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Inhalt

Marion Mangelsdorf/Michael Pregernig/Verena Kuni
(Bio-)Diversity, Gender, and Intersectionality 5

Aufsätze

Regula Kolar/Bianca Baerlocher
Vielfalt im Wald – Chancengleichheit als Kriterium
für eine nachhaltige Waldgestaltung 19

Anna Kaijser/Annica Kronsell
Who Gets to Know about Nature? – Biodiversity and Ecosystem
Services through an Intersectional Lens 41

Katharina Nowak
Disentangling Participation in 'Local Organic' Food Activism
in London – On the Intersecting Dynamics of Whiteness, Coloniality
and Methodologies that Constitute Ecological Identities 69

Martina Padmanabhan
Intraface: Negotiating Gender-Relations in Agrobiodiversity.................. 85

Gespräch

Why We Need Critical Interdisciplinarity:
A Dialogue on Feminist Science Technology Studies,
Postcolonial Issues, and EcoDiversity... 109
A Dialogue between Banu Subramaniam and Sigrid Schmitz

Rezensionen

Peter Kronenberg
Cherokee Gender Decolonization: Reweaving Two-Spirit Memory 125
Qwo-Li Driskill (2016): Asegi Stories: Cherokee Queer and Two-Spirit Memory

Anna Schreiner
„Der Wunsch nach einem Normkind ist nicht feministisch" 129
Kirsten Achtelik (2015): Selbstbestimmte Norm. Feminismus,
Pränataldiagnostik, Abtreibung

Autor*innen 135

Bisher erschienene Titel
der *Freiburger Zeitschrift für GeschlechterStudien* 139

Ausgaben der Vorläuferin *Freiburger GeschlechterStudien* 140

Freiburger Zeitschrift für Geschlechterstudien 22/2: 5-15

Marion Mangelsdorf/Michael Pregernig/Verena Kuni

(Bio-)Diversity, Gender, and Intersectionality
(Bio-)Diversität, Geschlecht und Intersektionalität

Now, it's impossible to change:
Civilization is no longer a delicate flower. [...]
Today mankind has to put up with monoculture.
They proceed to generate civilization like sugar beets en masse.

Claude Lévi-Strauss, *Tristes Tropes* (1955)

In a globalized world Lévi-Strauss' statement – made in the 1950s – has taken on an unsuspected meaning, one that also drives this journal. This Special Issue takes an interdisciplinary perspective on *monocultures* in our natural environments as well as in our understanding of societies. Bringing together environmental *and* social sciences as well as gender studies and theories of intersectionality, we strive to address the following questions: how can we find ways of doing and undoing differences with the goal of fostering variety in flora and fauna as well as variety in human ways of living? And what does it mean if we face not just biodiversity as a natural and diversity as a social phenomenon, but (bio)diversity as an interdisciplinary concept of naturecultures? (Haraway 2003; c.f. Subramniam/Schmitz this issue)

Generally, biodiversity describes the "variety of life" on Earth. About three decades ago, biodiversity became a key concept in the environmental and conservation discourse. The term gained prominence for the first time in 1986, when it was used in the title of the American *National Forum on BioDiversity*. This conference, as well as the subsequent initiatives, marked a conceptual turning point in nature conservation politics. Whereas very early conservation efforts targeted "nature" or "wilderness" and later "endangered species," the focus eventually shifted to the preservation and promotion of biodiversity (Takacs 1996; Morar et al. 2015). It became an environmental issue par excellence at the environmental conference in Rio de Janeiro in 1992, when the final document *Agenda 21* emphasized the socio-cultural significance of biodiversity next to its ecological and economic meaning. One year later, the *Convention on Biological Diversity* (CBD) was ratified, which has since been endorsed by almost 200 states.

Whereas the natural sciences define biodiversity – seemingly value-free – as the variability between species, within species, and as the variability of ecosystems, environmental social science and the history of science are pointing to shifts of the conceptual frame – for example, from "nature" to "biodiversity" (and nowadays also often towards "ecosystem services") – as being always strategi-

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cally driven and bringing along different political, social and cultural implications. Despite "biodiversity" bearing great bio-physical features, above all, it must be understood as a social discourse. The biodiversity discourse generates and mobilizes a complex network of actors: from international organizations to mostly Western NGOs; from transnational bioprospectors, extending over indigenous communities, to social movements (Escobar 1998). It creates (or denies) access to resources, depending on whether biodiversity is framed as "common heritage of humanity" (in the economic sense of "global commons") or rather as a good under the sovereign control of nation states or even local communities (Turnhout et al. 2013). Eventually, it privileges certain forms of knowledge, while delegitimizing and therefore marginalizing others (Vadrot 2014).

Social science research on biodiversity, with its focus on "agency" and on modes of knowledge generation, its questions of power, and its aspects of social constructions of differences, reveals parallels and connection points with gender research. Interfaces between social science-oriented biodiversity research and gender research unfold from political initiatives as well as from theoretical and methodological similarities. With regard to political initiatives, the year 2015 can be seen as a significant milestone: in the context of the international convention on biodiversity, the so-called *Gender Plan of Action 2015-2020* came into force. Twenty years after the fourth World Women's Conference in 1995 in Beijing, one of the most crucial initial impulses for the discourse of *Gender and Environment* (c.f. Schultz 1995), this action plan advances what could already be found on the agenda in China: questions of equity and gender justice are linked with environmental political challenges in a globalized world.

In this context, looking at biodiversity is inseparable from looking at the diversity of human communities. Gender diversity and the power of gendered forms of knowledge and action gain great significance primarily with regard to questions of biodiversity and related questions of sustainability. These questions have been addressed early on in the scientific debate in different forms of Ecofeminism and Social Ecology (Hofmeister et al. 2013, 98-122; internet platform *genanet*: www.genanet.de/en/, accessed 4 August 2016).

Although given this background calls for the creation and use of interdisciplinary concepts and methods – and related efforts to bridge environmental studies and gender studies – seem to be obvious, they are rarely found. In the 2013 anthology "*Geschlechterverhältnisse und Nachhaltigkeit*" ("*Gender Relations and Sustainability*"), Sabine Höhler construes environmental studies and gender studies as parallel worlds, despite the fact that the two fields see themselves as "exemplary for new approaches in academic research and teaching, which increasingly strive to address complex global problems"[1] (Höhler 2013: 169, translated). Höhler argues that on this point "the claims and implementation of interdisciplinarity diverge"[2] (ibid.: 169, translated). Related realms are systematically separated, even though they started out to "turn around sciences from the inside out and to explore the mechanisms of knowledge generation" (ibid.: 170, translated).[3]

This Special Issue strives to address the above-mentioned knowledge gap in that it stresses the importance of gender as a category of differentiation. In

gender studies, the differentiation of a genetically influenced, biological sex and a socially constructed gender, as well as the relations between sex and gender, play a crucial role. During recent decades, numerous contributions from the realm of science studies and history of science have pointed out that these relations have been formative for the development of our views on nature and on the relationship between nature and culture as well as the self-image of the natural sciences themselves (c.f. amongst others Keller 1985; Schiebinger 1993, 1995, 2014; Harding 2006, 2011, 2015; Ebeling/Schmitz 2006; Harding 2011; Subramaniam 2014). Recently, environmental studies have gone in a similar direction (c.f. Katz 2015) insofar as they ascribe great importance to the acknowledgement of gender differences as well as the reflection on reformation of socio-cultural gender relations in the global struggle for the conservation of biodiversity (c.f. the project BIODIV for the implementation of CBD; GIZ/BMZ 2001; Hummel et al. 2001; Howard 2003; Becker 2004; Hummel et al. in Becker/Jahn 2006).

Gender studies have triggered various types of fundamental debates on the term (bio)diversity, hence putting our understandings of nature and life up to discussion (c.f. Palm 2008). This automatically leads to several questions: should we hold on to nature as a boundary-drawing concept in order to indicate the unavailability of the living (c.f. Gransee 1999: 203)? Within what structures of the usability of nature are we navigating? Can forms of "doing nature" (Katz 2011) be discussed comparably to the approach of "doing gender" in order to initiate a reflection of the noticeably techno-scientific characterization of environmental and natural sciences?

The Contributions to this Special Issue

Within the framework of the above-mentioned questions, the following paragraphs summarize key insights from the contributions to this Special Issue organized in three thematic sections: diversity and differences, intersectionality, and theory-praxis-transfers.

Diversitiy and Differences

Acknowledging diversity and difference as beneficial qualities instead of using them as indicators of deficiencies or as arguments for limination and exclusion has by no means become self-evident. On the contrary, the traditional characteristics that are historically inscribed into global societal orders and institutional knowledge still take effect (c.f. Subramaniam 2014). This is not the only reason that the efforts of communication and connection of disciplinary perspectives are necessary. Sustainable biodiversity politics require an examination of differences and diversity in their various dimensions.

In their essay "Vielfalt im Wald" ("Diversity in the Woods"), **Bianca Baerlocher** and **Regula Kolar** show how such an examination oriented towards common understanding can work and which further perspectives may be opened up.

The forest is a "NatureCulture" used and shaped by humans for centuries; it is considered as a habitat and as an economic, and, to an increasing degree, also a recreation area. While these dimensions of the forest as an ecological, economic, and recreational resource have shifted in their relations to one another in the course of historical and societal transformations, it seems that, in contrast, due to its cultural-historical development, it is not only the image of the forest that is still informed by traditional perspectives. In fact, these connotations affect areas of activities and practices that are decisive for the negotiation of the relations between humans and the forest. For example, the Swiss forestry sector which Baerlocher and Kolar focus on is still dominated by men. Within this framework the authors raise the question of what perspectives can be opened up to shape this field in an integrative manner, embracing sustainability, equity, and distributive justice by considering and incorporating the interdisciplinarity-oriented approaches of gender and environmental studies.

The acknowledgement of diversity and differences exemplified by the substitution of the term equity for the term equality proves to be a requirement for the implementation of appropriate measures in the field. What is more, it enables us to take new points of view on the relations between all the different actors into consideration. This is what Baerlocher und Kolar are arguing for in the outlook of their study by proposing to understand forestry as care work.

Intersectionality

In the field of gender studies, the concept of intersectionality provides new perspectives on different types of discrimination along categories such as gender, ethnicity, religion, age, or status with regard to rights and agency (e.g. Crenshaw 1991; Becker-Schmidt 2007; Hardmeier et al. 2007; Winker/Degele 2009; Walgenbach et al. 2012). Two papers of this Special Issue explicitly draw on the concept of intersectionality in their analyses of the global biodiversity discourse and of local activism in a UK-based alternative food initiative. Those two papers not only provide insightful case studies, but also propose important conceptual extensions to the intersectionality debate in that they feature two groups of actors that have largely been ignored up until now, i.e. 'nature' as a non-human 'actor' and researchers themselves.

In their paper "Who Gets to Know About Nature?" **Anna Kaijser** and **Annica Kronsell** start out with the observation that, up until now, research on intersectionality has had a strong 'humanist focus'; it has largely analyzed relations among humans with little attention to relations involving non-humans. Considering that background, they revisit selected theories that challenge the dualistic construction and representation of humans and nature as separate entities. Drawing on theories from the fields of ecofeminism, critical animal studies, and posthumanism, they introduce an intersectional analytical lens, which enables a focus on human-nature power relations. Empirically, the paper by Kaijser and Kronsell sheds light on two key 'meaning-making categories' in the current environmental discourse, i.e. the concepts of 'biodiversity' and 'ecosystem

services,' which have gained significant prominence both in the political and the scholarly debate on environmental issues in recent years. Their review-style analysis of the social scientific scholarly literature shows that dualistic constructions and representations of human-nature relations are (still) predominant in the biodiversity and ecosystem services debate; while the concept of 'biodiversity' largely goes hand-in-hand with notions of universal scientific knowledge and practices of measuring and mapping nature, the concept of 'ecosystem services' shows tendencies of the 'commodification' of nature and, with that, fosters its incorporation into a market-based logic. On a more optimistic note, however, Kaijser and Kronsell also see some potential in the idea of 'biodiversity' for encompassing intersectional human-nature relations, "as the concept opens up for representing diversity and differences among subjectivities and knowledges" (Kaijser/Kronsell: 59).

In her paper "Disentangling Participation in 'Local Organic' Food Activism in London," **Katharina Nowak** focuses on intersectional biases and related practices of inclusion and exclusion on a more local level, namely in the London-based organic food network *Organiclea.* Based on a critique of the globalized, corporate agri-food system, the network strives to facilitate a 'reconnection with nature' through food-growing. The author points out that despite its emphatic claim for diversity and inclusiveness, *Organiclea* still shows a strong white middle class bias among its active members. Building mainly on the work of U.S. food justice theorists, Nowak conceptualizes food as an "array of social relations," an array apt to analyze and understand intersections of race, class, gender – and nature. What is remarkable about this paper is that, in her analysis, the author does not only put her empirical focus on organic 'foodways' as such, but applies an intersectional lens to her own activities as a researcher 'in the field' as well. With that, she strives to carve out "how whiteness, coloniality and scientific methodologies intersect to bring about one-dimensional spaces and subjectivities" (Nowak: 71).

Theory-Praxis-Transfers

When gender research meets environmental science, topics such as biodiversity, mechanisms of knowledge building, and their critical reflection become the focus of analysis. In addition, the objective to generate knowledge transfer and transformational knowledge is often pursued. This is how changeability of social reality as well as creation of social and biological diversity can be put up for discussion in the critical biodiversity and gender research (Braidotti et al. 1994).

Agriculture is considered one of the fields in which this aggregate can be experienced on an everyday cultural basis. **Martina Padmanabhan** reminds us about this fact in the beginning of her essay "Intraface: Negotiating Gender-Relations in Agrobiodiversity," when she refers to the piece of bread we eat for breakfast as the materialization of a cultivation culture that is several centuries old and shaped by various forces. Agrobiodiversity being understood as the species variability of plants and animals, or rather of all living beings involved

in cultivation, is not only to be considered as an ecological preservation goal of a sustainability-oriented agriculture, but also as a historically evolved, socio-ecological artifact in constant change. These conditions call for an adequate examination uniting different forms of knowledge cultures and coming up to the complex interdependence of all involved agents, each of them having a respective momentum and all being interrelated.

For this reason, Padmanabhan introduces the concept of the "intraface" to show, in her exemplary analysis of a gendered organization for rice cultivation in Kerala, South India, what practice-oriented perspectives can be opened for agrobiodiversity.

Prospect

Recently in historical, theoretical, and critical natural science research, post-humanist approaches and a so-called "New Materialism" have come into the scope of interest (Barad 2007; Alaimo 2008; Dolphin et al. 2012). Here, concepts and methods are being developed that deal with the complex interrelations of nature and culture and of material(s), matter(s), and discourse. In contrast to an anthropocentric view and hence also in contrast to an ethno- and androcentric view, they touch upon the concept of human and non-human agency, natural and technical actors, expressing a multi-species network (Ah-King 2014; Haraway 2003, 2008). Banu Subramaniam and Sigrid Schmitz expand on these multifaceted networks, referring also to Donna Haraway's concept of "naturecultures", in: "Why We Need Critical Interdisciplinarity: A Dialogue on Feminist STS, Postcolonial Issues, and EcoDiversity" (c.f. 109-122). In doing so, they draw on metaphors and images that support the discussion about diversity in social as well as in environmental contexts. When dealing with the "diversity of life" in different public realms, we would also like to emphasize the importance of images. This is not only concerning questions of representation in a broader sense, where politics of images play a significant role issues elaborated by critical, feminist and postcolonial arts and cultural studies in the last decades (see e.g. Lewis/Mills 2003; Jones 2003, 2010; Jay/Ramaswamy 2014). To an even greater degree it concerns our envisioning of future constellations of biodiversity and conviviality, insofar as these influence the opportunity of shaping the present. In both realms, artists who deal with the interfaces of the related disciplines have significantly contributed to drawing attention to the interrelations of the politics of images and the possibilities of action. In this way, they also referred to the close interrelation of theories, concepts, and practices that can be experienced in the materiality and embodiment of knowledge. Hence, re-visions of visual cultures of (bio)diversity as well as a transdisciplinarity-oriented artistic practice targeting this highly relevant field of actions are contributing a fundamental part to the task of sensitizing for current and future questions and problems. Moreover, by creating visibility, encouraging and enabling cross-border communication, and developing strategies for constructive critical action, they offer alternative points of access and activate opportunities capable of opening up new

perspectives (see i.e. Göhler 2010; Kagan 2011, 2013; Christov-Bakargiev 2012; Ebert/Zell 2014; Davis/Turpin 2015).

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Remarks

1 Original version: „[…] als beispielhaft für neuere Ansätze in der Hochschulforschung und Lehre [gelten], die sich zunehmend komplexen globalen Problemstellungen zuwenden." (Höhler 2013, 169)

2 Original version: dass an dieser Stelle „der Anspruch und die Umsetzung der Interdisziplinarität auseinanderklaffen" (Höhler 2013, 169).

