Chapter 2
Gendering Climate Knowledge for Justice: Catalyzing a New Research Agenda

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Abstract A key theme of feminist science studies theorists is the question of whose interests are served by the knowledge that mainstream science deems worthy of development, and whose interests are served by the knowledge projects that are overlooked or ignored. A central concern animating this analysis is thus whether we have the knowledge we need to ensure climate justice. The aim of this essay is to catalyze a new climate change research agenda designed to locate epistemic gaps and injustices, to reveal the circulations of power regarding what is known and what remains unknown, to render transparent the ways in which knowledge is framed, and to examine whose interests are served by our current knowledges and ignorances about anthropogenic climate change. My analysis includes not only scientific approaches to climate change, but also the gendering of knowledges and ignorances in the work of theorists studying the topic of gender and climate change.

Keywords Gender • Climate change • Feminist theory • Inequality • Vulnerability

Feminist theorizing in the past decades has revealed a wealth of knowledge that had previously been overlooked or marginalized. To select just two examples, consider the work of feminist economists who demonstrated the importance of appreciating and counting the contribution of unpaid labor to the economy, much, though not all, done by women (Braunstein and Staveren 2011; Folbre 1995; Himmelweit 1995; Waring 1990) or the work of feminist theorists who in their study of sexualized violence transformed our understanding of practices such as marital rape, date rape, and sexual harassment that had been "normalized" in such a way that the violence was minimized or denied (Fricker 2006; Scheman 1980).

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M. Alston and K. Whittenbury (eds.), *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, DOI 10.1007/978-94-007-5518-5_2,

Feminists working in the field of epistemology and science studies provide important methodological resources for better understanding knowledge production, and, in particular, the intersections between power and knowledge. Interests and power often result in the view that only certain methods lead to knowledge, as well as impacting and limiting the domain of knowledge that is actively pursued. Assumptions about who is capable of certain types of knowledge and the systematic marginalization and social bias against certain groups frequently results in the phenomena of epistemic injustice (Fricker 2007; Hoagland 2003) where the experiences and knowledges of such groups have been obscured and at times even rendered unintelligible. The development of feminist standpoint theory has offered insights into how biases common to scientific practitioners get embedded into the practice of science, yet remain invisible, held in place both by systematic ignorance and by a view of scientific objectivity as eschewing all subjectivity and thus immune, at least over time, to interest, politics, or prejudice (Haraway 1989; Harding 1991; Wylie 2002). While social biases about gender, class, or race are most likely to inform and limit scientific practice in the biological and social sciences (Fausto-Sterling 2000; Haraway 1997; Martin 1987) no field of science is immune from these impacts (Traweek 1988). For reasons such as these, feminist science studies theories have argued that scientific knowledge is limited and partial, requiring the insights of feminist and other liberatory theorists[1] to encourage less partial, more adequate knowledges (Haraway 1988; Harding 1991). Feminist science studies has revealed the illusion and the harm of the Western view of science as performing what Donna Haraway called the "God trick" of offering knowledge that is disinterested, value-free, emerges from no social location, remains independent of human interests or politics, and simply provides access to "the way the world is" (Haraway 1988, pp. 581–4). In its stead, feminist theorists have argued that "we need not—indeed, must not—choose between "good politics" and "good science" . . . for the former can at least sometimes produce the latter, and the latter, at least in some cases, requires the former" (Harding 2004, p. 30). The point, then, is not to eliminate politics or interests from science, but to understand which interests advance knowledge and for whom, and which obstruct knowledge, again for whom. In other words, we always have to ask *whose interests are served* by the knowledge that mainstream science believes it is important to develop, and whose interests are served by the knowledge projects that are overlooked or ignored.

This question is crucial in many domains, but it is particularly salient in the study of anthropogenic climate change, where what we know and do not know is inextricably interlinked with issues of justice. Our knowledges and our ignorances (Oreskes and Conway 2008; Tuana 2006) will have a huge impact on who will live and who will die, who will benefit and who will be harmed. A central concern animating my analysis is thus whether we have the knowledges we need to ensure climate justice. While this is a question far too complex to address in the space of

[1] I use this term to refer to all theorists working to identify and eradicate oppression, including race theorists, postcolonial theorists, etc.

one essay, my goal is *to catalyze a research agenda* designed to locate epistemic gaps and injustices, to reveal the circulations of power regarding what is known and what remains unknown, to render transparent the ways in which knowledge is framed, and to examine whose interests are served by our current knowledges and ignorances about anthropogenic climate change.

