

Interdisciplinary Perspectives on Equality and Diversity
Special Issue: Climate change and intersectionality
Volume 4, Issue 1. 2018

According to climate change projections, Finland may experience a 1.3 - 3.1°C mean annual temperature rise and a 2 to 16 per cent increase in precipitation between 2010 and 2039 (Jylhä, Tuomenvirta and Ruosteenoja 2004, 139). Considering weather extremes, there are few modelling studies on Finland and northern Europe in general (*ibid*, 144). Currently, there is no climate action plan for Helsinki, but climate actions are integrated in other plans spread over different sectors. The Helsinki climate roadmap (City of Helsinki 2016) aims to gather and communicate information relating to climate change actions found in these other documents. Helsinki's climate roadmap describes actions the city aims to take in order to develop Helsinki into a "carbon neutral and climate resilient city during the next decades" (City of Helsinki 2016, 2). It is a visionary, not a binding document (personal communication with City of Helsinki staff, November 14, 2016). The mitigation goals are set out by the City Council and the City Board of Helsinki (City of Helsinki 2017b).

The Helsinki Region has 1.4 million residents, the city of Helsinki about 630 000 (City of Helsinki 2017a). Finland has one of Europe's lowest rates (5.5 per cent) of people living below the poverty threshold, defined as 50 percent of the national median income, with a "majority of immigrant households…in poverty" (Yanke 2014). The 2016 unemployment rate in the city was almost 12 percent (Jaakola and Vilkama 2017). Segregation according to socio-economic factors has also been observed in the city, where areas of low incomes and education levels are often overlapping with high unemployment rates, including among immigrants (*ibid.*). Incomes vary according to age, ethnicity and gender: old women report the highest rates of problems with livelihood due to low incomes, women in average earn 75 per cent of the income of men, and low incomes in families are most common among residents with foreign backgrounds (*ibid.*). Thus, there are several social aspects that might interplay to create varying vulnerabilities.

Mapping gender norms is difficult; however, statistics on gender equality can serve as indicators for structural injustices as well as gender norms. According to OECD, women in Finland spend about 50 percent more time on unpaid work than men (OECD 2017). This work includes for example child care and other domestic chores as well as voluntary work for the community (UN Women 2015). This gap is smaller than the average for OECD countries, where women in average spend double the amount of hours on unpaid work than men do (*ibid.*). According to Eurostat (2017), the average income of women in Finland

Submitted on the 09 January 2017
Accepted on the 14 September 2017

is about 17 per cent less than the average income of men. These numbers suggest that gender is a factor of high relevance when it comes to access to monetary resources and further suggests that women still today take more responsibility in the domestic sphere. Of course, this is a national average and norms and structures in urban Helsinki might differ.

In the Helsinki climate roadmap, there is no explicit mention of gender. Some of the strategies can be questioned in terms of gender equality, such as the promotion of waste recycling at home; as already mentioned, research suggests that this strategy tends to put more work-load on women who are already burdened with the majority of unpaid domestic work (MacGregor 2009). Furthermore, as the study by Bradley (2009) suggests, such strategies are not necessarily the most effective and might be rooted in normative and excluding assumptions of what is a sustainable life-style, leaving greater climate change impacts unaddressed.

In the Helsinki climate roadmap document, the compatibility of economic growth with a low-carbon society is not questioned, mirroring ecomodern ideas. In other parts of the roadmap, however, ecomodern norms are challenged by discussions on life-style changes and transformation of urban structures, rather than solutions based on technology and economic growth. For example, the ecomodern masculine discourse is questioned where the road map challenges the meat-eating dietary norm (however in the form of an advice for the individual citizen): “Swap your ham sandwiches for vegetable tarts” (City of Helsinki 2016, 13) as well as the idea that private cars could be a sustainable mode of travelling. Instead the city presents the vision that “public transport, walking and cycling, as well as new transportation services replace the use of private cars in a dense, green and enjoyable urban environment” (*ibid*, 6). Also worth acknowledging is that the roadmap promotes a “dense urban structure” (*ibid*, 18). Density is suggested by Russo and Pattison (2016, 257-258) to be one the more just mitigation policies: When employment, housing and shopping are situated closely together and near public transportations, low-income communities benefit from lower transportation costs in instances where projects are directed at preserving existing housing and not merely constructing new, expensive communities.