3 Original version: obwohl sie antraten, „[…] die Wissenschaften von innen nach außen zu wenden und die Mechanismen der Wissensgenese zu erkunden." (Höhler 2013, 170)

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Aufsätze

Regula Kolar/Bianca Baerlocher

Vielfalt im Wald

Chancengleichheit als Kriterium für eine nachhaltige Waldgestaltung

Zusammenfassung: Der Wald ist für alle da – auf Seiten der Nutzer_innen, aber auch auf Seiten der Waldberufe. Dieser Artikel beleuchtet die männerdominierte Waldbranche und geht von einer Interdependenz zwischen Gesellschaft, Geschlecht und Natur aus. Denn die Gesellschaft-Natur-Beziehungen und deren Ausgestaltung sind mit *Gender* sowie mit Fragen der Chancengleichheit verknüpft. Ziel ist es, sich durch eine integrative Perspektive der beiden Forschungsfelder *Gender Studies* und Nachhaltigkeitsforschung sozialtheoretisch Problemstellungen von Nachhaltigkeit und Chancengleichheit zu nähern. Die theoretische Basis bilden dabei der Ansatz „sozial-ökologische Regime“ und die „*Care*“-Perspektive. Es wird argumentiert, dass nachhaltige Waldgestaltung heißt, Chancengleichheit im Zusammenhang mit der Waldnutzung auf allen Seiten zu gewährleisten. Zum Schluss wird die Frage gestellt: Ist nachhaltige Waldarbeit *Care*-Arbeit und umgekehrt?

Schlagwörter: Chancengleichheit; Partizipation; Care; Nachhaltigkeit; Sozial-ökologische Theorie.

Diversity in the Forest.
Equality Considered a Criterion for Sustainable Forest Management

Abstract: Woods are for everyone – for all users as well as for forest workers. This article focusses on the male dominated forestry sector in regard to the interdependency between society, gender and nature, because the human-nature relationship and its arrangement in society are linked to gender as well as to questions of equality. Thus the aim is to approach problems of sustainability and equality through an integrative perspective of gender studies and sustainability research. Two approaches serve as a theoretical basis: “socio-ecological regimes” and the so called “care”-perspective. The argument is that equality in connection with forest use on all sides can contribute to a sustainable forest management. At the end the question is brought up whether sustainable forest work is care work and vice versa.

Keywords: Equality; Participation; Care; Sustainability; Social-ecological Theory.

Herausforderungen im Schweizer Forstwesen hinsichtlich einer nachhaltigen Entwicklung

Im Rahmen einer nachhaltigen Waldnutzung stellt sich die Frage, wie auf Seiten der Waldbranche einer Vielfalt an Nutzungsinteressen begegnet wird. Die Branche ist aktuell vor große wirtschaftliche Herausforderungen gestellt. Der Wald diente lange vorrangig als *Holzproduzent*, was traditionellerweise das Einkommen aus dem Wald sicherte. Seit den 1990er Jahren sieht sich die Holzbranche jedoch mit Einnahmedefiziten konfrontiert (Bürgi/Pauli 2013: 148). Der

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Wald wird aber außerdem zunehmend ein Ort der Wohlfahrtsfunktion im Sinne der Freizeit- und Erholungsleistung. Durch die fortschreitende Urbanisierung wird insbesondere der stadtnahe Wald vermehrt von der Bevölkerung genutzt. Der Wald ist für alle da. Die Forstleute sind immer stärker mit Unterhalts- und Pflegearbeiten dieses Freizeitsektors beschäftigt, wobei diese Arbeiten am Wald in den meisten Kantonen keinen direkten und ökonomisch messbaren Ertrag bringen. Das heißt, dass die Schweizerische Forstbranche heute stärker denn je vor die große Herausforderung gestellt ist, die Ziele verschiedener Ansprüche der Multifunktionalität im Sinne einer nachhaltigen Nutzung der Wälder zu bewältigen. Sie tut dies zum Teil mittels Mitwirkungsprozessen zusammen mit Expert_innen, Berufsvertreter_innen, Interessensgruppen, Vereinen und Verbänden. Diese Mitwirkenden geben jedoch ein einseitiges Bild der tatsächlichen Waldnutzer_innen ab, und es stellen sich Fragen nach Chancengleichheit in Bezug auf die Partizipation an waldpolitischen Prozessen, wie wir im Folgenden darlegen werden.

Oft wird betont, dass Nachhaltigkeit als Idee der Forstbranche entsprungen ist, weil einst der Sächsische General Hans Carl von Carlowitz im 18. Jahrhundert dafür plädierte, dem Wald nicht mehr Holz zu entnehmen als nachwachse. Damit führte er gleichzeitig den ökonomischen Wert des Holzes auf seine Regenerationsfähigkeit zurück (vgl. Mauch 2014; Denzler 2013; Grober 2013; Stuber 2008; Schuler 2000). Auch wenn Carlowitz damit maßgeblich das Nachhaltigkeitsverständnis, insbesondere in der Forstbranche, beeinflusste, muss festgehalten werden, dass die Idee der Nachhaltigkeit spätestens seit dem Brundtland-Bericht[1] weit mehr ausmacht als die Kopplung von Ökonomie und natürlicher Ressource. Das wechselseitige dynamische Verhältnis von Mensch und Natur, insbesondere intra- und intergenerationale Gerechtigkeitsaspekte in Bezug auf die Verteilung von Ressourcen oder die Möglichkeit der Mitwirkung und Gestaltung von Entscheidungsprozessen, stehen heute in Bezug auf eine nachhaltige Umweltgestaltung und -nutzung im Zentrum. Obschon die Forstbranche heute ein *Waldmanagement* betreibt, welches alle Nachhaltigkeitsaspekte in sich zu vereinen versucht, werden diese stark ökonomisiert – was nicht zuletzt der häufig verwendete Begriff Waldmanagement für die Organisation und Gestaltung des Waldes verrät. Soziale Gerechtigkeit und Chancengleichheit in Bezug auf Geschlecht, aber auch weitere soziale Dimensionen werden bisher nur marginal berücksichtigt (vgl. BAFU 2013; BUWAL 2004). Dies zeigt sich einerseits im Geschlechterverhältnis in den Waldberufen, aber auch im Bereich der Mitwirkung in waldpolitischen Prozessen bzgl. Planung und Entwicklung des Waldes.

Der Forstbereich gehört – nicht nur in der Schweiz – zu den am stärksten männerdominierten Berufsfeldern überhaupt (vgl. Nadai 2001; Holz 2006; Tuma 2016). Für die unausgewogene Repräsentation von Frauen sind zwei Gründe zentral, wobei der zweite Fakt sicherlich eine Folge des ersten ist: Als ursprünglich militärischer Berufszweig gilt der Forstberuf als konservativ-traditionalistische und männerbündlerische Institution. Zudem gibt es fast keine Teilzeitstellen in der Branche, was die Vereinbarkeit von Familie und Beruf

bzw. eine generelle Work-Life-Balance erschwert oder gar verhindert (vgl. Nadai 2001; Holz 2006). Beide Voraussetzungen wirken sehr unattraktiv auf alle jene, die sich ein Berufsumfeld wünschen, welches die Vereinbarkeit von Familie, Freizeit und Erwerbsarbeit ermöglicht. Will die Forstbranche attraktiver werden für Frauen, aber auch für Männer, die sich mit bestimmten Vorstellungen in der herrschenden Berufskultur nicht identifizieren können, müsste sie sich öffnen und modernisieren.

Die Repräsentation von Frauen ist nicht nur in den Waldberufen selbst sehr gering, sondern diese geringe Vertretung im Berufsfeld verhindert mithin auch die chancengleiche Mitwirkung in waldpolitischen Planungsprozessen zu Entwicklung, Gestaltung und Organisation des Waldes, wie sie für eine nachhaltige Umweltgestaltung relevant sind. Die nachhaltige Nutzung von Wäldern ist in den neu formulierten globalen *Sustainable Development Goals* (SDGs) explizit als eigenständiges Ziel aufgeführt (UN 2015). Ebenso war in den *Millennium Development Goals* (MDGs) und ist in den SDGs die Gleichstellung der Geschlechter eines der globalen Nachhaltigkeitsziele (UN 2000, 2015). Mit den in diesem Artikel aufgeworfenen Problemstellungen gehen wir von einem inhaltlichen Zusammenhang beider Zielsetzungen aus: Das heißt, dass Chancengleichheit in Bezug auf die Verteilung natürlicher Ressourcen gewährleistet wird und soziale Strukturkategorien oder Machtverhältnisse, wie bspw. aufgrund von Geschlecht, nicht zu Diskriminierung, Ungleichheit und Ausschluss führen. Auch auf einer analytischen Ebene gehen wir von einer Interdependenz zwischen Gesellschaft, Geschlecht und Natur aus, wobei wir aufgrund der empirischen Sachlage eine differenztheoretische Perspektive auf Geschlecht einnehmen und uns auf geschlechtsspezifische Chancengleichheit konzentrieren.

Vor diesem Hintergrund möchten wir hier folgenden Fragen nachgehen: Welche Rolle spielt (genderspezifische) Chancengleichheit derzeit in der Schweizer Waldbranche? Und: Wie nachhaltig ist die Waldgestaltung, wenn man Chancengleichheit als ein Nachhaltigkeitskriterium definiert? Ziel dieses Artikels ist es, sich durch eine integrative Perspektive sozialtheoretisch der geschilderten Probleme um Nachhaltigkeit und Chancengleichheit zu nähern. Das heißt, wie die Gesellschaft-Natur-Beziehungen mit Fragen der Chancengleichheit zusammenhängen, kann unseres Erachtens durch eine integrative Perspektive besser erfasst werden. Wir tun dies mithilfe zweier Ansätze: des Konzepts *sozial-ökologische Regime* aus der *Nachhaltigkeitsforschung*, welches ein Grundverständnis für das Zusammenwirken von gesellschaftlicher Organisation in Bezug auf natürliche Ressourcen bereitstellt (vgl. Baerlocher 2013) sowie des *Care-Ansatzes* aus den *Gender Studies*. *Care*-Theorien haben einen großen Stellenwert innerhalb der *Gender Studies* und der Forschung zu Ungleichheit und Diskriminierung. Das Ziel ist dabei der Einbezug der *Care*-Perspektive in politische, philosophische, soziologische und wirtschaftliche Theorien. Jeder Mensch ist im Laufe seines Lebens mehrmals sorgebedürftig: alle zu Beginn, manche während und viele zum Ende. In solchen Momenten ist der Mensch angewiesen auf andere Menschen, die seine Sorgebedürfnisse erkennen, sich dieser annehmen und ihm helfen. Wie diese *Care*-Verhältnisse organisiert werden, ist eine politische

Frage, die mit Geschlechterverhältnissen, Verteilungschancen von Zeit, Macht und Geld und überhaupt mit sozialen Ungleichheiten zu tun hat: „Care as a political concept requires that we recognize how care – especially the question, who cares for whom? – marks relations of power in our society and marks the intersection of gender, race, and class with care-giving" (Tronto 1993: 169). Als sozialtheoretische Analyseperspektive hat *Care* ihren Ursprung in Debatten um ungleiche Verteilung und Bewertung sowie generell die Trennung von Produktions- und Reproduktionsarbeit zwischen den Geschlechtern in der Frauenbewegung der 1970er und 1980er Jahre und fand so Eingang in die feministische Gesellschaftstheorie („doppelte Vergesellschaftung") und schließlich in die Frauen- und Geschlechterforschung (vgl. Hofmeister et al. 2013; Winker 2015). Philosophisch ist *Care* ein Teil der *Tugendethik*. In der feministischen Philosophie hat insbesondere Carol Gilligan mit „the ethics of care" (Gilligan 1982) die *Care*-Debatte inspiriert. Auch Joan Tronto (1993, 2013a, 2013b) und Elisabeth Conradi (2001, 2010) sind bedeutende Denkerinnen im Bereich der Achtsamkeits- bzw. *Care*-Ethik. *Care* ist im Bereich der Ethik ein umfassender Begriff und wird verstanden als „a species activity that includes everything that we do to maintain, continue, and repair our ‚world', so that we can live in it as well as possible" (Tronto 1993: 103). Diese Welt beinhaltet laut Tronto unsere Körper, das Selbst und die Umwelt, „all of which we seek to interweave in a complex, life-sustaining web" (ebd.). Der *Care*-Begriff, den wir hier verwenden, beinhaltet also einerseits die sozialtheoretische Komponente der Reproduktionsarbeiten und den mit ihnen einhergehenden geschlechtsspezifischen Ungleichheiten, andererseits aber auch eine ethische Haltung verbunden mit einer Abhängigkeit aufgrund der Gegebenheiten unseres Seins.

Ein wesentliches Merkmal des „Konzepts sozial-ökologische Regime" (Baerlocher 2013: 103) ist die „regulative Leitidee" (ebd.: 114 ff.), die die Wechselwirkungen zwischen Akteur_innen, dem Sozialen und der biophysischen Welt in eine normative Richtung beeinflusst. Indem wir vorschlagen, *Care* als regulative Leitidee in sozial-ökologischen Waldregimen zu verstehen, wollen wir nach Chancengleichheit und damit nach der sozialen Komponente der Nachhaltigkeit der Schweizer Waldbranche fragen. Dies soll im Hinblick auf die dargestellten Problemstellungen der Partizipation im Berufsfeld und in waldpolitischen Prozessen einerseits sowie der diversen und wachsenden Nutzungsinteressen der Öffentlichkeit auf der anderen Seite geschehen.

Natur- und Geschlechterverhältnisse in der nachhaltigen Waldgestaltung

Die eingangs erläuterten Problemstellungen bedürfen einer integrativen Perspektive, die sowohl die nachhaltigkeitsbezogene Fragestellung mit jener der Chancengleichheit in Bezug auf Geschlecht verbindet, als auch die Frage nach Geschlecht in Verbindung mit den Gesellschaft-Natur-Verhältnissen in den Blick nimmt. In der Genderforschung wurde dieses Verhältnis insbesondere im deutschsprachigen Raum lange Zeit nur marginal behandelt (vgl. Bauhardt 2011; Hummel/Schultz 2011; Schön et al. 2002). Zwar ist das Aufbrechen der Grenzzie-

hungen zwischen Mensch/Kultur und Natur, Geistes- und Naturwissenschaften, Biologie und Sozialem ein Anliegen vieler Gendertheoretiker_innen, die konkrete Auseinandersetzung mit gesellschaftlichen und damit vergeschlechtlichten Naturverhältnissen gehört aktuell jedoch nicht zum Forschungsmainstream in den *Gender Studies* (vgl. u.a. Bauhardt 2011, 2012). In den 1980er und 1990er Jahren hat sich die feministische Umweltforschung sowie der Ökofeminismus der Gesellschaft-Natur-Verhältnisse angenommen, in der Folge des *cultural turns* jedoch ist dieses Verhältnis schwierig geworden, und nur wenige Theoretiker_innen wagen den Spagat zwischen „dekonstruktivistischen Genderverständnissen und der Materialität von Natur und Umweltphänomenen" bzw. schaffen es, „das Mensch-Natur-Verhältnis als ein materielles Verhältnis zu begreifen, ohne den Diskurs über die größere Naturnähe von Frauen zu perpetuieren" (Bauhardt 2011: 199). Mit dem Boom des *Material Feminism* aus dem angelsächsischen Raum findet jedoch seit ein paar Jahren auch im deutschsprachigen Raum die Thematisierung von Materialität und Geschlecht immer häufiger Eingang in die *Gender Studies* (vgl. u.a. Bauhardt 2011, 2012).

Gender als soziale Kategorie oder Machtverhältnis ist auf der anderen Seite kaum Gegenstand der Nachhaltigkeitsforschung (vgl. Hofmeister et al. 2013; Schön et al. 2002). Zwar werden Geschlechterunterschiede in Form der Kategorien Mann und Frau in der empirischen Nachhaltigkeitsforschung berücksichtigt, jedoch befasst sie sich auf theoretischer Ebene nur marginal mit Geschlechterverhältnissen in den Gesellschaft-Natur-Beziehungen bzw. verknüpft die Theoriebildung für nachhaltige Entwicklung kaum mit geschlechtertheoretischen Überlegungen und Erkenntnissen (vgl. Schön et al. 2002: 4). Die meisten Berührungspunkte und Überschneidungen zwischen Nachhaltigkeit und *Gender* finden sich in der sozialen Ökologie bzw. der Wissenschaft von den gesellschaftlichen Naturverhältnissen (vgl. Hofmeister et al. 2013; Becker/Jahn 2006; Hummel/Schultz 2011).