This essay is designed to add this relatively overlooked research agenda on the gendering of knowledges and ignorances to current work on gender and climate change. Over the past decade, there has been a growing recognition of the need to identify gender differentiated impacts of climate change. Studies of how gender roles and gendered division of labor, as well as underlying economic, social, and political factors, can result in gender differences in the impacts of climate change have become an important and growing aspect of the climate change literature (Alston 2010; Brody et al. 2008; Dankelman 2010; Denton 2002; Johnsson-Latham 2010; Terry 2009). Important scholarship has also begun to identify gendered differences in the perception of climate change impacts and risks (Slovic 1999; Flynn et al. 1994; Davidson and Freudenburg 1996). In addition, valuable analyses of gender representation in the climate policy domain have also provided insights regarding the question of gender representation in the political domain. While there is still much to be done on these topics, an understanding of the gendering of knowledges and ignorances has lagged far behind. This essay serves as a call to research to encourage the development of new knowledges in this important domain.

I provide two examples of knowledge-ignorance/power linkages. The first examines hidden value judgments embedded in current models of climate impacts. The second begins to tease out a problematic dualism at the heart of our views of the regions and peoples most impacted by global warming.

Value Judgments and Reasons for Concern

In an analysis of the value judgments of economic modeling in the context of climate change, particularly the comparison of the value of harms or benefits that occur at different times, or what is called "discounting," Julie Nelson argues that both the value judgment about the moral weight to be accorded to future generations and what counts as rigorous research:

> can be traced to a hypervaluation of detachment. By over-emphasizing characteristics of distance, individuality, autonomy, and abstraction within economic thought, the practices of orthodox neoclassical economics have become severely impoverished. Feminist insights into the roles of connection and detachment in the history and philosophy of science can help in analysis of this situation, and in shaping economic practices that can better help address the real ethical and practical questions humanity urgently needs to face (Nelson 2008, 442).

In a similar fashion, I will argue that this same focus on objectivity, detachment, and abstraction results in systematic bias in how climate science represents the harms of climate change.

There is little doubt that much attention in the climate change literature has been focused on the harms of climate change and the need to "prevent dangerous anthropogenic interference with the climate system" (UNFCCC 1992, Article 2). The United Nations Framework Convention on Climate Change, an international treaty established in 1992 at the United Nations Conference on Environment and Development and currently ratified by 195 parties, aims to stabilize greenhouse gas concentrations in such a way as to ensure that it is possible for "ecosystems to adapt naturally to climate change," to do all that is possible to guarantee that "food production is not threatened," and to allow "economic development to proceed in a sustainable manner" (UNFCCC, Article 2).

The Intergovernmental Panel on Climate Change (IPCC) was established to provide comprehensive assessments of the current state of knowledge about climate change, its potential environmental and socio-economic impacts, and possible options for adapting to the negative impacts of climate change and mitigation options aimed at reducing future harms. Authors of the IPCC Third Assessment Report worked to synthesize information on climate risks and vulnerabilities and to provide criteria for judging which vulnerabilities might be labeled "key." This study identified what was labeled the "five reasons for concern":

1. Risks to unique and threatened systems;
2. Risks of extreme weather events;
3. Distribution of impacts;
4. Aggregate impacts;
5. Risks of large scale discontinuities (McCarthy et al. 2001, Ch. 19).