Submitted on the 09 January 2017
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Interdisciplinary Perspectives on Equality and Diversity
Special Issue: Climate change and intersectionality
Volume 4, Issue 1. 2018

In general, the roadmap contains a large focus on how individuals can reduce their carbon footprints by their own actions, such as buying more "quality products" and second hand or investing in wind power. So called environmentally friendly consumption is one of the ideas within ecomodernism (MacGregor 2009; Hultman 2013). Other strategies include the "promotion of the use of low emissions vehicles with parking benefits" - a typical strategy of ecomodern masculine values - which according to the research by Russo and Pattison (2016) benefit wealthy people who can afford these "clean" cars. Similarly, buying quality products and investing in technology demand a certain wealth. Of course wind power has a smaller climate change impact than fossil fuels, but including such a strategy is a problem when not everyone can afford it. Questions also remain about how it will be implemented, as well as whether it will really lead to environmental benefits if the people investing in these technologies save money which they later spend on a weekend trip by airplane.

Investment in "green technology" enables some businesses and investors to accrue wealth while others, for example, working class may be excluded from such economic benefits. The questions of what other groups might be excluded and why are therefore important: Are there factors other than wealth that could limit an individual's ability to invest in "clean" cars or green technologies? Which are the norms behind the policies and whose perception of sustainability is it embracing? These and similar questions are crucial to ask when designing climate policy. If designed with sensitivity to differences in intersecting social factors such as class and income, gender, age and ability, climate policy has the potential to create adaptation strategies for everyone.

If such differences are ignored, on the other hand, social and economic inequalities based on these intersecting structures of power are in risk of being amplified. Likewise, awareness of gendered norms is crucial in order to create policies that are adapted not merely to the hegemonic masculinity, but to the actual inhabitants of the city in question. Climate policy sensitive to these questions will likely be better able to facilitate climate justice, yet remain missing from the Helsinki roadmap.

The City of Johannesburg Climate Change Adaptation Plan (CoJ CCAP)

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Interdisciplinary Perspectives on Equality and Diversity
Special Issue: Climate change and intersectionality
Volume 4, Issue 1. 2018

In South Africa, climate measurements and projections are carried out through several universities and science councils (Ziervogel *et al.* 2014). Since the 1960s, mean annual temperatures in South Africa have increased by more than 1.5 times the global average of 0.65°C and extreme rainfalls are already more frequent (*ibid.*). By 2081-2100, South Africa is estimated to experience a further increase in temperature of 3 - 6°C compared to 1986-2005 (*ibid*.) and heavy storms may increase in the Gauteng Province where Johannesburg is located (Fatti and Vogel 2011). According to the Climate Change Adaptation Plan, the City of Johannesburg is likely to experience temperature increases as well as more frequent storms and extended rain season (City of Johannesburg 2009).

In Johannesburg there are three relevant policy documents: Energy & Climate Change and Action Plan of 2012 (draft), Climate Change Strategic Framework of 2015 (still under approval from council) and the Climate Change Adaptation Plan, further referred to as CoJ CCAP. This study looks into the CoJ CCAP (*ibid*) since this is the only public document in the moment of writing. The CoJ CCAP aims to address the required adaptations of the City of Johannesburg (*ibid*). It evaluates climate projections for the region of Johannesburg, assesses risks related to these projections, discusses vulnerabilities to climate change, and describes costs and benefits which may arise due to climate change impacts (*ibid.*). Input has been given from stakeholders as well as published reports from different departments of the municipality (*ibid.*).

About 4.4 million people live in the City of Johannesburg (World Population Review 2017).