Die Art und Weise, wie Wälder genutzt, gepflegt und bewahrt werden, widerspiegelt „die jeweiligen gesellschaftskulturellen Ansprüche und Werthaltungen gegenüber Natur und natürlichen Ressourcen" (Katz/Mayer 2006: 251). Katz und Mayer gehören zu den wenigen Forscher_innen, die den Zusammenhang zwischen Natur- und Geschlechterverhältnissen im Bereich der Waldpflege und Waldnutzung aufzeigen (vgl. u.a. Katz 2011; Katz/Mayer 2006; Hehn et al. 2010; Termeer 2008). Sie widmen sich der Thematik mittels einer Studie, welche sie im Bereich der Waldwirtschaft in Deutschland durchgeführt haben mit der Prämisse, dass Naturkonstruktionen „weder wert- noch geschlechterneutral gedeutet werden" können (Katz/Mayer 2006: 251). Die Autorinnen zeigen zwei Typen von Naturverständnissen auf: Natur als „ein gewinnmaximiertes Betreuungsobjekt" und Natur als „ein teilinstrumentalisiertes Mitgestaltungssubjekt" (ebd.: 244 ff.). Das erste Verständnis ist geprägt durch Attribute wie Naturbeherrschung, -kontrolle, -formbarkeit, -optimierung, Instrumentalisierung und Funktionalisierung – Begriffe, die kulturell „männlich" konnotiert sind (ebd.: 245). Beim zweiten Verständnis hingegen wird der Natur Autonomie in ihrer Entwicklung und Regenerationskraft zugestanden und sie bleibt fremd und unverständlich

bzw. „niemals in Gänze erfass- und erkennbar“ (ebd.). Bei der Waldpflege und -nutzung kommen mit diesem Naturverständnis eher kulturell „weiblich“ konnotierte Tätigkeiten und Eigenschaften wie Beobachten, Rücksichtnehmen, Kommunizieren und Reagieren anstatt Agieren zum Tragen, so die Autor_innen (ebd.). Beim Typ eins werden Natur und deren reproduktive Prozesse als unendlich und unentgeltlich vorausgesetzt, und in der Folge erhält der Wald seinen Wert als „kapitalmarktförmiges Warenprodukt“ (ebd.). Die Produktivität in der Reproduktivität bzw. die „(Re)Produktion“ (Biesecker/Hofmeister 2006: 247 ff.) erhält nur beim Typ zwei eine Bedeutung, indem Natur als Prozesskategorie verstanden wird (ebd.). Der Wald steht also in diesem Naturverständnis in dauerndem Prozess von Produktion und Reproduktion, wobei beide Seiten des Prozesses als gleichwertig und nicht voneinander trennbar gelten. Auf das Konzept (Re)Produktivität gehen wir im nächsten Kapitel noch genauer ein.

Wie die Vergesellschaftung und Vergeschlechtlichung der Naturverhältnisse genauer charakterisiert werden können in Bezug auf die Art und Weise wie in der Schweiz der Wald gestaltet und organisiert wird, ist bislang nicht untersucht worden. Das Zusammendenken von Chancengleichheitstheorien in Bezug auf Geschlecht und Nachhaltigkeitstheorien ist also noch zu leisten, um eine Basis für die Untersuchung des Umgangs mit der Ressource Wald zu schaffen. Zwar deutet der Artikel „Nachhaltigkeitsorientierte Waldwirtschaft und ‚kulturelle Weiblichkeit‘“ (Katz 2013) auf diese Verbindung hin, jedoch befasst sich die Autorin wie bereits in der vorgestellten Studie von Katz und Mayer (2006) mit geschlechtlich kodierten Naturverständnissen und den daraus folgenden Waldbewirtschaftungsweisen, die ökologisch nachhaltiger oder weniger nachhaltig sind (ebd.). Eine Auseinandersetzung auf Basis von Nachhaltigkeitstheorien, auch im Sinne von sozialer Nachhaltigkeit findet jedoch nicht statt.

Genau zu dieser Forschungslücke, wie sie sich in der Schnittstelle von Nachhaltigkeit und geschlechtsspezifischer Chancengleichheit am Beispiel des Gegenstands Wald präsentiert, möchten wir einen Beitrag leisten. Denn es bedarf u.E. jener integrativen Perspektive, um die dargestellten Probleme rund um die Partizipation im Berufsfeld wie auch in der Waldnutzung in deren Komplexität erkenntnisbringend zu erfassen.

Nachhaltigkeit und Chancengleichheit als integrative Perspektive

Im Sinne einer integrativen Perspektive wollen wir den Zusammenhang zwischen Chancengleichheit und dem gesellschaftlichen Umgang mit Natur bzw. den natürlichen Ressourcen über die beschriebenen Ansätze des sozial-ökologischen Regimes und der *Care*-Perspektive mit Blick auf die Schweizer Waldbranche thematisieren.

Sozial-ökologische Regime als Basis der Gesellschaft-Natur-Beziehungen

Die Nachhaltigkeitsforschung als problemorientierte Fachrichtung stellt drei wesentliche Typen von Wissen zur Verfügung: erstens Systemwissen der Gesellschaft-Natur-Beziehungen, zweitens normenorientiertes Wissen und drittens Transformationswissen, das zum Prozess in Richtung eines nachhaltigen guten Lebens der Menschen beitragen soll (vgl. Michelsen/Adomssent 2014). Die Gesellschaft-Natur-Verhältnisse, in unserem Fall das Verhältnis Menschen zum Wald, müssen also im Sinne der Nachhaltigkeitsforschung in ihrem theoretischen Fundament berücksichtigt werden. Hierzu wählen wir den Ansatz sozial-ökologischer Regime und gehen von regulierten Waldregimen aus, die durch gesellschaftliche „regulative Leitideen“ (Baerlocher 2013: 114 ff.) geprägt werden. Ein sozial-ökologisches Regime ist zunächst ein organisierter und koordinierter Handlungszusammenhang, der sich dadurch konstituiert, dass die kollektiven regulativen Absichten die biophysische Welt, in diesem Fall den Wald, in eine definierte Form bringen sollen. Dies mit der Besonderheit, dass in diesen sozial-ökologischen Regimen nicht allein die Umwelt geregelt wird, sondern auch soziale Strukturen und Handlungsweisen, sodass das Zusammenspiel sozialer Gefüge und der Zustand der biophysischen Welt eine beabsichtigte Gestalt annimmt (ebd.: 117). Diese zunächst deskriptive Perspektive erlaubt es, die gesellschaftlichen und individuellen Handlungen in Bezug auf die Ressource Wald zu erfassen und damit die gesellschaftlichen Naturverhältnisse für den Wald zu konkretisieren. In Abbildung 1 ist das Modell eines sozial-ökologischen Regimes mit seinen wesentlichen Charakteristika in Adaption unseres Gegenstands Wald dargestellt. Wald wird in diesem Strukturationskontext als eigendynamische Größe verstanden.

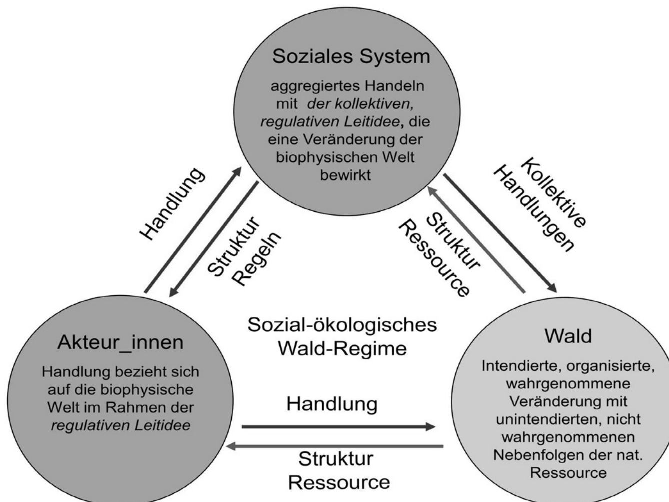

Abb. 1. Sozial-ökologisches Regime (nach Baerlocher 2013: 111)

Eines dieser wesentlichen Merkmale in der Wechselwirkung von Akteur_in, Sozialem und biophysischer Welt ist die regulative Leitidee, die dieses Gefüge in einer normativen Richtung beeinflusst, wobei sowohl zwischen Akteur_in und sozialem System als auch zwischen Akteur_in und der biophysischen Welt sowie dem sozialen System und der biophysischen Welt Wechselwirkungen aus Handlung und Struktur bestehen. Diese Wechselwirkungen anleitenden regulativen Leitideen sind kollektiv und drücken sich deshalb in Formen aggregierten Handelns aus. Die normative Spezifizierung der analytisch gedachten, sozial-ökologischen Wald-Regime kann über die Beschreibung verschiedener regulativer Leitideen erfolgen, z.B. für eine Region, eine bestimmte Form der sozialen Gruppierung oder eine bestimmte Zeit. Zum Beispiel: Das erste Forstpolizeigesetz von 1876 in der Schweiz ist unter der Leitidee verfasst, die Schweizer Bevölkerung vor Hochwasser zu schützen und dem Waldfrevel Einhalt zu gebieten (Baerlocher 2013: 180). Unter dieser regulativen Leitidee mussten sich Waldakteur_innen und die dazugehörige Politik auf eine Weise organisieren, die den Umgang mit der Ressource Wald per Gesetz regeln konnte. Zur damaligen Zeit gab es eine solche komplexe Regulation in Bezug auf den Wald noch nicht. Das gewählte Mittel der Umsetzung der Leitidee, nämlich das Gesetz und dessen Ausführungen, zog weitere Organisationsformen nach sich, z.B. den Einsatz von Bannwarten in Wäldern oder verschiedenen Verwaltungsstellen. Ebenso hatte die Agenda 21 – um ein aktuelleres Beispiel zu nennen – einen Einfluss auf die regulativen Leitideen in der Schweiz in Hinblick auf Partizipation in der Waldentwicklungsplanung und die Wahl der Mittel, die diese Leitidee unter der lokalen politischen Voraussetzung umsetzen. Die Mitwirkung von Interessensgruppen ist mittlerweile in vielen Kantonen in waldpolitischen Verordnungen festgehalten und wird bei der Waldentwicklungsplanung umgesetzt.

Durch die in den vorangehenden Kapiteln gemachten Ausführungen ist deutlich geworden, dass eine nachhaltige Waldgestaltung nicht zu trennen ist von sozialer Gerechtigkeit bzw. Chancengleichheitsaspekten und mit der Leitidee der Gleichstellung der Geschlechter in Zusammenhang steht. Mit anderen Worten: In der Weise, wie der Umgang mit und auch das Verständnis von der Natur von gesellschaftlichen Vorstellungen und Werten bzw. Wissen auf Seiten des Systems wie auch der Akteur_innen geprägt ist, sind im sozial-ökologischen Waldregime auch Geschlechterverhältnisse organisiert. Im Hinblick auf die aufgeworfene Problematik kann man dies mit der Regime-Perspektive so ausdrücken, dass in der Schweiz auch heute noch vorrangig männliche Akteure das sozial-ökologische Waldregime gestalten und organisieren und die Nachhaltigkeit des Forstwesens somit in Frage gestellt ist, was im Folgenden für die Produktivität in der forstlichen Arbeitswelt veranschaulicht werden soll.

Care/Achtsamkeit als regulative Leitidee sozial-ökologischer Waldregime

Der Mensch wie auch die nichtmenschliche Natur sind endliche, verletzliche Entitäten, die der (Vor)Sorge und Achtsamkeit bedürfen. Der nachhaltigen Entwicklung der Gesellschaft ist die Sorge für Mensch und Natur wie auch deren Beziehung heute und morgen inhärent. Ebenso wie die *SDGs* und *MDGs* gibt es schon frühere handlungsanweisende globalpolitische Dokumente, die auf dem Vorsorgeprinzip basieren und auf eine Idee des Sorgens und Kümmerns rekurrieren: Die *Johannesburg-Deklaration 2002* spricht von einer „humanen, gerechten und *fürsorgenden* globalen Gesellschaft" (Gottschlich 2016: 467 ff.); der Bericht der *Commission on Global Governance* 1995 sieht „die Bereitschaft, für andere *zu sorgen,* als eine der höchsten Werte zwischenmenschlichen Verhaltens" (ebd.) an und nicht zuletzt bezieht sich der Brundtland-Bericht mit „Our common future" auf die „Menschenfamilie" (ebd.), welche auf Verbundenheit und Abhängigkeit beruht, was wiederum *Fürsorge* als Handlung zur Folge hat. Auch bei Trontos *Care*-Verständnis lässt sich von der Fürsorge ein Handeln ableiten: Dieses „caring about" führt zum Handeln („taking care of", vgl. Tronto 1993: 106 ff.; 2013a: 154) – bspw. zum Handeln für nachhaltige Entwicklung. Oder wie es Morgan formuliert: „We care for others because this is what being sustainable means in an ecologically interdependent world" (Morgan 2010: 1863).

Betrachtet man das zurzeit herrschende Waldregime, sind unter der regulativen Leitidee der Nachhaltigkeit ganz verschiedene Teilbereiche, Ziele und Strategien auszumachen: Biodiversität, Schutz vor Naturgefahren, Flächenerhalt, Freizeit- und Erholungsnutzung, Schutz des Trinkwasserreservoirs und nicht zuletzt wirtschaftliche Holznutzung. Wobei zu erwähnen ist, dass die erklärten Hauptziele der Schweizer Waldpolitik die „nachhaltige Waldbewirtschaftung" sowie die „effiziente und innovative Wald- und Holzwirtschaft" sind (BAFU 2013: 13). Leitideen können verschiedenen Machtverhältnissen und Formen der Normgebung (Gesetz, Programme etc.) unterliegen und miteinander in Einklang stehen oder kollidieren. Letzteres ist bei der multifunktionalen Nutzung der Wälder nicht selten der Fall (vgl. Suda/Pukall 2014). Nachhaltigkeit kann also als eine übergeordnete Leitidee verstanden werden, die sich durch verschiedene Indikatoren ausdrücken lässt, die ihrerseits wiederum selbst zu Leitideen werden können.

Die dargestellten Problemstellungen in der Waldbranche lassen die Frage zu, ob das Nachhaltigkeitsverständnis des zurzeit herrschenden Waldregimes geprägt ist von einem Ungleichgewicht auf Seiten der sozialen Nachhaltigkeit, bzw. ob Gerechtigkeit nur marginal mit einbezogen oder gar außer Acht gelassen wird. Die Ziele der Waldpolitik 2020 (BAFU 2013) deuten darauf hin, wenn wir die soziale Dimension der Waldbewirtschaftung betrachten, die zwar als Teil der Nachhaltigkeitsstrategie gilt, jedoch bei der Ausarbeitung jener Ziele ungleich gegenüber insbesondere der ökonomischen Dimension gewichtet wird (ebd.: 14).

Care bzw. Sorge, Fürsorge, Achtsamkeit, Zuwendung, Pflege etc. gelten als essentieller Bestandteil unseres Seins wie auch des Für- und Miteinanders und

könnten im Sinne der Regime-Perspektive als eine oder zumindest Teil einer regulativen Leitidee verstanden werden. *Care* lässt sich analytisch vom Gerechtigkeitspostulat der Nachhaltigkeitsforschung ableiten. Gerechtigkeit gilt als eine zentrale Leitidee für die Transformation der Gesellschaft in Richtung einer nachhaltigen Entwicklung. Ob sich eine Gesellschaft nachhaltig entwickelt, kann u.a. anhand des Kriteriums inter- und intragenerationaler Gerechtigkeit beurteilt werden (vgl. u.a. Burger/Christen 2011). Das angestrebte Ziel in der nachhaltigen Entwicklung ist also Chancengleichheit hinsichtlich verschiedener sozialer Kategorien, wie bspw. Geschlecht, in Bezug auf den Zugang zu natürlichen Ressourcen. Auch in den *Gender Studies* ist Chancengleichheit ein wesentlicher Bezugspunkt, um Geschlechterverhältnisse zu analysieren. So ist das Ziel einer gendergerechten Gesellschaft, die Chancengleichheit zwischen den Geschlechtern – welche immer interdependent mit anderen sozialen Kategorien sind – in Bezug auf gesellschaftliche Teilhabe. Der Ausschluss von bzw. der erschwerte Zugang zu verschiedenen Gesellschaftsbereichen wie bspw. Politik oder Arbeit hat mit Machtverhältnissen zu tun, die sich an sozialen Kategorien orientieren und ihrerseits neue Machtverhältnisse hervorbringen. Ein in Bezug auf Geschlecht wesentliches Machtverhältnis ist die Verteilung von Arbeit – von produktiver und reproduktiver bzw. *Care*-Arbeit. Wie bereits erläutert ist *Care* im philosophischen Sinne ein umfassender Begriff. Warum sollen wir uns als Menschen um unsere Umwelt bzw. um andere Menschen und die Natur kümmern? Die ethische Voraussetzung für eine achtsame Zuwendung ist die Einsicht, dass der Mensch, überhaupt jedes Leben, ein verletzliches[2] und endliches Wesen und damit auch sorgebedürftig ist (Conradi 2010: 95). Aufgrund der eigenen Verfasstheit ist die moralische Konsequenz laut Gilligan und Tronto, dass wir uns von der Bedürftigkeit anderer Lebewesen, der Umwelt und dem Selbst nicht abwenden sollen. Oder wie es Conradi knapp und deutlich formuliert: „Zuwenden statt wegsehen" (ebd.).