To communicate the relationship between temperature increases and the severity of what they identified as the five key vulnerabilities, the authors created what is now called "the burning embers" diagram, which is reproduced in Fig. 2.1. The designation, "burning embers," was a reflection of the color scheme used to represent risks and impacts, which starts with yellow and increases to dark red. The figure was updated in 2008 (the version on the right hand side in Fig. 2.1) to incorporate new data collected in the IPCC fourth assessment report. The updated figure was based on observations of already existing impacts from increases in global mean temperatures, better understanding of the likelihood and magnitude of impacts from global mean temperatures, clearer identification of which regions are likely to be most affected, and evidence concerning possibilities of irreversible changes and large impacts on multiple-century time scales (Smith et al. 2009). What the comparison between the two representations clearly illustrates is that in each of the five "reasons for concern" categories, the temperature range that would likely avoid "dangerous anthropogenic interference" is getting smaller.

The figure provides a simple measure of the severity of harm easy for those not experienced in interpreting graphs or probability distribution figures to understand. Well-versed in reading red as signaling danger and yellow as a marker of caution, it takes little training to see how risks and negative impacts are correlated with increases in global mean temperature: the darker the color, the higher the danger.

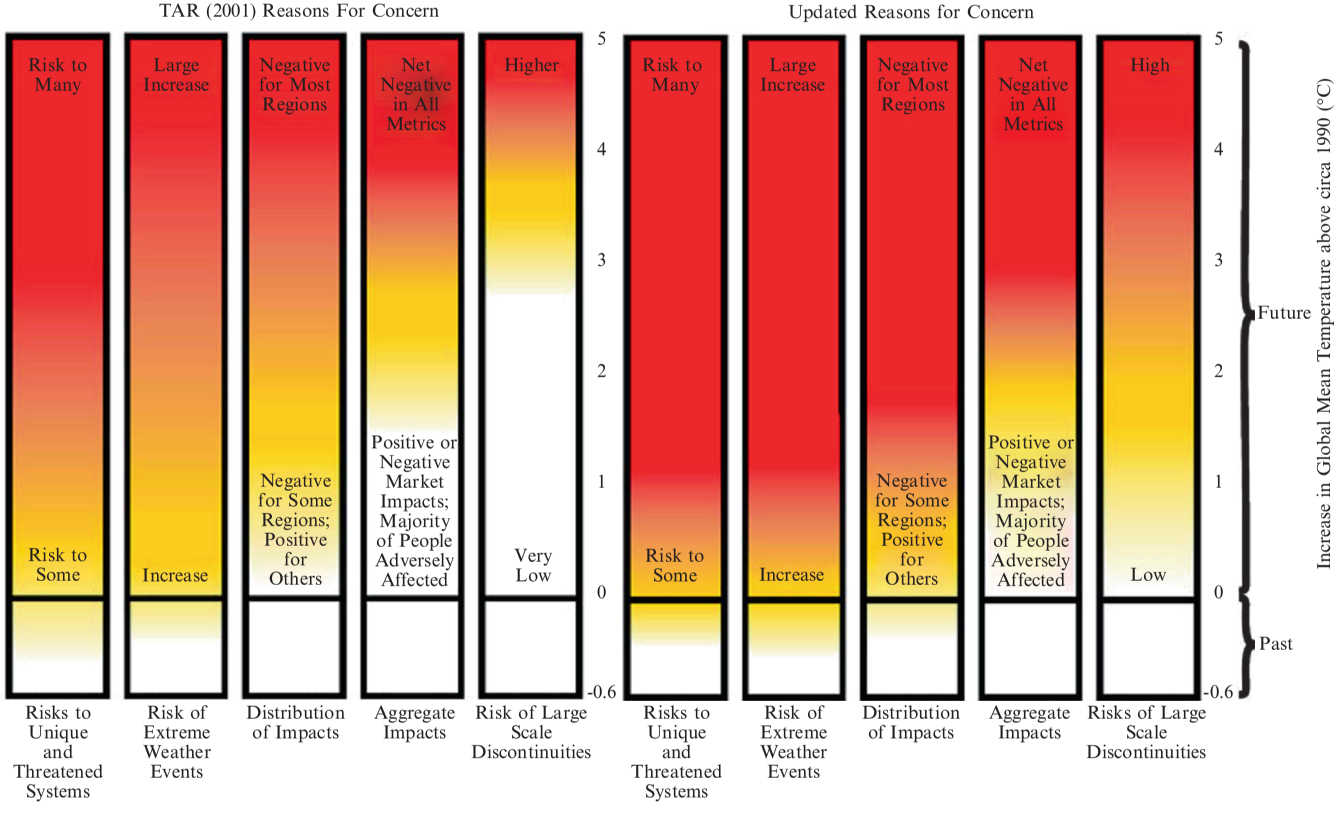

Fig. 2.1 Risks from climate change, by reason for concern on the left from climate change 2001: Impacts, adaptation and vulnerability compared with updated data from Smith et al. 2009. Climate change consequences are plotted against increases in global mean temperature (°C) after 1990