Since the 1970s, urban poverty in Johannesburg has increased and poverty is to a large extent concentrated to areas where black residents were confined during the apartheid period (Beall, Crankshaw and Parnell 2000). According to city authorities, 72 percent of Johannesburg's poor residents[1] are black (City of Johannesburg 2007). About 20 percent of the city's residents live outside of formal dwellings (STATSSA 2017) and further 40 percent lived in housing classified as "inadequate", meaning that municipality services are faulty (City of Johannesburg 2007). Problems and characteristics of informal settlements (or "slums") differ between cities, why strategies to improve such areas must be place-

[1] Defined as earning less than R25 000 per year, corresponding to approximately 1750 Euros per year.

Submitted on the 09 January 2017
Accepted on the 14 September 2017

specific (Gulyani, Talukdar and Jack 2010). Further, even within the same slum, living conditions vary between residents according to factors such as poverty status and tenancy (*ibid*) - again indicating the importance of discussing problems and solutions with sensitivity to intersectional social factors.

According to a report by UN Women (2015, 113), women in South Africa spend about double the amount of time doing unpaid work than South African men. Other studies indicate even larger differences, suggesting that women spend about 2.5 times more hours on unpaid work than men (OECD 2017). However, norms and structures within a large city like Johannesburg and the average country are likely to vary.

As in Helsinki climate roadmap, gender is not explicitly mentioned in CoJ CCAP. However, some strategies are representative of many women's needs and interests, such as public transport[2] and urban gardening[3]. Poverty is the social aspect most frequently addressed. There is an awareness of the higher risk facing poor communities especially in informal settlements, due to a lack of access to resources and protection through insurance. Age is also addressed, with reflections upon the complex health needs of the elderly and the very young, as is the specific vulnerabilities of migrants who are often less informed

[2] In most cultures women have a disproportionately high responsibility over domestic work in comparison to men and are thus "time poor" (Turner and Grieco 2000, 129-131). Because of these responsibilities women's travel patterns tend to be more complex than those of men, since different domestic tasks (school, home, shopping, etc.) might be carried out in a variety of locations (GenderCC 2017). Further, low-income groups are more likely than higher income groups to use public transport (*ibid.*). When public transportation is of low quality or runs infrequently, this increase the time-poverty of the main users of public transportation (Turner and Grieco 2000).

[3] Some scholars highlight urban gardening projects as means taken by women to engage in political action within their community (e.g. Slater 2001; White 2011). For example in areas of food insecurity in Detroit, USA, black women are engaging in communal gardening in order to be self-reliant and to create access to healthy food, some doing so as a means of political resistance against corporatism and capitalism (White 2011, 18-24). In areas where there is a strong gendered division of labour and resources, urban gardens have the potential to address practical gender needs, enabling women to cope with their present situation by for example providing the household with healthy food or gaining an extra income (Hovorka 2006). However, crucial for urban gardens and similar projects to actually address strategic gender needs, rooted in women's subordinate social status in society, is to make sure that women are involved in the planning and decision-making of related projects (*ibid.*). In Finland, urban gardening was a crucial means for survival during and after the world wars (Keshavarz and Bell 2016, 21). In Helsinki some newly established community gardens were used permanently by working-class people and one of the first allotment gardens in the city was established by among others members of the womens' movement (ibid.).

Submitted on the 09 January 2017
Accepted on the 14 September 2017

of local risks, such as flooding of informal settlements in flood-prone areas. CoJ CCAP also addresses racism and xenophobia expressed by locals towards immigrants and sees this as a cause of vulnerability. Importantly, it contains an indirect intersectional perspective when the intersection between ethnicity, income and age is addressed in admitting that poor migrant children will be especially vulnerable to diseases.

CoJ CCAP goes further than Helsinki climate roadmap in discussing inequalities. It addresses the fact that without working against existing economic injustices, little benefit will come from adaptation measures: "Poverty alleviation, including the relocation of settlements located within floodplains, the extension of basic housing and infrastructure, the expansion of job opportunities, and the improvement in education and primary health care delivery services are arguably the most important measures that can be undertaken to reduce the exposure of these communities to the impacts of climate change." (City of Johannesburg 2009, 34).

As with the Helsinki climate roadmap, CoJ CCAP contains values of ecomodernism and masculinity, and in general the language is technical and economic. The fact that the clean development mechanism (CDM) is presented as a solution can be read as an expression of ecomodern masculine values, embracing market based mechanisms.