Obwohl *Care* in allen Sphären – privat, beruflich, zivilgesellschaftlich – von Bedeutung ist, werden Sorgeverhältnisse dennoch meist der Privatsphäre zugewiesen. Zudem haben reproduktive Tätigkeiten ökonomisch und gesellschaftlich in der industriekapitalistischen Welt wenig Ansehen und Wert. In der feministisch ökologischen Ökonomik (vgl. u.a. Biesecker/Hofmeister 2006) werden *Care* und Natur hingegen auch als produktive und damit wertvolle Kräfte verstanden. Biesecker und Hofmeister haben den Begriff (Re)Produktivität eingeführt (ebd.). Damit ist eine Weise des Wirtschaftens gemeint, die Produktion und Reproduktion als gleichwertige und nicht voneinander trennbare Prozesse in Natur und Gesellschaft versteht. „Lebendige Tätigkeiten sind auch produktive Tätigkeiten" (Hofmeister 2013: 129). In der westlichen, industriekapitalistischen Gesellschaft werden Kultur und Natur, weiblich und männlich in hierarchisierender Weise dichotomisiert. In dieser Denkweise werden auch Produktions- und Reproduktionsarbeit voneinander getrennt. Dieses Trennungsverhältnis ist historisch vergeschlechtlicht, wobei aktuell reproduktive Tätigkeiten weiterhin feminisiert werden und es sind v.a. Frauen, Migrant_innen und Personen mit niedriger Bildung, die *Care*-Arbeit leisten (vgl. u.a. Winker 2015; Tronto 2013a, 2013b). Gabriele Winker bringt es aus einer kapitalismuskritischen Perspektive

folgendermaßen auf den Punkt, indem sie festhält, dass: „[…] die klassistische, heteronormative, rassistische und bodyistische […] Spaltung der Arbeitskräfte und deren differenzierte Zuordnung zu unterschiedlichen Positionen in Lohnarbeit und Reproduktionsarbeit eine wichtige Grundlage [ist], um die Kosten der Reproduktion der Arbeitskraft möglichst gering zu halten“ (Winker 2015: 141). Biesecker und Hofmeister wollen mit dem Begriff *(Re)Produktivität* das Ganze der Ökonomie, sprich das lebenssichernde Wirtschaften, in den Fokus stellen und nicht nur produktiv messbare Erzeugnisse.

Die nachhaltige Gestaltung des sozial-ökologischen Waldregimes hängt u.a. auch von sozial wirkmächtigen regulativen Leitideen in Bezug auf die Ressourcennutzung ab, die sich in der Umsetzung der Chancengleichheit ausdrücken. Mit anderen Worten: Wie und ob *Care* als Leitidee der Gestaltung des Waldes zugrunde liegt, wird Auswirkungen auf die Nachhaltigkeit des sozial-ökologischen Waldregimes haben. So haben bestimmte Naturverständnisse einen Einfluss auf die Waldgestaltung, -nutzung und -pflege wie auch auf deren Verhältnis zueinander (vgl. Katz/Mayer 2006). Wird die Waldnatur als Prozesskategorie verstanden, erhält die Reproduktivität einen Wert, der jenseits der Verwertungs- und Ausbeutungslogik liegt. Auch die soziale Reproduktivität bzw. Reproduktions- oder *Care*-Arbeit gilt als unentgeltliche und unendliche Ressource, die ausgebeutet werden kann. Diese Ausbeutung führt zu einer Krise des Reproduktiven: im Sozialen zur Krise der Reproduktionsarbeit und im Naturalen zur ökologischen Krise (Biesecker/Hofmeister 2006: 137). Dies bietet einen interessanten Anknüpfungspunkt, denn bisher hat sich der *Care*-Ansatz in den *Gender Studies* und den sozialpolitischen Theorien v.a. auf die Mensch-Mensch-Beziehung bezogen (vgl. Hofmeister/Mölders 2013: 2). Aber auch die Gesellschaft-Natur-Beziehungen können unter dem Aspekt der (Für-)Sorge betrachtet werden, wie durch Biesecker und Hofmeister ausgeführt wird. Auch Mölders und Hofmeister bringen Überlegungen zu den Gesellschaft-Natur-Beziehungen mit der *Care*-Perspektive zusammen, räumen jedoch gleich zu Beginn ein, dass das *Care*-Konzept der Mensch-Mensch-Beziehung nicht ohne weiteres auf die Beziehungen zwischen Menschen und Naturen übertragbar sei (Hofmeister/Mölders 2013: 3). Die Autorinnen gehen von einem *Care*-Begriff aus, bei dem „das Sich-in-Beziehung-Setzen zwischen Subjekten, verbunden mit Asymmetrien und Abhängigkeiten zwischen sorgenden und umsorgten Personen“ (ebd.) im Vordergrund steht. Sie setzen beim *Care*-Begriff den Fokus auf Sorgen und Kümmern und stellen ihn damit dem Begriff des *Vorsorgenden Wirtschaftens* gegenüber, welcher die Grundlage des Konzepts der (Re)Produktivität bildet. Wir stützen uns jedoch auf einen breiteren *Care*-Begriff, wie ihn die *Care*-Ethikerinnen Conradi und Tronto prägten: *Care* erstens als ethische Haltung aufgrund der Abhängigkeit des eigenen Seins sowie *Care* zweitens als Handeln, welches das Selbst und die Umwelt bestmöglich aufrechterhält, fortsetzt und instand setzt. Zudem begreifen wir *Vorsorgendes Wirtschaften* als Teil von *Care*.[3] Übertragen auf den Wald würde dies bedeuten, dass die reproduktiven Tätigkeiten der Waldnatur sowie der Waldarbeiter_innen zusammen mit den produktiven, kapitalistisch verwertbaren Prozessen der Holzproduktion als gleichwertig und nicht voneinander trennbar angesehen würden. Die (Re)Produktion des

Waldes umfasst in dieser Logik alles, was den Erhalt, das Fortbestehen und Instandsetzen der Waldnatur, ihrer Leistungen und die damit verbundenen Tätigkeiten auf Seiten der Natur wie auch der Menschen betrifft.

Auf die Frage hin, welcher Werteverschiebungen und Veränderungen in Bezug auf mögliche Tätigkeiten es bedarf, damit die Waldberufe sowie die Waldgestaltung Chancengleichheit gerecht werden und wie sich dies mit der Idee der (Re)Produktivität verbinden ließe, ist ein genauerer Blick auf Conradis Verständnis von *Care*-Interaktionen interessant (vgl. Conradi 2010: 95 ff.). *Care* wird dabei in Unterkategorien unterteilt bzw. differenziert. Conradi entwickelt „zwölf Elemente einer philosophischen Ethik der Achtsamkeit“ (ebd.), welche nach ihrem Verständnis *Care*-Interaktionen kennzeichnen sollen. Sie arbeitet also mit einem normativen Ansatz, der sich aus der *Tugendethik* ableitet (vgl. ebd.: 94). *Care* bedeutet für sie menschliche Interaktionen. Dieses Verständnis könnte man im Sinne von *Care* als Leitidee sozial-ökologischer Regime auf Mensch-Umwelt bzw. Gesellschaft-Natur-Beziehungen erweitern, wie bereits oben vorgeschlagen. Übertragen auf die Mensch-Wald-Beziehung bzw. die Beziehung zwischen den Forstleuten und dem Wald könnten Conradis *Care*-Elemente folgendermaßen lauten (weiterentwickelt nach Conradi 2010): Waldpflege ist ein fortdauernder Prozess, für den Verlässlichkeit nötig ist. Durch die achtsame Zuwendung der Forstleute entsteht eine Beziehung zum Wald, die gepflegt und intensiviert wird. Die Forstleute erfüllen die Bedürfnisse des Waldes, indem sie seine Entwicklung unterstützen, sich auf die Situation des Waldes einlassen, den Wald mit Aufmerksamkeit pflegen, auf seine Antworten auf die Eingriffe ‚hören‘ und daraus Konsequenzen ziehen. Sie setzen sich für die Rechte und Würde ein, die dem Wald zustehen. Aufgrund achtsamer Zuwendung sollen die Forstleute aktiv in das Wachstum und die Entwicklung des Waldes eingreifen, jedoch ohne eine Gegenleistung desselben zu erwarten. (Dieser Punkt ist sicher kritisch zu betrachten in Bezug auf die Holzproduktion). Dafür brauchen sie Kompetenz und müssen Verantwortung übernehmen. Sie erledigen Waldarbeiten mit den nötigen Sicherheitsmaßnahmen und so, dass sie sich nicht in Gefahr bringen. Der Wald, die Waldpflege sowie die Personen, die sie ausüben, sollen wertgeschätzt werden und die Forstleute erkennen und befördern Möglichkeiten der eigenen Ermutigung im Rahmen der Waldpflege. Das Ergebnis der Zuwendung, Hilfe und Unterstützung ist selbstbestimmtes Handeln der Forstleute.

Die hier zusammengefassten *Care*-Elemente beschreiben Aspekte der Politisierung und beinhalten zum Teil auch normative Vorstellungen, die sich wie bereits erwähnt durch Conradis Verortung in der *Tugendethik* ergeben. Um über diese Perspektive hinaus zu kommen, ist es notwendig, empirisch zu prüfen, welchen Stellenwert die reproduktiven Tätigkeiten der Waldnatur sowie der Waldarbeiter_innen in der Schweizer Forstbranche haben und welche Auswirkungen die Anerkennung eines handlungsanweisenden Wertes wie *Care* im Zusammenhang mit der Waldarbeit auf die Branche hätte. Als theoretischer Hintergrund würden der ‚Subjektstatus’ der Natur sowie die Einsicht, dass die Natur, das gesellschaftliche System sowie die/der Akteur_in oder die/der Förster_in eine Einheit bilden – um mit den Worten des sozial-ökologischen Regimes

zu sprechen – im Rahmen einer empirischen Erhebung eine wesentliche Rolle spielen.

Care und Partizipation in Waldentwicklungsprozessen

Die Frage nach Chancengleichheit ist nicht nur im Hinblick auf Partizipation im Berufsfeld, sondern auch im Bereich der Mitwirkung an Waldentwicklungsprozessen wichtig. Auf Seiten der Waldpolitik müssen die verschiedenen Nutzungsinteressen im Zusammenhang mit den Waldfunktionen, wie weiter oben erläutert, balanciert werden. Spricht man in der Nachhaltigkeitsforschung von Nutzungsinteressen, geht es gleichzeitig um die Frage nach Chancengleichheit in Bezug auf den Zugang zu einer natürlichen Ressource sowie um Teilhabe an Gestaltungsprozessen jener Ressource.

Wir möchten nun Chancengleichheit in der Mitwirkung an Waldentwicklungsprozessen unter dem Aspekt *Care* beleuchten. Dies unter der Prämisse, dass politische Partizipation mit *Care*-Verhältnissen verknüpft ist. Partizipation kann, wie oben angesprochen, eine Leitidee für die Transformation der Gesellschaft in Richtung nachhaltige Entwicklung, aber auch eine Möglichkeit der Umsetzung der *Care*-Leitidee sein. Spätestens seit der Institutionalisierung der *Agenda 21* auf globalpolitischer Ebene gilt die Mitwirkung von *stakeholdern* wie auch der Öffentlichkeit als essentieller Bestandteil der Nachhaltigkeitsgovernance. Auch in der Waldpolitik hat Partizipation einen hohen Stellenwert. Laut der im Rahmen der Institutionalisierung der *Agenda 21* entwickelten nationalen forstpolitischen Programme (NFPs), welche in einer Resolution der Konferenz zum Schutz der Wälder Europas (MCPFE 2003) enthalten sind, die u.a. auch die Schweiz unterzeichnet hat, soll die Waldnutzung sowie die Balancierung der verschiedenen Nutzungsinteressen nachhaltig sein (vgl. Zingerli/Zimmermann 2006). Der Schweizer Wald soll sich also nachhaltig entwickeln, was laut der genannten Resolution auch Partizipation bzw. die sozio-ökonomischen Waldfunktionen beinhaltet. Umsetzungsstudien zu NFPs zeigen aber, dass es oft bei der Rhetorik bleibt, und dass sich am Ende starke (ökonomische) Waldinteressen durchsetzen (ebd.).

Beide Postulate, Partizipation und Chancengleichheit haben viel mit den politischen Strukturen und dem vorherrschenden Demokratieverständnis zu tun, denn Mitwirkung kann ganz unterschiedlich verstanden und vollzogen werden. Das Konzept der „Care-Demokratie“ von Joan Tronto (2013a) sowie die Idee der „Care Revolution“ von Gabriele Winker (2015) sollen helfen, partizipative Prozesse mit *Care* als Leitidee zu verknüpfen und damit eine Perspektive für eine nachhaltige und damit chancengleiche Waldgestaltung zu eröffnen. Mit „Moral Boundaries. A Political Argument for an Ethic of Care” hat Joan Tronto (1993) einen wesentlichen Beitrag zur politischen Auseinandersetzung mit *Care* geleistet. Zwanzig Jahre später prägte sie den Begriff „Caring Democracy“ (Tronto 2013a). Tronto unterscheidet fünf verschiedene Phasen von *Care*: „Caring About”, „Taking Care of” oder „Caring for”, „Care-giving”, „Care-receiving” und als letzte Phase, die vier ersten Phasen vereinende „Caring with“

(Tronto 1993: 106 ff., 2013a: 154).[4] Ein essentieller Bestandteil einer *Care*-Demokratie laut Tronto ist nicht, Bürger_innen eine Stimme zu geben im Sinne von Wahl- und Stimmrecht, sondern sie ganz konkret über die Verteilung von *Care*-Verantwortlichkeiten mitbestimmen zu lassen. Partizipation ist also wesentlicher Bestandteil von Trontos Demokratieverständnis. Dieses Verständnis hat außerdem zur Folge, dass Chancengleichheit nicht aufgrund von Autonomie zum Bürger_innenrecht wird, sondern vielmehr aufgrund der Verletzlichkeit jedes und jeder Einzelnen sowie aufgrund der Tatsache, dass alle im Laufe ihres Lebens *care-receivers* und *care-givers* sind (ebd.: 6). Wenn wir Menschen bzw. Mitglieder einer Gesellschaft als verletzliche, endliche Wesen begreifen, die sich immer wieder in *Care*-Verhältnissen befinden bzw. deren Leben fortwährend – mal mehr, mal weniger – durch Sorge um andere, die Umwelt und sich selbst geprägt sind, ist die moralische Konsequenz, Sorgetätigkeiten wie auch -bedürfnisse aufzuwerten und sie als unverzichtbar für die Gesellschaft anzuerkennen: „Only if we understand care as a political idea will we be able to change its status of those who do caring work in our culture" (Tronto 1993: 157). Für Tronto würden wir zu *better citizens* in einer Demokratie, wenn Qualitäten wie Achtsamkeit und Verantwortung nicht nur auf *Care*-Aktivitäten beschränkt, sondern unsere bürgerschaftlichen Aktivitäten anleiten würden. Oder anders ausgedrückt: *Care* kann zum Demokratisierungsprozess des politischen Lebens beitragen (ebd.: 167ff.).

Auch Gabriele Winker verfolgt einen demokratiepolitischen Ansatz mit ihrem *Care*-Verständnis, welcher stark von Kapitalismuskritik geprägt ist. Das Ziel der „Care Revolution" (Winker 2015) ist „eine an menschlichen Bedürfnissen, insbesondere an der Sorge füreinander, orientierte, radikal demokratisch gestaltete Gesellschaft" (ebd.: 143). Sie begreift diese Revolution als eine „politische Transformationsstrategie" (ebd.), die an die feministischen politischen Erkenntnisse anknüpft. Dabei wird *Care*-Arbeit als grundlegend ins Zentrum gestellt und „als Bezugspunkt der Gesellschaftsveränderung gewählt" (ebd.). Dies setzt einen Perspektivenwechsel voraus, nach dem „nicht weiter die Profitmaximierung, sondern stattdessen die Verwirklichung menschlicher Bedürfnisse ins Zentrum gesellschaftlichen und damit auch ökonomischen Handelns" (ebd.: 144) gestellt wird, was sich nur in demokratischen Prozessen gestalten lässt. Winker beschreibt *Care* als derart grundlegend, dass erst dann, wenn *Care*-Arbeiten demokratisch verhandelt und geregelt werden, Menschen in *Care*-Verhältnissen politisch aktiv sein können (vgl. ebd.: 148).