In their discussion of the update of the burning embers figure, Smith et al. (2009) underscore the objectivity of the IPCC's findings:

> In presenting the "embers" in the TAR [Third Assessment Report], IPCC authors did not assess whether any single RFC [reason for concern] was more important than any other; nor, as they noted, did they conclude what level of impact or what atmospheric concentrations of greenhouse gases would constitute DAI [dangerous anthropogenic interference], a value judgment that would be policy prescriptive. The "embers" were designed primarily to communicate the associations of impacts with increases in GMT [global mean temperature] and facilitate examination of the underlying evidence for use by decision-makers contemplating responses to these concerns (4133).

The view of science, good science, as objective, dealing only with facts and avoiding value judgments, haunts this quote. The authors twice underscore that the burning embers figure involves no subjective decisions. In the first instance they insist that no decision was made about how to weigh the reasons for concern: "IPCC authors did not assess whether any single RFC was more important than any other." In the second instance they maintain that no decision was made regarding how to define dangerous anthropogenic interference, which they insist would be a "value judgment" that would be, perhaps, appropriate for "decision-makers contemplating responses to these concerns," but not for scientists, who presumably must avoid value judgments at all costs.

But the figure, nonetheless, is interlaced with value judgments. For example, the selection of the five reasons for concern embeds value judgments in the selection of the five, in the decision that there are five and only five reasons for concern, and that the concerns are in fact those identified and no others. While there is no weighting across the vectors implied by the figure, nonetheless, having five rather than four vectors leads to the conclusion that each of these are vectors of concern to be taken seriously. Why, to take just one example, should aggregate impacts be one of the vectors?

The damage from climate change is not simply proportional to increases in global mean temperature. Some regions are more vulnerable than others. Furthermore, negative impacts often depend not simply on the magnitude of the changes but also on the rate of change. These factors interact with social factors such as the resilience of communities and the adaptive capacity of both human and ecological systems. A focus on aggregate harms obscures the fact that relatively low aggregate harms is still compatible with very high levels of harm for some groups of people and for some ecosystems. And let us not forget that when we aggregate impacts, the beneficial climate impacts in one region offsets adverse climate impacts in another. But that means that some harms, even extreme harms for some regions are considered acceptable or "safe" as long as the majority are not impacted.

Furthermore, value judgments are relevant not only to the selection of the reasons for concern—all these and just these—but there are also very important value judgments embedded in each of the vectors. Returning to aggregate impacts, we have to consider *what was counted* as an aggregate impact and *how those aggregate impacts were measured* to determine the intensity of the color vector on this figure. Were the impacts that "counted" primarily economic costs and perhaps loss of human life? What about those impacts that cannot be weighed via a simple

economic model, such as loss of place (Tschakert et al. 2011; Tuana 2012) or loss of biological diversity (Thomas et al. 2004), or erosion of social and/or ecological resilience? Furthermore, second order value judgments can be embedded even after a first order value judgment is made. For example, a common first order value judgment is to count the loss of human life, or "years of life lost," as a key measure of aggregate impacts. But this is often accompanied by a second order value judgment, about how to count the value of life years. Are they all equivalent? Or do we use, as some have done, an economic measure that would result in lower values for the loss of life years in a poorer region of the world since individuals in these regions contribute a smaller amount to the GDP than individuals in wealthier regions (Dessai et al. 2004). Even rebalancing this inequity by weighting costs in poorer regions with income, embeds the value judgment that economic impacts (rather than psychological or aesthetic) are the appropriate measures. The decision to measure aggregate impacts in terms primarily of financial impact, frequently in terms of impact on gross domestic product, thus embeds many value decisions about what counts (income generating activities) and what does not (well-being, ecosystem flourishing), who counts, and who counts for less.