Comparing the cities

All in all, neither of the cities' climate policies explicitly includes gender. While Helsinki fails in addressing intersecting power structures or any social category at all, Johannesburg has a limited acknowledgement of intersecting social issues in which the factors ethnicity, poverty and age are most present. While both documents fit into the discourse of ecomodern masculinity, a few of the presented strategies challenge these norms.

The higher degree of poverty in South Africa than in Finland may explain why Johannesburg has gone much further in acknowledging the importance of working against poverty in order to benefit from climate policies: the awareness of social injustice and consequences thereof is more established. CoJ CCAP further

Submitted on the 09 January 2017
Accepted on the 14 September 2017

addresses racism and xenophobia expressed by locals towards immigrants, and also identifies poor migrant children as a group of special vulnerability. Considering the ongoing sometimes called "refugee crisis" where people are dying in the oceans or locked up in refugee centers like prisoners, watched by armed guards (e.g. Lyman 2015; Goldstein 2017; Jones 2017), as well as the predicted rise in people displaced by climate change impacts (Esmailian 2013, Stiernstedt 2015), it is remarkable that migrants are not mentioned at all in Helsinki climate roadmap. Judging by the reviewed research on climate policies, one could suspect that this is not something unique to Helsinki but common for the Global North where the impacts of climate change are not as direct. But what about the indirect effects of climate change that cities will experience, such as higher insurance costs due to weather extremes? Direct impacts such as decreased food security can lead to further indirect impacts such as increased food prices globally (*ibid.*), affecting people with low incomes the hardest. Dissemination of infectious diseases and social problems enhanced by for instance material losses, psychological stress, and dislocation of people, are other indirect consequences that are expected to increase (IPCC 2014). These consequences strike people differently according to intersecting social factors.

Discussion and conclusions

Using the two cases of Helsinki and Johannesburg, this study adds empirical support to claims that intersectionality is highly relevant to urban climate policy. The analysis finds alignment with literature saying that there is a lack of gender-awareness in urban climate policies, but that poverty is addressed and may be limited to countries of the Global South.

This is not surprising considering that the degree of poverty is in general larger here than in the Global North. Further, the focus on poverty makes sense considering that lack of resource access is one of the major causes of vulnerability. However, poverty is not evenly spread out over the population of a city, but follows social structures such as race, nationality, gender and ability. Poverty alleviation programs and strategies directed at limiting negative effects on poor people are crucial. However, these programmes

Submitted on the 09 January 2017
Accepted on the 14 September 2017

may not even out the unequal workload on men and women in order to limit households' energy use or make public transportation (a low carbon option) a safe means of travel for those in fear of racial or sexist abuse. To help end these injustices, hegemonic norms of masculinity within policy-making institutions must be addressed together with other norms based on gender, race, ability and other intersecting social factors. Such intersectional perspectives are not commonly used in urban climate policies today. If these norms are *not* addressed they are likely to continue steering policy-making, further reinforcing inequalities that turn some people into winners for whom the climate policies' are designed, while others are left invisible and vulnerable to the climate change impacts.

What is clear when going through research on climate change and climate policy, is that direct causes of vulnerability are in many times due to economic inequalities. Even though patriarchal, racialised and other power structures tend to be the indirect reasons behind these inequalities, the concrete outcome - poverty and vulnerability - often look the same. An intersectional lens thus raises a number of questions for further research: Does this mean that intersectionality is excessive and unnecessary? Would addressing poverty also neutralize intersectional issues? The impacts of climate change are material, but vulnerability towards them may result from intersecting social and cultural oppressions - which in turn are reinforced by some climate strategies. Climate policy-making arenas by themselves may not be enough to make the societal transformation away from neoliberal capitalism needed to remove economic inequalities from this paradigm (see Marx 1887, Mies 1998). Short of this, society can ensure that inequalities, in terms of climate change vulnerability, are not reinforced by policies - which they risk to be when norms and power structures are left invisible and unaddressed.

Submitted on the 09 January 2017
Accepted on the 14 September 2017

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