Waldpolitik und insbesondere die Mitwirkung an der Waldentwicklung sind heute eine Form von bürgerschaftlichen Aktivitäten in der Schweiz. Knüpft man nun an Überlegungen zur *Care*-Demokratie und *Care*-Revolution an, heißt das, dass Partizipationsprozesse moralischer, gerechter und damit auch chancengleicher wären, würden Werte wie Achtsamkeit, Sorge und Verantwortung diese anleiten. Doch wie sieht die Mitwirkung in der Waldgestaltung und -entwicklung in der Schweiz zurzeit aus? In den Richtlinien und Prozessabläufen über die Waldplanung und Waldentwicklung des Bundes wie auch in einigen kantonalen Waldverordnungen ist die Mitwirkung von Interessensgruppen und der Bevölkerung explizit festgehalten. Partizipation ist also ein wichtiger

Bestandteil der Waldpolitik in der Schweiz. Die Frage ist jedoch: Wer partizipiert und wie? Bisherige Analysen waldpolitischer Dokumente sowie des Partizipationsprozesses eines regionalen Waldentwicklungsplans zeigen, dass Expert_innen, organisierte Institutionen (Vereine, Verbände) und interessierte organisierte Gruppen, also klassische *stakeholder* im Fokus stehen (vgl. BUWAL 2004; BAFU 2013; Hunziker et al. 2012). Wer fehlt? Es sind unorganisierte Freizeit- und Erholungsnutzende, Kinder und Jugendliche, alte Menschen, Menschen, die nicht der weißen Mehrheitsgesellschaft angehören wie bspw. Migrant_innen, und nicht zuletzt Frauen als Berufsvertreterinnen der Waldbranche.[5] Mit anderen Worten fehlen in besonderem Maße „*Care*-Givers" und „*Care*-Receivers", sprich Menschen, die der Sorge bedürfen oder sich um andere kümmern in Form von Erziehung, Pflege und Betreuung. Es ist bekannt, dass sich organisierte Interessen schneller und besser Gehör verschaffen können (vgl. u.a. Walk 2011). Das bedeutet nicht, dass Unorganisierte zwangsläufig weniger interessiert sind, sondern es fehlen ihnen meist Ressourcen wie Zeit, Geld und Macht (bestimmte Position in der beruflichen oder politischen Hierarchie, Mitbestimmungsrecht etc.), um sich zu organisieren und ihren Interessen Ausdruck zu verleihen: „Menschen in permanent unsicheren und belastenden Lebensbedingungen bleibt häufig kaum Kraft, neben der Bewältigung des Alltags noch Auseinandersetzungen zu führen und sich zu organisieren" (Winker 2015: 148). Dieser Mangel an Ressourcen kann also u.a. auf die Wirkungsweisen von *Care*-Verhältnissen zurückzuführen sein. Wichtig ist zu unterstreichen, dass trotz des breiten Verständnisses des *Care*-Begriffs nicht alle Menschen immer und immer in gleichem Masse in *Care*-Verhältnissen stehen und sich davon abhängig die Frage von Ressourcen und Macht stellt. Wir gehen also davon aus, dass Sorgeverpflichtungen bzw. Sorgebedürftigkeit zu Ausschlüssen in Bezug auf gesellschaftliche (und damit auch auf politische) Teilhabe und Mitwirkung führen. Um einen chancengleichen und in Bezug auf mögliche Interessen ausgewogenen Partizipationsprozess zu gewährleisten, könnte – so unser Vorschlag – die Bedeutung von *Care*-Verhältnissen bzw. *Care* als regulative Leitidee in Waldplanungs- und Waldgestaltungsprozesse miteinbezogen werden. Dies bedarf freilich eines größeren gesellschaftlichen Wandels hinsichtlich der Anerkennung von *Care* – eben bspw. eine *Care*-Revolution – sowie des Einbezugs von *Care*-Verhältnissen in die Gestaltung von Lohnarbeitszeiten, Schule, Steuern, Verständnis von Staatsbürger_innenschaft etc. Jedoch ließen sich bereits heute kleinere Veränderungen in Partizipationsprozessen umsetzen, wie bspw. *care*-freundliche Zeiten von Mitwirkungsworkshops, Kinderbetreuung vor Ort, Quoten für Menschen in *Care*-Verhältnissen und nicht zuletzt ein bewusster Einbezug von unorganisierten Waldnutzer_innen.

Im Sinne unserer Überlegungen setzen wir voraus, dass die Waldgestaltung dann nachhaltig ist, wenn neben ökologischen und wirtschaftlichen Aspekten gleichermaßen auch soziale Aspekte berücksichtigt werden und damit Chancengleichheit als Kriterium von Nachhaltigkeit vorausgesetzt wird. Die Verbindung der Theorie sozial-ökologischer Regime mit dem *Care*-Ansatz ermöglicht uns, die Problemstellungen in Bezug auf die Repräsentation in den Waldberufen auf der

einen Seite und Partizipation in den Waldentwicklungsprozessen sowie stattfindender Wandel in der Waldbranche auf der anderen folgendermaßen auf den Punkt zu bringen: Der Zugang zu den Waldberufen muss einladender und machbarer auf diejenigen Menschen wirken, die sich nicht mit dem vorherrschenden konservativen und traditionalistischen Männerbund identifizieren (können) und sich nicht auf die auf gewinnmaximierter Waldnutzung beruhenden Tätigkeiten beschränken möchten. Dafür bedarf es eines Umdenkens und Umstrukturierens des Naturverständnisses und der damit verbundenen Tätigkeiten in der Waldarbeit, aber auch der Wertigkeit von *Care*-Tätigkeiten. Zweitens sollte die Waldgestaltung in der Balancierung der Nutzungsinteressen einer zunehmenden diversen Freizeit- und Erholungsnutzung des Waldes gerecht werden, indem die Nutzer_innen chancengleich in Mitwirkungsprozesse einbezogen werden. Hierfür ist die *Care*-Perspektive hilfreich, da sie *care-givers* und *care-receivers* sowie die unorganisierte Öffentlichkeit mit ihren Nutzungsinteressen einbezieht. Oder nochmals anders ausgedrückt: Die Situation der Schweizer sozial-ökologischen Waldregime zeigt, dass es Defizite hinsichtlich Chancengleichheit auf der Ebene der Waldberufe wie auch der Waldentwicklungsprozesse gibt. *Care* als regulative und moralisch verpflichtende Leitidee könnte Chancenungleichheit durch die Veränderung der Tätigkeiten und Bedeutungszuschreibung der forstlichen Arbeit entgegen wirken und zudem in Verbindung mit Partizipation zum Demokratisierungsprozess in der politischen Gestaltung beitragen. Dies würde sowohl Auswirkungen auf das Nachhaltigkeitsverständnis des Schweizer Waldwesens als auch auf dessen Nachhaltigkeit an sich haben.

Ausblick:
Ist nachhaltige Waldarbeit Care-Arbeit? Ist Care-Arbeit nachhaltige Waldarbeit?

Dass soziale Gerechtigkeitsaspekte in Bereichen der Ökosystemgestaltung vernachlässigt werden, diese aber zwingend Teil einer nachhaltigen Entwicklung sind, ist ein bekanntes Problem (vgl. Burger/Christen 2011). Nicht zuletzt sind auch Ansätze wie das *Drei-Säulen-Modell*[6] Ursache für die Aufrechterhaltung einer Trennung sozialer und ökologischer Aspekte in der Umsetzung nachhaltiger Entwicklung (vgl. ebd.). In den hier theoretisch aufgearbeiteten Ansätzen haben wir dem entgegen eine integrative Perspektive auf den Umgang mit der natürlichen Ressource Wald eingenommen. Auf der einen Seite haben wir von einem sozial-ökologischen Ansatz her argumentiert, der soziale und ökologische Phänomene als Basis für Nachhaltigkeit integriert, auf der anderen Seite wurden gesellschaftliche Leitideen des aktuellen sozial-ökologischen Waldregimes in der Schweiz verknüpft, um aufzuzeigen, dass Chancengleichheit und *Care* eng mit der (Für-)Sorge für die Ressource Wald zusammenhängen, jedoch das aktuelle Waldregime sehr stark auf eine wirtschaftlich verwertbare Produktion ausgerichtet ist. Die fehlenden sozialen Gerechtigkeitskriterien haben wir unter theoretischer Herleitung als ein Manko in der nachhaltigen Waldentwicklung herausgearbeitet. Ausgehend von dieser integrativen Perspektive gälte es nun in einem weiteren Schritt empirisch zu überprüfen, ob und inwiefern *Care* als regu-

lative Leitidee bereits doch oder ansatzweise in waldpolitischen Dokumenten zu finden ist oder im aktuellen Waldregime bereits umgesetzt wird. Dabei wäre es interessant, auf Conradis *Care*-Verständnis, welches sie im Zusammenhang mit *Care*-Interaktionen beschreibt, zurückzugreifen und diese auf die Interaktionen zwischen Forstleuten und dem Wald zu übertragen. Abgeleitet von der Theorie „Care als regulative Leitidee sozial-ökologischer Regime" würden wir folgende Hypothese für eine empirische Arbeit formulieren: Waldberufe sind in vieler Hinsicht wie Pflegeberufe. Mit anderen Worten: Ein großer Teil der heute anfallenden Waldarbeit ist *Care*-Arbeit, insbesondere dann, wenn sie sich anstatt an Holzproduktion vermehrt an Tätigkeiten, die mit Sorge verbunden sind wie z.B. Waldpflege, Waldpädagogik und Waldgestaltung als Freizeit- und Erholungsraum orientiert. Das Image des Berufes spiegelt aber immer noch ein anderes Verständnis wider. Aufgrund dieses Sachverhalts sowie unserer theoretischen Überlegungen gibt es gute Gründe anzunehmen, dass die Forstbranche attraktiver für Menschen mit mehr Affinität zu Sorge- und Pflegearbeiten werden würde, sofern das Image reflektiert und die Handlungsfelder je nach dem angepasst würden. Dies wiederum würde die Aufmerksamkeit der Branche gegenüber anderen in *Care*-Verhältnissen stärken und die Interessen der unorganisierten Waldnutzer_innen bekäme mehr Gewicht.

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Anmerkungen

1 Bericht mit dem Titel „Our Common Future", 1987 von der Weltkommission für Umwelt und Entwicklung der Vereinten Nationen („Brundtland-Kommission") veröffentlicht. Die damalige norwegische Ministerpräsidentin Gro Harlem Brundtland hatte den Vorsitz in dieser Kommission. Der Bericht ist bekannt für seine Definition des Begriffs Nachhaltige Entwicklung. <https://www.nachhaltigkeit.info/artikel/brundtland_report_563.htm> (Zugriff am 15.07.2016).

2 Diese Verletzlichkeit hängt nicht nur von Alter und Gesundheit, sondern auch zu einem großen Masse von der Positionierung in der Gesellschaft ab. Eine geflüchtete bzw. vertriebene Person kann trotz guter Gesundheit und Selbstständigkeit sehr verletzlich sein, je nach dem in welchem Staat sie sich bspw. gerade befindet. Die Artikel von Katharina Nowak sowie Anna Kaijser und Annica Kronsell in diesem Band gehen näher auf die Interdependenz verschiedener sozialer Kategorien und das Konzept von Intersektionalität ein.

3 Wir gehen davon aus, dass die Autorinnen Biesecker, Hofmeister und Mölders ihr Konzept der (Re)Produktivität bewusst nicht unter Care subsummieren, da die Verwendung des Care-Begriffs die sozialpolitische Geschichte bzw. feministischen Bewegungen rund um die Frage der Reproduktionsarbeit verschleiern kann. Oder wie es Frigga Haug formuliert: Care meint alles und nichts und hat „als Schmelztiegel ganz unterschiedlicher Bedeutungen, von Nothilfe und Fürsorge von oben über die allgemeine Haltung mitmenschlicher Tugend und helfende Liebe bis zur notwendigen Versorgung von Kindern Alten im Haushalt usw., Karriere gemacht." (Haug 2013: 87) Wir setzen uns dieser (auch berechtigten) Kritik gerne aus und werden zukünftig die Verwendung des Care-Begriffs noch genauer reflektieren.

4 „Caring about" erfordert Achtsamkeit gegenüber Bedürfnissen sowie das Erkennen, dass diesen Bedürfnissen begegnet werden soll. „Taking care of" oder „caring for" bedeutet das Übernehmen von Verantwortung für die erkannten Bedürfnisse sowie die Erkenntnis, im Sinne dieser Bedürfnisse tätig werden zu können. „Care-giving" beschreibt den aktiven, physischen Prozess der Sorge bzw. die Interaktion mit der Sorge empfangenden Person oder des Gegenstandes. Dieser Prozess benötigt Kompetenz, den Bedürfnissen tatsächlich Folge zu leisten. „Care-receiving" beschreibt die Phase des Annehmens der Zuwendung. Die ver- und umsorgten Personen oder Gegenstände reagieren auf die Care-Aktivität (Tronto 2013b: 5ff.). „Caring with" als letzte Phase ist dann erreicht, wenn Bürger_innen einer Care-Demokratie erwarten können, dass die ersten vier Care-Phasen einen wiederkehrenden Prozess bedeuten, auf den sie sich verlassen können und wenn sie gleichzeitig zur Einsicht gelangen, dass Care-Verantwortlichkeiten und -Bedürfnisse nur solidarisch, also zusammen mit anderen demokratisch zu bewältigen sind (Tronto 2013b: 5).

5 Zur Interdependenz sozialer Kategorien und zum Konzept der Intersektionalität siehe die Artikel von Anna Kaijser und Annica Kronsell sowie Katharina Nowak in diesem Band.

6 Das Drei-Säulen-Modell beschreibt die gleichzeitige und gleichberechtigte Umsetzung von ökologischen, sozialen und ökonomischen Zielen in der nachhaltigen Entwicklung.

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Anna Kaijser/Annica Kronsell

Who Gets to Know about Nature?

Biodiversity and Ecosystem Services through an Intersectional Lens

Abstract: Intersectionality originates in feminist critical theory as a perspective for analyzing categories of difference and relations of power. In this article we explore how the categories of 'human' and 'nature' are made meaningful in relation to each other and assemble an intersectional analytical lens drawing on theories from the fields of ecofeminism, critical animal studies and posthumanism. A common theme in these fields is the dualistic construction and representation of humans and nature as separate entities and we study how such dualism plays out in relation to issues of knowledge and subjectivity. The analytical lens is engaged to explore the concepts of biodiversity and eco-system services, which have emerged as keywords for conceptualizing human-nature relations in environmental research and policy. We assess debates around the concepts of biodiversity and eco-system services in scholarly publications, and how these reflect, reinforce, or contest dualistic and hierarchical constructions of human-nature relations. We look for principal tendencies, as well as challenging perspectives and voices.

Keywords: ecofeminism; critical animal studies; posthumanism; dualistic construction; knowledge.

Who Gets to Know about Nature?
Biodiversität und Ökosystemdienstleistungen in einem intersektionalen Blickwinkel

Zusammenfassung: Intersektionalität knüpft als Perspektive an die kritisch feministische Theorie an, um Differenzkategorien und dynamische Machtverhältnisse zu analysieren. In dem vorliegenden Aufsatz untersuchen wir, wie die Kategorien ‚Mensch' und ‚Natur' in Verbindung zu einander Bedeutung erlangen und entwickeln einen intersektional analytischen Blickwinkel, gestützt auf Theorien aus den Bereichen Ökofeminismus, critical animal studies und Posthumanismus. Eine weitverbreitete Thematik in all diesen Feldern ist die dualistische Konstruktion und Repräsentation von Menschen und Natur als separate Entitäten und wir untersuchen die Frage danach, wie solche Dualismen in Bezug auf Wissen und Subjektivität auftreten. Mit Hilfe des intersektionalen Blickwinkels analysieren wir Konzepte von Biodiversität und Ökosystemdienstleistungen, die sich als Schlüsselbegriffe der Konzeptualisierung von Mensch-Natur-Beziehungen in Umweltforschung und Politik herausgebildet haben. Hierzu werten wir die Debatten um die Konzepte von Biodiversität und Ökosystemdienstleistung in akademischen Publikationen aus und erläutern, wie dualistische und hierarchische Konstruktionen von Mensch-Natur-Beziehungen darin gespiegelt, bekräftigt oder bestritten werden. Dabei suchen wir nach den prominentesten Tendenzen ebenso wie nach kritischen Perspektiven und Stimmen.

Schlagwörter: Ökofeminismus; critical animal studies; Posthumanismus; dualistische Konstruktion; Wissen.

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Introduction

Feminist research and activism has a long tradition of destabilizing ideas of universal knowledge and objectivity, and of questioning whose voices are privileged over others as well as of showing how claims to knowledge and legitimacy are embedded in dynamic power relations linked to gender and other social categorizations. Intersectionality has been developed within feminist critical theory as an analytical tool for exploring how relations of power take form and play out on all levels of interaction, from individual encounters to societal structures. Intersectional analysis explores how categorizations – including gender, class, race, age and sexual orientation – are entangled and co-constructed, and form the basis for complex and shifting relations of dominance and marginalization. So far, intersectional research has focused on relations among humans with little attention to environmental issues and relations involving non-humans. Previously we suggested that intersectionality might be engaged in studies of climate change issues (Kaijser/Kronsell 2014) and here we draw on this work to discuss how intersectional analysis may be extended to also include human-nature relations.

Intersectionality is not a theory, it is an analytical perspective or a lens through which a phenomenon may be studied, engaging theories in relevant areas of research. In this article, we have chosen to draw on three fields that aspire to analyze human-nature relations: ecofeminism, critical animal studies, and posthumanism. After an introduction to intersectionality, we move on to introduce and discuss these theoretical fields. We identify a critical stance towards processes of dualistic construction in human-nature relations as a common theme. This theme – dualistic constructions – informs the intersectional analytical lens that we develop and we explore it by looking at constructions and representations of knowledge and subjectivity in relation to the concepts *biodiversity* and *ecosystem services*.

The UN Convention on Biological Diversity defines biodiversity – or biological diversity – as "…the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (UN CBD 1992). Biodiversity refers to all existing living organisms, including all animals and plants. Thus defined, we suggest that biodiversity is a concept that has potential to be inclusive of intersectional categories and relations, as the emphasis is on variability among living organisms, on various categories of species and their relationships with each other. The concept ecosystem services has gained popularity as a way to 'operationalize' biodiversity, and is defined as the benefits humans receive from biodiversity (cf. MEA 2005).

In the past decades the two concepts, biodiversity and ecosystem services, have spread from scientific to policy literature to become keywords in both science and

policy discourse on environmental issues. This motivates our pick of scholarly publications for review. In our analysis of publications concerned with the two concepts we used what we term an *overarching* and a *profound* intersectional analysis. The overarching analysis which encompassed a larger amount of material in order to show wider tendencies of representation, difference and/or injustice, asking questions like 'how often?' or 'how many?' served as the base for a profound analysis that covers a narrower material and asks questions regarding meaning making to understand, for instance, how and why particular subjectivities and perspectives gain privilege over others. These modes of analysis complement each other and have resulted in a selection of articles which are discussed using the themes drawn from the theoretical fields of ecofeminism, critical animal studies, and posthumanism.