When we aim to "prevent dangerous anthropogenic interference," what is being counted? Is the measure geophysical thresholds, such as the disintegration of the West Antarctic Ice Sheet or the breakdown of the thermohaline circulation, or is the goal to calculate risks to social thresholds caused by water shortages or the food insecurities that collapse social orders or abilities of communities to adapt? Obviously, the geophysical thresholds are interlinked to social thresholds, but the bulk of the research to date has focused on the geophysical thresholds rather than the social thresholds.

To give just one final example, consider the first reason for concern. When the "risks to unique and threatened systems" figure is framed, what is counted as unique and what is overlooked in this mode of measurement? According to Smith et al. (2009, 4114) "This RFC [reason for concern] addresses the potential for increased damage to or irreversible loss of unique and threatened systems, such as coral reefs, tropical glaciers, endangered species, unique ecosystems, biodiversity hotspots, small island states, and indigenous communities." While some spatial regions are considered in this measurement (small island states), others are ignored (tropical ecosystems, dry land areas).

Joni Seager in "Death by Degrees" focuses on the ideological framing of the 2°C rhetoric. 2°C has been seen as an important threshold consensus achieved in the 2009 G8 Summit meetings, namely that in order to prevent dangerous anthropogenic interference with the climate system, the global average temperature should not be allowed to exceed 2°C over pre-industrial levels. Seager argues that this target is "distinctively ideological: it is precise enough to appear to be scientifically based, and it is a target for which geophysical systems themselves appear to be the primary reference (rather than emissions-control targets or historically based reduction goals, for example, which are directed towards human actions)" (Seager 2009, p. 14). She reveals the various components of this ideology including the view that humans can 'master' nature, or in this case, climate change and that warming

up to 2° is "a degree of danger that is acceptable" (14), reminding us that "many ecosystems and peoples will hit limits to adaptation long before 2°C, and some already have" (15).

> For the millions of people in poor countries, low-latitude countries, low-lying states, and small island states, 2° is not acceptable. For the dozens of states already pushed to adaptive limits, a 2° cap, even if achievable, is too little, too late. For fragile ecosystems, perhaps especially coral reef and other marine communities, 2° of warming is not a safe target (2009, 16).

Aggregating harms and identifying "Reasons for Concern" is as distinctively ideological as the target of 2°C. Even worse, it is a trap and an illusion. It renders us complacent in believing that we are developing the knowledge we need to understand the harms of climate change, while at the same moment obscuring the actual harms done to individuals, to groups, and to ecosystems. Such models offer us value judgments obscured by a cloak of objective detachment, when what is needed for climate justice is value transparency, clear attention to all the impacts, and a science that cultivates a sentiment of responsibility and care instead of objective detachment. Unpacking what this would mean in practice in the domain of climate science is, I contend, a key research agenda for feminist scholars.

This layered example is designed to illustrate the important work needed by feminist scholars in the domain of climate change research. The image of science as objective and as both interest- and power-free frames our knowledges and ignorances about climate change impacts. It represents a form of the gender dimension of climate change that is imbedded in scientific practice and must be teased apart to fully address issues of climate justice. While this example focuses on the value judgments imbedded in scientific knowledges concerning climate impacts, in the next section my focus will be on values and assumptions embedded in the wider narratives of climate impacts, for they are framed by power/knowledge couplings as well.

The Feminist Dream of a Successor Science

In her study of the intersections between feminist and postcolonial science studies, *Science from Below,* Sandra Harding focuses her analysis on the knowledge projects and practices of Western modernity, arguing that modernity "remains haunted by anxieties about the feminine and the primitive, both of which are associated with the traditional" (2008, 1). She reminds us that any account of the development and expansion of Western science, as well as of Western society, must understand their deep connection to empires and colonization. The "development and modernization of the West were materially as well as ideologically *built on the exploitation,* de-development, and "constructed traditionalism" of the societies which European expansion encountered, from 1492 through the events in today's newspapers" (2008, 68). Furthermore, Harding details how Western scientific and technological

development have gone hand-in-hand with widespread environmental destruction, the de-skilling and consequent alienation of labor, a steadily increasing gap between the resources available to rich and poor both locally and globally, and the continuing resources these provide for sexist and racist projects.

Harding claims that feminist and postcolonialist theorizing provide three important resources for understanding the complex interconnections between power and knowledge that are essential to practices of science that are more just. First, they reveal the processes and institutions that led to indigenous knowledge practices, other than those of Western science,[2] being ignored or suppressed. Second, through careful investigation of the co-constitution of gender with class, race, and other social hierarchies these forms of theorizing serve as an important reminder of the various others whose participation is essential to the emergence of science as a truly democratic practice. Third, they focus attention on women as active agents in the processes of scientific and technological change.

While these insights provide a powerful lens through which to render transparent the workings of power/knowledge-ignorance couplings in the study of the geophysical basis of climate change, my examples in this section turn instead on the social science narratives, particularly those dealing with impacts, adaptation, and vulnerability (the domain of Working Group II of the IPCC). Here, albeit briefly, I would like to add to our research agenda and provide an example of the ways in which the narratives surrounding global climate change are informed by and reinforce the framework Harding labeled "Western modernity." What Harding's work has so clearly revealed is that the interests that structure knowledge and determine what is known, as well as what is ignored, are those of the more powerful nations and those that matter to powerful organizations and corporations. She documents how science "from above" enacts a linked set of dualisms in which the first term is privileged. What I add to this insight is that this same dualism structures the dominant frameworks for thinking about global climate change as well (Fig. 2.2).

My focus in this section concerns how these same dualisms circulate in climate discourses to link agency with the "Global North" and vulnerability with the "Global South.[3]" And just as the dualisms are gender coded, I will argue that the discourses themselves carry gendered biases. Not only is the "Global South" viewed as vulnerable, but gendered tropes of this same dualism work to render women in

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[2]As Harding reminds us, Western science, far from providing a "view from nowhere" is itself an indigenous knowledge practice embedded in and reinforced by traditional values and institutions.

[3]I fully realize that every term used to divide the world (First World/Third World—with or without the addition of the Second World; developed/developing; modern/traditional; high-income economies/low-income economies; etc.) are all fraught with problems. While I will use the designation of Global North/Global South (reflecting rankings on the Human Development Index), I do so throughout with quotes in recognition that distinctions like this embed values in ways not always fully transparent.

Privileged	Subordinated
Objective and value free	Subjective and value laden
Science	Indigenous knowledges
Modern/Developed	Primitive/Less Developed
Knowledge	Folk wisdom/ignorance
Agency	Passivity
Masculine	Feminine

Fig. 2.2 Some of the central dualisms that structure Western modernity

the "Global South" as victims. The "Global North" is depicted as having agency and assigned responsibility both for causing the problem of climate change, but also for responding to it with technological and policy solutions.

This dual trope of the "Global South" as victims of climate change in need of the resources of the "Global North" to survive is prevalent in climate science literature. Let me be clear, a justice perspective *does* require acknowledging the differential impacts of climate change on regions, as well as recognizing that some groups have more resources for adaptation than others. While not intending to deny either of these points, the recurring trope of conceptualizing the "Global South" as vulnerable and less able to act in the face of climate impacts, repeats and is informed by centuries of discourses regarding these countries as lessor—less developed, less modern, less technologically advanced, less stable, less capable of self-governance. *The problem is that while the rhetoric reflects certain truths, it plays into and perpetuates systematic prejudices about these countries embedded in the ontology of Western modernity*.

To give just one example, in the course of one page, Stephen H. Schneider and Janica Lane in their essay, "Dangers and Thresholds in Climate Change," mention the vulnerability of what they refer to as "the poorer, warmer nations of the world" nine times. Just a few illustrative quotes reveal the persistence of the above dualisms: developing nations "will experience more and more severe climate change impacts;" "the developing nations will most likely experience predominately detrimental effects;" "there is an imbalance between rich and poor nations' ability to cope with climate impacts;" "less developed countries tend to have lower adaptive capacities, as they are often limited by financial, technological, and governmental constraints;" "the uneven distribution of climate change impacts leaves the hotter, poorer nations—the countries that have less adaptive capacity—more vulnerable and more in need of adaptation" (2006, p. 28). Schneider's and Lane's aim is to argue that justice concerns must take these differences into account. Despite their good intentions, the same discourse that Harding warns us about haunts this text. The "less developed" are framed as less modern, less capable, less technologically advanced.