We found that dualistic constructions of human-nature relations were predominant in the material and elaborate on this in the analysis. Exploring representations of knowledges and subjectivities, we found that a particular notion of universal scientific knowledge, focused on measuring and mapping nature, and associated with supposedly neutral and objective scientist knowers, was privileged. While alternative kinds of knowledge and different knowing subjects were sometimes recognized and called for, these were represented as 'other', at best complementing and informing the dominant scientific understanding.

Intersectional Approaches to Environmental Matters

Intersectionality is grounded in feminist theorization of power and knowledge production, as a way to understand and shed light on how complex dynamics of power emerge and interact. Davis (2008: 68) defines intersectionality as "the interaction between gender, race and other categories of difference in individual lives, social practices, institutional arrangements, and cultural ideologies and the outcomes of these interactions in terms of power". The underlying ideas are not new. Feminist scholarship and activism have placed gender in relation to other structures of domination long before the concept of intersectionality was introduced (Brah/Phoenix 2004; Lykke 2005). Crenshaw (1991) who is accredited with first using the term, did so with sharp criticism of what she perceived as a white, middle class woman's perspective dominating the mainstream feminist movement. Anti-racist and postcolonial commentary continues to vitalize feminist studies and, together with queer, masculinity and disability studies, enriches the understanding of how norms are constructed and power relations interact. Intersectionality functions as a common platform for feminist theorizing (Lykke 2005; see also Davies 2008).

While intersectionality emerged within anti-racist feminism, related ideas have developed within various strands of feminist theorizing, including ecofeminism. The strands have developed in parallel but largely as divergent paths. Postcolonial and poststructural feminism have generally advanced a humanist focus

on intersections of, for instance, race, class and gender, while ecofeminism, animal studies and posthumanist feminism – on which we elaborate further below – have addressed human-nature power relations, particularly questioning human dominance and the idea of humans as exceptional, separated from nature and the single subject of knowledge and agency.

Intersections of power can be found in all relations, on all levels from institutional practices to individual actions (de los Reyes/Mulinari 2005). Social categorizations are co-constituted in relation to each other (e.g. working-class man, indigenous woman), and serve as grounds for inclusion and exclusion, and for defining what is to be considered normal or deviant. Yet, these categories are not necessarily explicit: there is a need to look for invisibilities and silences as intersectional categories are not necessarily referred to because they reflect underlying and implicit power patterns often depicted as 'natural' or 'given' differences (Winker/Degele 2011). Intersectionality is not by default associated with any specific methodology but attempts have been made at outlining methods for applying intersectionality empirically (see e.g. McCall 2001; Winker/Degele 2011). For further analysis, an intersectional approach – not being in itself a theory – relies on a range of social theories about identity formation and power relations. Theories relating to nature, non-humans and the environment have had less influence on intersectional research than those focusing on social aspects. We argue that for intersectionality to be useful for studying environmental and sustainability issues, it needs to be informed also by theories generated in research fields that look at the relationship between the contested binary categories of society and nature. Thus, in the following we explore the theoretical fields of ecofeminism, critical animal studies and posthumanism to develop an analytical lens that allows us to trace and interrogate intersectional power relations in conceptualizations of biodiversity and ecosystem services in scholarly literature.

Intersectionality in Environmental Research: How Can Nature Be Included?

In this section we review three areas of scholarship, ecofeminism, critical animal studies and posthumanism, for their contribution to understanding intersectional power dynamics. We ask what they provide in terms of understanding power relations between humans and nature and how these relations can be conceptualized. Through the review we find themes that provide the lens used to guide our analysis. While we here, for increased clarity, divide the fields in three different sections, it should be noted that they often overlap, and some authors can be placed in all of the three scholarships.

Ecofeminism

Ecofeminist scholarship makes a substantial contribution to the conceptualization of intersectional power relations. As nicely summarized by Mallory (2013: 251) ecofeminism's main argument is that

> …not all groups of humans are situated equally in regard to ecological degradation and exposure to environmental toxins, as a direct result of histories of inequality and oppression. These histories are linked through processes of dualism, in which nature/humans, Anglo-European 'whites'/people of color, and masculinity/femininity are placed into opposition. Such conceptual pairings are gendered, as well as raced, classed, and specied. Ecofeminism directly interrogates the sources and effects of these pairings, exposing the ways in which sexist ideologies are connected to 'naturism'.

Ecofeminism emerged from a rich variety of scholarly disciplines and political contexts. Many of the first ecofeminist contributions (e.g. Daly 1978; Griffin 1980) appeared in arts and theology, often focusing on the spiritual development of the human self in relation to the environment, not unlike the approach of eco-philosophical scholars (e.g. Devall/Sessions 1985; Naess 1989). Empirically, many early studies concerned women's experiences of environmental degradation in or close to the home (Gibbs 1997) and later work continues to focus on women's local activism (Moore 2015).

Ecofeminist scholarship in history, social sciences and among philosophers and theorists with an interest in power relations is what we find most relevant for developing intersectionality to embrace relations with nature and non-humans. In general, ecofeminists conceptualize the body as simultaneously biological and social and shaped by material as well as social relations and structures (Cudworth 2005: 134). In what follows we briefly outline ecofeminist contributions. From this diverse literature we focus on the concept of dualism introduced by Merchant and developed most comprehensively by Plumwood as one of the most important contributions from ecofeminism in understanding intersectional power relations. Thereby we exclude valuable ecofeminist contributions that engage with power relations, such as systems theorist Cudworth (2005), as well as contributions that deal with political institutions (Sandilands 1999) and with human political agency in relation to nature (MacGregor 2004, 2006).

Plumwood (1993) suggests that human-nature relations be conceptualized as reproduced through dualism(s). For one, she builds on a central tenet in Bookchin's (1990) social ecology, that domination of nature is closely tied to the domination of humans by humans. Secondly, she builds on the work of Merchant who established that the domination of humans by humans developed historically in relation to nature and gender. Dualism is "a key factor in Western civilization's advance at the expense of nature" writes Merchant (1980: 143). The move from an organic to a mechanical world order based on a nature-cultural

dualism constructed culture superior to nature. The mechanist construction includes understanding the human self as a rational master rendering nature as vegetative matter, inert and controllable, open to human manipulation and management (Merchant 1980: 214, 245f.). Merchant and later Plumwood provide structural interpretations of how the gender power order is implicated in the exploitation and destruction of nature, across intersectional categories and through a logic of dualism.

Plumwood proposes dualism as a way to understand power relations between humans and nature. Dualism, she argues, "results from a certain kind of denied dependency on a subordinated other" (1993: 41). Rather than focusing on masculinity per se as the site of domination, she refers to a "master identity" defined by the multiple exclusions inherent in Western culture where otherness is constructed not only in terms of gender, but also along binaries such as culture/nature, reason/emotion, and civilized/primitive which naturalize, for instance, "gender, class, race and nature oppressions" (1993: 43). Plumwood suggests that master practices, or processes of dualistic conceptualization, establish hierarchical ranking and justifies subordination (see also Warren 1990: 129). Dualistic construction happens through processes of *backgrounding*, *exclusion*, *incorporation* and *objectification* (Plumwood 1993: 47-60). Backgrounding denies the master's material and symbolic dependence on the other and marks the other as different and deviant from the perspective of the master, which is set up as universal. Exclusion is another way of denying association whereby characteristics of the self and the other are magnified, essentialized, and polarized, so that the dualistic categories are depicted as being different and having nothing in common. This, in turn, serves to naturalize hierarchies and oppression. Incorporating the other with the self is another process of dualistic construction. This means that the other is defined as a lack or an absence in regard to the self. Thus, "the other is recognised only to the extent that it is assimilated to the self, or incorporated into the self and its systems of desires and needs" (Plumwood 1993: 52), and there can be no reciprocal relation between the self and the other. Finally, objectification is a process whereby the needs, wishes, and rights of the other are only considered in terms of the instrumental values the other has to the master subject, and has provided the argument that natural resources are there for (particular, intersectionally situated) humans to use as they please. Through these master practices of dualistic construction, domination is established and maintained. According to Plumwood, this leads not only to a distorted understanding of human-nature relations (see Gaard 2015 on climate change), but also to unjust relations because master identities are privileged by and in control of these processes.

Critical Animal Studies

The field of critical animal studies also offers valuable insights to the inclusion of non-human subjects in analyses of power by problematizing the strict categorizations of 'human' and 'animal', and the hierarchical relations that these imply. Humans and non-human animals have always co-existed in close interaction with each other: such interactions play important roles in human societies and cultures, in both symbolic and material senses. Human-animal relations are often characterized by oppression, forced labor, and violence (Andersson et al. 2014). Throughout the history of knowledge production, much thought has been dedicated to theorizing human-animal relations and how such relations ought to be organized. The broad category of 'animal' is generally posed in opposition to the category of 'human'. Thus, all kinds of animals are grouped into a category of absolute others. Scholars in critical animal studies attempt to deconstruct this binary and to illuminate how it serves to establish and justify a relationship of hierarchy and domination, with violent consequences for non-human animals. For instance, Calvo explores how, through processes of othering and objectification, animals 'become meat' in industrial farming, involving violent, oppressive practices. These practices are also gendered, as the reproductive capacities of female animals are exploited for instance in dairy and egg production (Calvo 2008), thus exemplifying intersections of sexism and speciesism.

Best points out that "the discourse of the 'human' has been constituted in dualistic, speciesist, racist, patriarchal, and imperialist terms" (Best 2009, para. 11). The system of human domination over animals, in which human supremacy is rendered unquestionable, is interlinked with other hierarchies based on, for instance, race, gender, function, and class (Wolfe 2009; Twine 2010), so that women, people of color, people with disabilities, or the working class are, in different ways in different times and societies, considered 'less human' and closer to animals. Following the dualistic categorization of animals as different from and inferior to humans, being likened to animals, means being degraded. There are overlaps in the focus and motivation between critical animal studies and other fields of critical social theory, including feminism, queer theory, postcolonialism, and poststructuralism. Feminist researchers have for decades paid attention to such interconnections, and many have engaged feminist theory to address human-animal relations (see Adams/Donovan 1995; Plumwood 1995; Birke et al. 2004; Haraway 2008; Twine 2010). Several scholars have called for – and attempted – inclusion of non-human animals in analysis of intersecting power relations (Twine 2010; Birke 2012). This is a very important contribution both to feminist research and to the theorization of relations between 'humans' and 'nature' more generally.

Various difficulties have been identified regarding the inclusion of non-human animals in intersectional analysis. First, as several scholars have remarked, mainstream feminism has often been hesitant to engage in studies of animals and nature. This hesitance may be explained by fear of association with essentia-

list notions of women being – by biological determination – closer to nature, and therefore less human, than men (Twine 2010; Gaard 2011; see Kaijser/Kronsell 2014 for elaboration). A second challenge is of a more epistemological kind, and relates to what kinds of knowledge we, as humans, can produce about, and together with, animals, especially considering the violence and oppression that often characterizes human-animal relations, and the fact that 'animal studies' are carried out from a human, and thus anthropocentric, point of view (Wolfe 2009; Birke 2012; Pedersen 2014). Birke asks: "How good are our theories, intersectional or otherwise, at recognizing our situation and experiences as one species among many?" (2012: 154). Given the repression and suffering that animals experience in their interaction with humans, this question has deep implications for ethics and justice (see Pedersen 2014). It connects closely to a long history of theorizing oppression related to, for instance, gender, race and sexuality, where important though often painful debates have taken place regarding what can be known, how, and by whom, and who is to be considered a legitimate subject of knowledge (e.g. Alcoff/Potter 1993; Harding 1986, 1991).

One aspect brought up by scholars in critical animal studies, is the fact that even though humans make great efforts to separate ourselves physically and discursively from (other) animals, our lives are closely intertwined with theirs on terms that are far from equal. Through the consumption of meat, dairy, eggs, wool and leather – produced under more or less industrialized, and very often oppressive, conditions – humans live through and with the bodies and lives of animals, although in the daily lives of Western, urban people this is generally not recognized as production takes place somewhere else, out of sight. In a very physical sense, humans are to a great extent constituted by non-human matter – through the abovementioned eating and using of animals and animal products, or considering that our 'own' bodies by nature consist of more bacteria and other micro-organisms than of human genomes (Haraway 2008; Andersson et al. 2014). As Haraway puts it: "I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates" (Haraway 2008: 4). Recognition of such (inter)dependence and co-becoming with non-human others has led to calls for altered approaches to the meanings and implications of notions like care, ethics, and responsibility (see Haraway 2008; Rossini 2014). While intersectional perspectives from feminist social/cultural approaches have a related aim to connect several lines of discrimination and hierarchizing, critical animal studies provide motivation for intersectional explorations with the normative aim to challenge hierarchical constructions and to recognize different perspectives and agencies than those of a particular kind of humans.

Posthumanism

Entanglement with, and responsibility towards, the non-human is a key concern also of the broad research field that is labeled posthumanism. Contributions to this field are diverse but share the ambition to extend analysis to perspectives and agency of non-humans, including animals, plants, microorganisms, and matter. The label posthumanism indicates a challenge to the centering of humans as the single subject of knowledge within the humanities, and to what has been depicted as an exaggerated focus among scholars in social sciences and the humanities on discourses and symbolic representations, leaving the material world aside (see Barad 2003; Hekman 2010). The increasingly severe environmental destruction and climate change, and the intensified control over bodies and lives, are often brought up as motivations for this attention to non-human subjects and matter (see Tuana 2008; Bennett 2009; Hekman 2010).

Feminist research plays a central role in this field (see Alaimo/Hekman 2008; Alaimo 2010; Hekman 2010; Åsberg et al. 2011). As for ecofeminism and critical animal studies addressed above, some posthumanist feminist scholars have pointed to a hesitance among feminists to engage with bodies and the material environment. Many feminists, they argue, harbor a fear of talking about 'nature' as this may indirectly reinforce essentialist notions that associate 'women' with 'nature', 'matter' and 'animality' and thereby question the position of women as rational, thinking, human subjects (Alaimo/Hekman 2008; Hekman 2010). Feminist posthumanist scholars seek to challenge this reluctance by placing human-nature relations at the heart of feminist inquiry. They draw on insights from poststructural and postcolonial feminism, queer theory, and ecofeminism, and strive to bring these insights into analyses that include non-human subjects and environments. For instance, feminist posthumanist work is concerned with exploring the instability of subject positions and categorizations, and with challenging dualistic binaries such as man/woman and human/nature, and instead focuses on relationality and co-becoming (Alaimo/Hekman 2008). Such ideas are not novel. The gendered body as a site of both oppression and specific knowledges along with gendered material practices, such as the division of labor and resources, have been at the center of attention and critical analysis within feminist scholarship and activism since its inception (see Ahmed 2008 for a critical discussion). However, set aside the debate about novelty, posthumanist work offers insights regarding human-nature relations that are important for the purpose of this article.

Similar to – and in dialogue with – critical animal studies, many posthumanist feminists stress the interdependence and unbounded physical interrelations among humans and non-human subjects and matter. Alaimo proposes the term 'trans-corporeality' to account for the continuous flow between human bodies and material surroundings – through, for instance, breathing, intake of food and liquid, and circulation of chemicals and particles – and how these two cannot be distinguished as separate entities (Alaimo 2010). Trans-corporeality, Alaimo

argues, "brings the human body back into focus", but also "denies the human subject the sovereign central position" (ibid: 15-16) through emphasizing our physical interconnectedness with the environment. She hopes that awareness of this entanglement may incite new and different kinds of environmental ethics that are "not circumscribed by the human but [are] instead accountable to a material world that is never merely an external place but always the very substance of our selves and others" (2010: 158). Posthuman becoming through trans-corporeality challenges constructed boundaries and advances intersectional analysis way beyond binary constructions of human-nature.

Analytical Themes and Research Design

Above, we have briefly introduced three theoretical fields – ecofeminism, critical animal studies, and posthumanism – that relate to and offer highly relevant input to an intersectional analysis of *human-nature relations*. In this section, we return to a few recurring themes that we look to in our subsequent empirical analysis.

A common theme in the fields reviewed above is that they all problematize binary categories and *dualistic constructions* as key in how power relations among humans and between humans and non-humans are constructed and maintained. They also offer alternative conceptions, challenging dualistic models. Drawing on the work of Plumwood (1993) we employ the conceptualization of dualistic constructions as master practices. This helps us recognize the processes by which nature is rendered as 'other' in debates around biodiversity and ecosystem services. As a means to further specify our analysis, we explore how dualistic constructions play out in relation to *knowledge* and *subjectivity* – both of which are central concerns of many scholars in the theoretical fields presented above, and found highly relevant as we demonstrate in the empirical analysis.