This same rhetorical repetition frames women in these countries. We are told that:

- Women constitute the largest percentage of the world's poorest people.
- Because of the "feminization of poverty," women are most likely to experience the greatest negative impacts of shifting weather patterns, resulting in further deprivations.
- Gender roles render women more vulnerable.
- Women have little voice in climate policy debates.

What is particularly worrisome is that these same tropes of lack and passivity inflect even feminist discourses. While calling for greater attention to the impact of climate change on women and for the greater participation of women in climate policy, the same rhetorical linkages between women-poverty-vulnerability circulate in feminist discourses.

An early essay on gender and climate change by Fatima Denton (2002) serves as illustration. We find multiple repetitions of the above themes throughout a paper that is calling for mainstreaming gender issues into debates on climate change and sustainable development, and the inclusion of women in decision-making. Consider the following quotes:

On the link between women and poverty:

> Climate change is likely to accentuate the gaps between the world's rich and poor. It is widely accepted that women in developing countries constitute one of the poorest and most disadvantaged groups in society (p. 11).
>
> Women are already paying huge prices for globalisation, economic depression, and environmental degradation. Climate change is likely to worsen their already precarious situation, and leave them even more vulnerable (p. 18).

On the interaction between poverty and climate harms:

> women and their livelihoods activities are particularly vulnerable to the risks posed by environmental depletion (p. 11).

On the relation between gender roles and women's vulnerability:

> poor women are generally on the receiving end of the effects of increasing environmental degradation and depletion of natural resources, because of their involvement in, and reliance on, livelihoods activities which depend directly on the natural environment (p.12).
>
> Gender inequalities continue to exist in terms of access to land, control over resources, ability to command and access paid labour, capacity, and strategies for income diversification, as well as time spent on agricultural or forestry-based activities (p. 17).

And on the absence of women from climate policy development:

> Women are patently absent from the climate change decision-making process (p. 11).
>
> Climate negotiations could be seen as a parody of an unequal world economy, in which men, and the bigger nations, get to define the basis on which they participate and contribute to the reduction of growing environmental problems, while women, and smaller and poorer countries, look in from the outside, with virtually no power to change or influence the scope of the discussions (p. 10).

> Power dynamics characterise the relationships between richer and poorer nations, and these have gendered implications. If poorer nations are finding it difficult to get richer nations to meet their obligations and work towards climate mitigation, poor women have an even bigger problem in promoting their agenda. If smaller and poorer nations have difficulties in mounting the necessary infrastructure to take advantage of CDM projects, poorer women have even fewer means and less scope to diversify their livelihood and look after their families (p. 17).

My point is that even in the context of arguing for gender differentiated impacts and solutions that will adequately address them, even feminist attention to gender and climate change can get caught in the logic of dualisms and *aggregate women*, or more specifically, women from the less developed nations, and the poor, and depict them, all of them, as more vulnerable.

While selecting only one text to reveal the pattern of this discourse to illustrate the women-poverty-vulnerability linkages for women in developing countries, these associations have been and continue to be prevalent in the literature (cf. Cannon 2002; Dankelman 2002; Demetriades and Esplen 2008; Hannan 2009; Nelson et al. 2002; Terry 2009). And as noted by Arora-Jonsson (2011) the trope of the North as agential has resulted in a corresponding image of Northern women as more environmentally virtuous, namely, "more sensitive to risk, more prepared for behavioural change and more likely to support drastic policies and measures on climate change."

Once again, we see the trope of Western modernity so clearly depicted by Harding (2008) at work in these texts. The strength of the linkages between the "Global South" and the "primitive" or, as we say, "less developed," and the related women[4]-poverty-vulnerability linkage have such a strong hold on our conceptual framework that we uncritically accept statements such as "70% of all poor people are women," as well as repeat and reinforce the message through labels like "the feminization of poverty." Sherilyn MacGregor, to cite just one example, in an important analysis of the need for research on "the ways in which gendered discourses, roles and identities shape the political and material aspects of climate change," unwittingly participates in this trope of repetition:

> There is widespread agreement among climate change analysts and policy makers that the more socially and economically marginalized people are, the more vulnerable they are to the effects of global warming. The poor will be hurt the most. However, few other than feminists put the global feminization of poverty into the frame. In his analysis, for example, Giddens (2009) refers to 'the poor' as a homogenous group, with no attention to the fact that women are more likely to be poor, and to be responsible for the care of poor children, than men. This is a problematic blindness. Approximately 70 per cent of the world's poor are women; rural women in developing countries are among the most disadvantaged groups on the planet. They are therefore unlikely to have the necessary resources to cope with the changes brought by climate change, and very likely to suffer a worsening of their everyday conditions (2010, 130).

[4]Specifically women from the "Global South" and aggregated to remove any differences.

Yet, as critiqued by Arora-Jonsson (2011), the generalizations about women and poverty are seldom questioned. "No scientific study is ever cited to document percentages such as the assertion that 70% of all poor people are women . . . there is in fact little gender disaggregated data to support the feminization of poverty thesis" (p. 746). An early paper by Cecile Jackson (1996) exposed a number of problematic assumptions linked to the feminization of poverty thesis. She takes issue with the World Bank assumption not only that women are disproportionately represented among the poor, but also their inference from this that "the poorer the family the more likely it is to be headed by a woman" (World Bank 1989, p. iv). Jackson notes that this linkage of women-headed household and poverty is not accurate. "Much depends on the reason for female headedness, those which are *de facto* household heads and receive remittances from migrant males may often be less poor than male-headed households" (1996, p. 492). She also notes that the relationship between female-headed households and income varies significantly across countries. Jackson laments that "the unfortunate term "the feminization of poverty" has come to mean not (as gender analysis would suggest) that poverty is a gendered experience, but that the poor are mostly women" (p. 491). Despite more than a decade of studies like Jackson's critiquing the women-poverty linkage, it continues to hold sway even in feminist literature.

Adding to the problem is the assumption that poverty and vulnerability go hand-in-hand. With women, or at least women from less developed countries, too often framed via the second term in the chart above, so that their vulnerability renders them passive, susceptible, acted upon. In this way, women's vulnerability becomes *the problem* of gender justice. But this then reinforces the maleness of agency, assumes that men are not vulnerable to climate change, makes it difficult to see or appreciate women's agency, and occludes the relevance of gender dynamics in the "Global North."

The importance of gender, just like the impacts of climate change, will not be effectively understood as long as we approach it from an aggregate perspective. Neither the poor nor women, even "women from the Global South," are homogeneous. As feminist scholarship has reminded us time and time again, while gender can serve as an analytic category, it must always be richly situated. Gender outside of its complex contexts is too rough a measure to be effective and will always risk repeating dominant patterns of thinking and thereby reinforce sexist assumptions about women. In short, gender must always be studied from specific and embodied locations where we as researchers are continually attentive to the complex and intersecting power relations from which gender emerges in its specific manifestations and where we as researchers are always "answerable for what we learn how to see" (Haraway 1988, p. 583). We must remember that our findings will always be "partial, locatable, critical knowledges sustaining the possibility of webs of connections called solidarity in politics and shared conversations in epistemology" (Haraway 1988, p. 584). It is in such practices and in our efforts to resist simplification, homogenization, and aggregation, that we feminists have a chance to achieve our dream of a successor science.

The slogan of the Gender and Climate Change Network (genderCC) is that "There will be no climate justice without gender justice." Achieving this important goal will require such a successor science and an expansion of what counts as research on gender and climate change to include attention to circulations of knowledge/ignorance and power.

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http://www.springer.com/978-94-007-5517-8

Research, Action and Policy: Addressing the Gendered Impacts of Climate Change

Alston, M.; Whittenbury, K. (Eds.)
2013, XXII, 282 p., Hardcover
ISBN: 978-94-007-5517-8