Knowledge is a crucial theme when exploring human-nature relations, and we found that it was a main topic of contention in the scholarly work dealing with biodiversity and ecosystem services. Which knowledge is regarded as valid and legitimate, and thus informs action and decision-making, is a topic on which feminist theorists have offered valuable contributions. Here, Harding's work on standpoint theory (Harding 1986) and Haraway's work on situated knowledges (Haraway 1988) may be mentioned, as they put into question the assumption that scientific knowledge is neutral and objective, and suggest that scientists, like everyone else, are situated subjects coming from particular positions, which need to be recognized rather than ignored. How nature and non-humans are 'known', or made meaningful, has great bearings on environmental policy and practices. In the debates around biodiversity and ecosystem services, which we will discuss in the next section, certain knowledges are given a more prominent position than others. As biodiversity has emerged as a key concept in environmental scientific and policy discourse, mapping and categorization of species

has been assigned great importance as a means of understanding nature – and defining its value, as in the notion of ecosystem services. Here, scientific, and supposedly universal, knowledge is given privilege over other kinds of knowledge about nature, including more local and practice-based knowledge.

The issue of knowledge is closely related to questions of *subjectivity*. What is foregrounded as relevant knowledge relates to who counts as a knowing subject with agency. In post-Enlightenment scientific discourse, humans – and very particular humans (predominantly white, Western, highly educated males) – are regarded as the primary subjects of knowledge, able to look at the world from a supposedly neutral position; thus the situatedness of these knowing subjects is made invisible. Scholars within the three theoretical fields introduced above have all made efforts to challenge this idea of abstract neutrality, and to extend the position of knower beyond the sphere of scientific research and scholars as 'master subjects' of knowledge, and beyond the human, to include, for instance, animals.

A crucial step in any intersectional analysis of environmental matters and human-nature relations is to ask questions about how nature is represented in the analyzed material. In our study, social scientific scholarly literature discussing biodiversity and ecosystem services has been analyzed through two steps: first an *overarching* and then a *profound* intersectional analysis (see Henriksson/Kaijser 2016). As our study has as its focus how the concepts biodiversity and ecosystem services are discussed in the literature, in the first step we asked how the literature understands nature through these two concepts. We began by conducting an overarching bibliometric study[1] to identify scholarly literature that potentially could help us answer these questions. Through our overarching analysis we established that certain subjectivities were more frequent and certain kinds of knowledge were dominant, e.g. numerically the natural science articles were significantly more frequent than social science contributions and that the majority of articles came from western academic institutions. To be able to say more about what has been backgrounded and excluded in the scholarly debate a more profound intersectional analysis was necessary. We searched for tendencies of intersectional thinking across human-nature boundaries and looked for recognition of diverse subject positions and knowledges, and of transcorporeal relations. We chose articles that focused on biodiversity and ecosystem services and in their abstracts indicated that they were theoretically driven, and/or problematized these concepts somehow. The analysis revealed only a few examples representing, in this way, intersectional thinking and as we were keen to include as broad a range of perspectives as possible, we asked peers to recommend literature. We ended up with 39 articles for the in-depth analysis. This helped us outline how the understanding of nature, through the conceptualization of biodiversity and ecosystem services, was related to dualistic conceptualizations, what knowledge was dominant, and what resistances and contestations of dominant knowledge were present. These questions and themes are further elaborated in the remainder of the article.

Intersectional analysis of Biodiversity and Ecosystem Services

Biodiversity: an Intersectional Concept Turns Instrumental

The concept of biodiversity has proliferated in academic and policy discourse since the 1990s, when species extinction as a threat to biodiversity gained attention as one of the top environmental issues (Hill et al. 2013; Väliverronen 1998). The UN Convention on Biological Diversity presented at the Rio Earth Summit in 1992 helped spread the concept to larger audiences (Turnhout et al. 2013). Here, biodiversity was defined as "…the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems." (UN CBD 1992). This definition of biodiversity is the one most referred to in the articles that we analyze. As it refers to all existing living organisms, including all animals and plants as well as their relations in ecosystems, biodiversity can encompass intersectional categories and relations. The concept covers a great span: biodiversity "is about almost anything that is good and under a threat in our natural environment" (Väliverronen 1998: 31) and "the variety of life on Earth" (Mayer 2006: 109). The breadth of the concept is part of its popularity – similar to the concept of sustainability, biodiversity may mean almost anything (see also Takacs 1996). This broad character implies a potential for intersectional consideration and inclusion and, as Haila argues, biodiversity offers the possibility "to cope with the nature-culture dualism" (1999: 166), which presumes that humans dominate nature. He understands biodiversity as processual and embodied, which resonates with Alaimo's (2010) notion of trans-corporeality. Ecosystems comprise particular organisms mediated through metabolic processes and a continuous flow of energy and nutrients, which are self-organized (cf. Cudworth 2005). Hence, Haila argues, biodiversity conservation should not be about the protection of 'external' biological entities but about the respect of recurring self-organization in eco-social complexes that are 'internal'. Biodiversity is thus not to be seen as an external necessity for fulfilling human needs but as integrating human lifecycles: "human induced change is not essentially different from change in nature due to nonhuman factors" (Haila 1999: 176). This approach, he continues, requires transgressing dualistic conceptualizations.

Like Haila, Turnhout et al. (2013) argue that the concept of biodiversity has been attuned to a particular, distanced and simplified way of relating to nature, drawing on a certain kind of scientific knowledge (see also Bowker 2000). On a similar note, Escobar asks: "[D]oes 'biodiversity' exist? Is there a discrete reality of 'biodiversity' different from the infinity of living beings, including plants, animals, microorganisms, homo sapiens, and their interactions, attraction and repulsion, co-creations and destructions?" (1998: 54). He suggests that biodiversity may be approached not as "a true object that science progressively uncovers", but as "an historically produced discourse", which responds to "the problematization of survival motivated by the loss of biological diversity" (Escobar 1998: 54). Thereby

he points to the privileged role of a particular kind of scientific knowledge in defining and making sense of the concept of biodiversity, reflecting a specific articulation of the relation between humans and nature.

Ecosystem Services: Valuing Biodiversity

Similar to biodiversity, the concept of ecosystem services has spread from scientific to policy literature in the past decades. The concepts are tightly linked; in some cases ecosystem services has replaced biodiversity. A commonly cited definition of ecosystem services comes from the 2005 Millennium Ecosystem Assessment: "the benefits humans receive from ecosystems" (MEA 2005). Beyond the usefulness of ecosystem services to humans, human-nature relations are here made invisible and nature is seen as a lack or an absence in relation to human subjects. When nature is framed as ecosystem services it opens up for objectification which is, using Plumwood's terminology (1993), when the needs, wishes, rights of the other turn into instrumental values in relation to a particular, intersectionally situated master subject, and provides the grounds for the idea that biodiversity is there for humans to use as they please. In line with Escobar (1998), and inspired by the work of Latour (2004), Turnhout et al. (2013) suggest that the entwined discourses of biodiversity and ecosystem services should be read as part of 'the project of modernity', in which humans are conceptually separated from nature (cf. Merchant 1980). This means that ecosystems can be studied and managed as if human were not part of them – neglecting the close entanglement of humans with non-humans, and also neglecting aspects of nature that are not perceived as needed by humans.

Redford and Adams point out that there are many ecosystem processes that do not immediately benefit humans, for example fires or floods that may have an important regulatory function but can be disastrous for human societies particularly in the short term. They argue that

> [t]here is a danger that an economically driven focus on those "services" that are valuable to humans in their nature, scope, and timing may lead to calls to "regulate" ecosystem services to times and in flows that match human needs. Such regulation may be highly detrimental to long-term survival of the nonhuman parts of the ecosystems. (Redford/Adams 2009: 786)

Redford and Adams problematize the relation between ecosystem services and biodiversity, emphasizing that efforts to sustain specific ecosystem services may not serve to protect biodiversity. Despite what might have been the intention when introducing the ecosystem services concept, replacing existing species with other species – alien to the particular ecosystem – may maintain and even improve the provision of particular ecosystem services, while it may threaten biodiversity (Redford and Adams 2009). Thinking intersectionally, there is also a need to address how the concept ecosystem services relates to species that

are domesticated and/or highly useful to humans, but extensively exploited for example in industrial farming. None of our articles address significant questions raised in critical animal studies (Andersson et al. 2014; Pedersen 2014) about how to include ethics and responsibility towards structurally oppressed non-human species in the discussion of ecosystem services.

In the literature analyzed we also find evidence of a more pragmatic approach to biodiversity and ecosystem services, which considers these concepts as part of global environmental policy and governance. According to Meinard et al. (2014: 102) biodiversity is a concept able to unite different scientific traditions and public discourses opening for the possibility to bridge different interpretations and meanings. The 2005 Millennium Ecosystem Assessment is seen as an influential document whereby the idea of ecosystem services was transferred from academic writing to high-level environmental and conservation policy (Redford/Adams 2009; Seppelt et al. 2011; Dempsey/Robertson 2012). Market based instruments have long been preferred environmental and climate policy tools but it was only with MEA's advanced of ecosystem services that the idea that economic value can be attached to biodiversity became widespread (Lapeyre et al. 2015: 125). Addressing the popularity of the concept in environmental governance, Redford and Adams write that "[e]cosystem services have now become the central metaphor within which to express humanity's need for the rest of living nature" (Redford/Adams 2009: 785, see also Seppelt et al. 2011).

This approach is focused on the governance of biodiversity. Here the concept ecosystem services is intended as a means to account for the values of the environmental functions that humans are dependent upon, such as pollination, flood control and natural purification of water: useful because it makes these functions and their value to humans visible. Thereby it is a way to encompass what in mainstream economy terms is referred to as externalities (Kosoy/Corbera 2010). According to this logic, recognition of ecosystem services also makes it possible to assign a price to the use of a particular ecosystem service – in policy lingo referred to as payment for ecosystem services (PES) (see Redford/Adams 2009). We note how the dualistic construction is reproduced here: biodiversity is objectified into exclusionary categories, i.e. specific ecosystem services. These components can then be associated with a specific monetary value. What is in high demand then is a way to map and delineate ecosystem services, and as we noted in the overarching study, a major part of the scholarly articles were engaged in making biodiversity mapable and manageable, and to develop methods and techniques for doing so.

The wish to govern and map is complicated by the fact that an ecosystem does not lend itself to be compartmentalized, simplified and narrowed down to exchangeable units – its whole is always more than its parts. It is difficult to distinguish a particular ecosystem service from others, as ecosystems by definition are complex and integrated (Kosoy/Corbera 2010). Among human individuals and communities, perspectives vary greatly regarding which ecosystem

functions are valuable and which need to be regulated, and there may be several contrasting ideas among, for instance, scientists, policy makers, commercial users and local communities, respectively. Thus, since ecosystem services cannot possibly represent the entire complexity of ecosystems, their functions, and all contrasting human perspectives and needs, the risk here is that certain elements of biodiversity, which someone is willing and able to pay for, are brought into economic markets, while other elements, with less direct economic value, are neglected and destroyed in silence (Turnhout et al. 2013: 155).

A substantial part of the critique against the concept ecosystem services is related to the idea of assigning economic value to the environment, which commodifies nature and incorporates it into a capitalist logic (Sullivan 2009; Robertson 2012) and places it as part of the neoliberal order, with its faith in and strong emphasis on market solutions (Fairhead et al. 2012). However, these arguments are also criticized for being too simplistic (elaborated in Corbera 2015; Dempsey/Robertson 2012; Hahn et al. 2015). While the idea of ecosystem services can generally be placed within a neoliberal approach to nature and environmental governance, there are multiple varieties of market-based conservation of ecosystems (Corbera 2015: 156; Froger et al. 2015: 160; Lapeyre et al. 2015) and different types and degrees of commodification as well (Hahn et al. 2015). The concept is mobilized in diverse contexts with varying meanings and implications (Dempsey/Robertson 2012), and notions of justice vary across contexts (Corbera 2015: 156). Daw et al. (2011) offer an intersectional touch, albeit human centered, as they argue that the concept can only function if it includes the well-being of the poorest in society and by asking which humans derive benefits from these ecosystem services. On a similar note, Diaz et al. offer a methodology that connects "the specific components of biodiversity with the specific interests and priorities of social actors" (Diaz et al. 2011: 900). They argue for a greater differentiation in understanding biodiversity and ecosystem services, in different situations and to different social actors. Power and wealth determines which groups have access to what ecosystem services. This recognition of social differences can be read as a call for more intersectionally informed research and policies. But however insightful, the analysis of Diaz et al. (2011) applies strictly to human-to-human relations and furthermore includes only material interests (see also critique by Romero/Agrawal 2011).

A focus on human perspectives and interests seems strengthened through the use of ecosystem services, which may be seen to entail "a paradigm shift in the ethical and political foundations of biodiversity conservation, from conserving nature due to its intrinsic value to an emphasis on anthropocentric use values" (Loft et al. 2015: 150). The concept ecosystem services as so far applied, seems to further distance humans from nature, biodiversity and ecosystems and denies dependency on these 'others', rather than protecting nature's diversity (cf. Plumwood 1993: 41).

Biodiversity Knowledges and Subjectivities

As feminist scholarship has taught us, scientific knowledge is never neutral or objective, and researchers are situated subjects coming from particular positions. The scholarly discussion on biodiversity and ecosystem services that we try to make sense of can be viewed as an attempt to shape a universal knowledge about nature, rendering nature an object of science and control. This may be understood as a way to "distance the knowing subject from everybody and everything" (Haraway 1988: 581). Through the scientific vision, the all seeing eye of western positivist science comes to dominate – simultaneously distant and omnipresent – performing what Haraway calls the "God trick" (Haraway 1988: 582). The scholarly literature we reviewed suggested a dominant status of the environmental, agricultural, and biological sciences and scientists mainly in the rich North. In reviewing the history of the concept ecosystem services Ernstson and Sörlin claim that it reflects "the hegemonic role of ecologists, and of environmental and ecological economists" (2013: 275; see also Escobar 1998: 61-62). Failure to recognize that knowledge is situated extends also to critical social sciences according to Melathopoulos and Stoner (2015: 178). Haila (1999) draws on Foucault's ideas of the relationship between knowledge and social power as he problematizes the primacy of science in the biodiversity discourse. Here, scientific knowledge "is taken as an independent factor" and even "becomes something of a 'master-mind'", which, Haila argues, reinforces dualistic constructions of both human-nature relations and of reliable vs. false knowledge (Haila 1999: 169).

Efforts to govern biodiversity through an ecosystem services approach privilege a particular kind of scientific knowledge about nature, while silencing other scientific knowledges as well as localized ways of knowing nature (Ernstson/Sörlin 2013: 282). The ecosystem services approach, according to Ernstson/Sörlin, "performs a remarkable gesture, as coming from no-where, a non-place, but arranging itself so as to be able to talk to all places, claiming to have the tools to correctly measure the values of nature for any part of the world" (ibid: 281), thus enacting the 'God trick' and laying claims to a master position of legitimacy. However, as Fairhead et al. (2012: 254) suggest, ecological dynamics and an unruly, complex nature may jeopardize these efforts as ecological dynamics do not work according to market logic. The heterogeneity and changeability of ecosystems means that a variety of knowledges are needed for human-nature interaction – knowledges that are often marginalized. Sullivan asks, "what knowledges and experiences are being othered and displaced through the parlance and practice of ecosystem services markets?" (Sullivan 2009: 23). People living in areas identified as crucial for the provision of ecosystem services may find their livelihoods constrained by new markets for ecosystem services – and themselves left out to market mechanisms and management according to 'expert' knowledge. People belonging to a diversity of cultural settings with rich knowledges are often simply portrayed as 'local', 'marginalized', or 'poor', while these people and cultures often carry rich knowledges and perspectives that signal

alternative ways of relating to nature and may be valuable in addressing environmental problems (Sullivan 2009: 24).

Yet, while a particular kind of (supposedly neutral and objective) scientific knowledge is clearly privileged in the literature, there is also an emerging recognition that 'alternative' kinds of knowledge are useful and need to be included in the master story. Broadening the types of knowledge that constitute the foundation for policy making has in recent years come to be perceived as pertinent. Most policy instruments used in biodiversity governance rely on some type of evaluation (Hahn et al. 2015) and often incorporate 'local knowledge', although this notion is seldom defined. Through a study of how ecosystem services are expected to be relevant in order to enhance nature protection and sustainability in cities, Ernstson and Sörlin demonstrate that "the purportedly universal non-place from which the ESS [ecosystem services] approach aims to speak, is … highly embedded in social and place-specific relations" (Ernstson/Sörlin 2013: 279) and dependent on local and different knowledges.

'Local' communities are thus evoked as knowing subjects with special abilities to care for and repair nature, which scientists and policymakers may learn from. Especially, the knowledge of indigenous people is often brought up as valuable (Fairhead et al. 2012: 251). McNeely and Schroth focus on the potential of traditional agroforestry practices to support biodiversity conservation via the inclusion of "non-scientific knowledge of indigenous people" (2006: 552) and argue that valuable traditional knowledge should be shared in ecosystem management and in the cooperation between local people and scientists.

While recognizing the value of 'alternative' forms of knowledge, this and other articles (see Hill et al. 2013; Pert et al. 2015) risk perpetuating a dualistic representation of knowledge about biodiversity, or nature: on one hand, a uniform scientific knowledge, and, on the other hand, indigenous and/or local knowledge derived from practices and tradition. A clear hierarchy is established in the literature between a universal scientific knowledge, and a generalized idea of indigenous/local knowledge. While the former is expected to provide the foundation for policy, the latter is recognized as the 'other' kind of knowledge that might offer some valuable insight only if it is incorporated in the canon of proper scientific knowledge (Escobar 1998; Turnhout et al. 2013). We have noted elsewhere that such a dualistic representation of scientific and local/indigenous knowledge as separate spheres is problematic, since these have developed in close interaction and dialogue with each other for centuries (Kaijser 2014; see also Agrawal 2005). Such dualistic notions, moreover, ignores the diversity and situatedness of both 'scientific' and 'local' knowledges about nature, as they emerge in specific settings and environments. Various articles called for a broader scientific knowledge base when discussing and applying ecosystem services. For instance, Alves et al. (2013) and Mann et al. (2015) argue for the integration of social sciences and local knowledges into biodiversity science, and Froger et

al. (2015) for more ecological knowledge to inform economic calculations in provisions of ecosystem services.

An influential initiative that explicitly links biodiversity and ecosystem services is the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES), established in 2012 with the mission to assess "the state of the planet's biodiversity, its ecosystems and the essential services they provide to society" (IPBES), and thereby offer "scientifically credible and independent information" in the form of reports to decision-makers, authored by a multidisciplinary group of researchers (ibid.). A deeper engagement with the approaches and operations of IPBES is outside the scope of this article. However, IPBES is discussed at length in several of the articles that we include in our analysis (see Hill et al. 2013; Turnhout et al. 2014; Vadrot 2014; Borie/Hulme 2015). Borie and Hulme explore how different kinds of knowledge were handled in the IPBES process. While different knowledge systems were recognized and incorporated, the distinction between scientific and indigenous knowledge was essentialized (Borie/Hulme 2015). Scientific knowledge was here represented as measurement and monitoring of nature through mapping and categorization. Turnhout et al. (2014) place this view of science in a context of neoliberal, result-oriented New Public Management approaches to the science-policy interface that is the rationale behind the IPBES. The debate regarding the conceptual framework to be used in the IPBES has been highly polarized and politicized particularly between proponents of 'scientific western knowledge' and 'indigenous and local' knowledge. It is notable that this is recognized in the framework, with the two positions both reflected in IPBES's conceptual analytical framework through different color codes, blue for indigenous concepts and green for scientific, but also black for concepts that were viewed as consensual, such as nature and good quality of life (Diaz et al. 2015). In the debate leading up to the framework, the premises for the different knowledge claims were foregrounded and became visible (Borie/Hulme 2015). While the IPBES is not there yet, the fact that the contestation between knowledge claims has come to influence the framework may open up for critical and more nuanced discussion of diversities in 'scientific knowledge' as well as in the understanding of 'indigenous and local knowledge' in the future, with a prospect to go beyond dualistic constructions of knowledge.

Concluding Discussion

We have now discussed a selection of scholarly publications seen through the intersectional analytical lens that we presented in the section *Analytical Themes and Research Design*. Thus, we have explored how dualistic constructions come forward in the assessed publications, and how knowledges and subject positions are represented, or not represented. While highlighting dominant tendencies in the material, we have also looked for alternative and challenging approaches to human-nature relations within scholarly discussions of biodiversity and ecosystem services.

As mentioned above, we see a potential in the idea of biodiversity for encompassing intersectional human-nature relations, as the concept opens up for representing diversity and differences among subjectivities and knowledges. However, as it has become popular in the field of policymaking, biodiversity has generally come to be understood in a more technical manner, corresponding to a view of nature as something to be mapped and managed through a science-policy interface, in a spirit that Turnhout et al. (2014) would call measurementality. This tendency is further accentuated when biodiversity is coupled with the notion of ecosystem services, with the aspiration to split biological diversity in measurable segments that provide particular services, and add an element of (economic) valuation.

Several scholars call for recognition of intersectional differences and power relations among humans (see Escobar 1998; Sullivan 2009; Daw et al. 2011; Díaz et al. 2011; Fairhead et al. 2012). For instance, Sullivan (2009) notes that people from a diversity of cultural settings are in policy lingo often simply portrayed as 'local', 'marginalized', or 'poor', in relation to what, with Plumwood's terminology, may be called a 'master identity' (Plumwood 1993). While there is awareness in the assessed literature of differences and power imbalances among humans, this awareness is generally not extended beyond the human. The scholarship on biodiversity has become increasingly policy-oriented, reflecting a managerial approach in which humans are not regarded as being part of biodiversity, but in an outside, distanced position, and in charge of measuring and managing it. Such dualistic representations of human-nature relations are dominant in the assessed material. These two categories are treated as separated from each other, and placed in a hierarchical relation where nature is set as background, subject to mapping and management, and valued for the ecosystem services it may provide to humans rather than in itself. Also, the agency of non-humans is not recognized. Here, all of the processes of dualistic construction described by Plumwood (1993) – backgrounding, exclusion, incorporation and objectifications – are at play.

Inspired by the theoretical fields from which we draw our analytical lens, along with the assessed literature, we would like to end this article by asking, how could biodiversity be approached in ways that are sensitive to intersectional relations among and between humans and non-human subjects, or nature?

Turnhout et al. (2013) offer serious engagement with this question, and sketch out an alternative approach. They suggest that we "look more carefully at the diversity of human relations with biodiversity" (Turnhout et al. 2013: 158), which involve much more than measuring and commodifying. Recognition of the fact that humans are already, and have always been, entangled with biodiversity in countless and contextual ways, may inspire altered ways of 'living with' nature, as part of biodiversity (ibid.). Haila takes a similar stance as he discusses ways of overcoming human-nature dualisms and regarding humans as always encompassed in biodiversity (1998).

The positions taken by both Turnhout and Haila resonate with Alaimo's work of trans-corporeality, and more broadly with key concerns and stances in posthumanism, critical animal studies and ecofeminism, where the entanglement and interrelatedness of 'humans' and 'nature' is theorized. In a recent article, Haraway playfully and seriously explores possible paths for avoiding major ecological disaster by learning to live with – as physically integrated with – non-humans in "myriad temporalities and spatialities and myriad intra-active entities-in-assemblages – including the more-than-human, other-than-human, inhuman, and human-as-humus" (Haraway 2015: 160). For achieving "multispecies ecojustice", she calls on feminists to "exercise leadership in imagination, theory, and action" (ibid: 161). This is where we see the place for intersectional engagement with human-nature relations, conceptualized as biodiversity or otherwise. In the present text, we have drawn on previous feminist work of human-nature relations in order to assemble an intersectional lens, through which we have looked at notions of biodiversity and ecosystem services. We believe that an intersectional approach, profoundly rooted in feminist theorization, offers valuable possibilities for re-thinking – and, hopefully, re-enacting – human-nature relations, with attention to the diversity and changeability of such relations, without claims to universal truths, and with room for multiple knowledges, knowers, and voices.

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Remarks

1 Our empirical analysis begun with an overarching analysis where we scoped scholarly work through a word search for ecosystem services and biodiversity in articles and book chapters. Through this SCOPUS search (December 22, 2015) we found 4000 publications mainly in the environmental, agricultural, and biological sciences. We analyzed the abstracts from 460 articles categorized as social science in some more depth. The objective of the bibliometric overarching study was to identify scholarly literature that potentially could help us in our profound analysis and from this search we selected 34 articles.

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Katharina Nowak

Disentangling Participation in 'Local Organic' Food Activism in London

On the Intersecting Dynamics of Whiteness, Coloniality and Methodologies that Constitute Ecological Identities

Abstract: The way *we* grow and consume food has become a key arena where concepts of nature, sustainability and identity are being negotiated. But who is the "we" in this discourse? The London-based local organic food network Organiclea that seeks to facilitate a reconnection with nature through food growing provides the empirical platform for exploring this question and its related territories of participation in such food spaces and understandings of race, nature and culture. Building on the work of US food justice theorists who have introduced framings of whiteness and coloniality in relation to the exclusiveness of local organic food practice, this paper asks what it means to engage in such food activism in light of intersectionality that informs any identity and therefore stance towards food and nature. By reviewing and embedding these conceptualisations within a UK context with the help of inductive interviews and intersectionality as an empirical paradigm, a deeper understanding of racialised (ecological) identity formation behind ecological identities and the role of scientific methodologies in upholding subordinated diaspora subjectivities can be brought forth. This study therefore provides important subtle layers to gender studies' signature framework of intersectionality and the disproportionate participation on the part of diaspora subjects in the design and operation of local organic food practice.

Keywords: local organic food networks; food justice; intersectionality; whiteness; coloniality.

Alle sind willkommen aber wer MACHT am Ende mit?

Über intersektionale Dynamiken von Weißsein, Kolonialität und Forschungsmethoden hinter ökologischen Identitäten in einem Londoner sozial-urbanen Landwirtschaftsprojekt

Zusammenfassung: Wie *wir* unsere Lebensmittel anbauen und konsumieren ist zu einer wichtigen Arena geworden, in der Naturverständnisse sowie Nachhaltigkeits- und Identitätskonzepte ausgehandelt werden. Doch wer ist dieses diskursive ‚*Wir*'? Das Londoner sozial-urbane Landwirtschaftsprojekt Organiclea, das sich durch den lokalen Anbau von Lebensmitteln für eine Aufhebung der Entfremdung von der Natur einsetzt, dient dabei als empirische Plattform, um dieser Frage samt ihrer thematischen Schnittstellen wie Teilnahme, Rassialisierungsprozessen sowie Natur- und Kulurverständnissen nachzugehen. Die theoretische Anlehnnung und Weiterführung orientiert sich an dem US-fundierten Wissenskanon zu *Food Justice*, der damit begonnen hat, erste Rahmungen zu Weißsein und Kolonialität in Bezug auf diese Art der Verbreitung von Bio-Gemüse anzubieten. Dieser Artikel überarbeitet jene Konzeptualisierungen und beginnt, sie innerhalb des britischen sozial-urbanen Landwirtschaftsdiskurses mit Hilfe von induktivem Befragungsmaterial und Intersektionalität als empirisches Paradigma einzubetten. Dadurch kann ein tieferes Verständnis von rassialisierter (ökologischer) Identitätsbildung und der Rolle von Forschungsmethoden in der Aufrechterhaltung von untergeordneten diasporischen Subjektivitäten hervorgebracht werden, um Lücken in Bezug auf die Exklusivität und unverhältnismäßige Teilnahme seitens diasporischer Subjekte in der Gestaltung solcher Initiativen zu füllen.

Schlagwörter: sozial-urbane Landwirtschaft; Intersektionalität; Weißsein; rassialisierte Identitätsbildung; Kolonialität.

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Negotiating the "Who" behind Local Organic Food in Northeast London

> I think it is beautiful for bringing people together that wouldn't normally come together because there is quite a big mix at Hawkwood of ages and backgrounds, not as full as it could be. It doesn't represent the whole community in this area, but I think it is a good sign. I think they are very open in that way. (V5)

This account describes how one participant perceives Hawkwood, the food growing site of the local organic food network Organiclea in Northeast London that can be seen as part of a wider food movement that challenges the doings of the corporate agri-food system by cultivating more food locally in line with permaculture principles and skillshare activities. Even though it is not considered to be representative of the demographics of the local area Waltham Forest in London, this food growing space is seen as being inviting and offering a place where a diverse group of people can meet and learn in a non-preachy way about alternative ways of doing food. This extract is indicative of the key themes of exclusiveness and white elephants in the room[1] that will be explored in this paper through empirical intersectionality, whose overall aim is to provide some patterns of explanation as to why some people participate in doing local organic food more than others. The research objective is not about discovering whether Organiclea and its related local food outlets are fully representative of their local demographics, which partially adds to the problem in that it reifies essentialist notions of 'race' that are based on dichotomous categories and reinforces the allure that racialisation is undone merely by focusing on proportional participation (Moore et al. 2003; Reardon 2005). Rather it is about the subtle workings of whiteness that intersects with the social process of doing research behind how such a local organic food space is being perceived on the part of both white and diaspora participants, as well as myself the white academic. Drawing on the UK racial discourse, *white* as a political category that refers to a culturally signified construct and representation of identity and the self-appointed term *diaspora* are chosen deliberately in this study to make the negotiation of agency and subjectivity visible. In particular, diaspora implies an anti-dichotomous political expression that challenges the binary logic of many methodologies that run the risk of essentialising the equally self-appointed terms Black and People of Colour as well as the latter's problematic connotation of 'colour' in relation to 'race' or ethnicity that is – in many British framings – considered an outdated and offensive remainder of the 1960s (McCall 2005; Gillborn 2008). Out of the realisation that the divide between essentialist and non-essentialist notions of such political identities had become obstructive, the idea of diaspora as a mode of representation and analytical framework was proposed by key Black British scholars such as Paul Gilroy to emphasise the pluralistic and diverse character of the non-white British population that share histories and continuities of oppression and a common diaspora space in Britain (Gilroy 2000; Malik 2001). It is within this context that I have decided to employ the terms white and diaspora in this study to juggle the area of conflict around these social positions. The perpetual trade-off between reinforcing dualistic subject dichotomies of diaspora

and white *and* needing such binary categories to highlight the continuous damage brought about by the social reality of racialised difference (Alexander/James 2011) is something that I have been struggling with during every stage of this research process.

Overall, making this damage more visible is a key motivation of this study. US food justice theorists and activists have begun to explore that damage in the whitened coding and discourses of both the US mainstream and alternative food movement that clearly mark and encode its related spaces and arenas as white. My argument will extend their work by embedding such food justice framings within a UK context and opening up these themes of damage to broader mechanisms of intersecting social relations around whiteness and research processes. It will build on my initial empirical study with ten subjects involved with Organiclea that I conducted in 2012, which looked at how they talk about or imagine inclusionary and exclusionary practices as well as the very practice of doing local organic food itself. I started asking for interviews through convenience sampling with an eye for a fairly balanced composition of diaspora and white research subjects (see appendix for an overview). To avoid reifications of categories of difference, the interviewees were not presented with any categories, which means that the research objective was examined from a sideways direction to reduce the interview bias.

After applying feminist intersectional reflexivity to some of their accounts and my very own role in conducting this study, this paper now attempts to carve out how whiteness, coloniality and scientific methodologies intersect to bring about one-dimensional spaces and subjectivities. I would like to stress that I have no intention of generating shame at Organiclea or in the wider local organic food movement for I am aware we are all socialised into a colonial/modern world system that permeates our epistemologies with boundaries and dichotomies. Rather, I seek to lay bare my own learning process of the workings of whiteness and coloniality given my own white academic identity and how this relates to the absence or presence of voices and epistemologies in this study, as well as the difficulty of negotiating that fine line between 'speaking about' the diaspora and 'speaking nearby' them (Chen/Minh-ha 1992). Even though such feminist intrapersonal reflexivity (Hill-Collins 2000) cannot magically do away with dichotomies, it works as a useful tool to depict and analyse mechanisms of assigning agency within the very research process itself and the role of expert knowledge in creating the diaspora/white dichotomy in the first place.

Situating Local Organic Food Practice within the Arena of Whiteness

The Organiclea project started in 2001 with the aim of cultivating more food locally in line with permaculture principles and skillshare activities in the London borough of Waltham Forest, featuring three project outlets: the food growing site Hawkwood, the Hornbeam café as the project's community space with a weekly market stall as well as the initiative Common Sense Growers that represents its outreach arm through which they provide direct training to

organisations seeking to establish their own food growing projects. In addition to paid project workers and apprentices, Organiclea relies on a large number of volunteers for its growing, processing and selling activities who either find out about the project themselves or get referred in by social service agencies. The initiative can be seen as part of a wider food movement that has built strong and sound opposition to the corporate monoculture behind our food and taste. Given the multivocality of such alternative food initiatives in the wider literature and discourse, I decided to employ the term *local organic food network* in this study as it best captures the type of activism championed by the concurrent UK food narrative. Framed by Seyfang (2006), it symbolises the recommendations for action prescribed by contemporary sustainability discourses that consider buying local and organic as the signature public arena for change towards less damaging socio-ecological food production and consumption patterns. Whilst providing the normative and positivist foundations for this proliferation of organic foodways in the first place, the Northern academy has also begun to critique their rise. By applying a cultural politics lens to the common rhetoric around what is referred to as alternative food activism in the US literature, Slocum (2006) and Guthman (2011) have argued that most of the discourses associated with alternative food signal to a *white* subject and thus code the operations and spaces of alternative food as essentially *white*. In particular, the romanticised portrayal of agricultural work employed in that discourse blanks out the explicit racialisation of the United States' land and agricultural labour relationships. 'Putting your hands in the soil' is thus almost predestined to conjure up mental pictures of slave labour for People of Colour as opposed to the rosy nostalgia of 'working the lands' (Guthman 2011).

Such colonial framings tend to be largely unacknowledged by the *white middle class* demographic that dominates these alternative food initiatives in the US and tie into the inherent discrimination of non-white actors in that they determine the rhetoric, spaces and broader activism of agri-food transformation, thereby crushing other narratives (Slocum 2006; Guthman 2011; Alkon/Agyeman 2011; Harper forthcoming 2017). Such concerns and conversations are, however, strikingly noteworthy for their absence in the literature and organic food practice in the UK and wider European context despite considerable materialised and discursive similarities in how such alternative foodways have come about and operate. This paper seeks to start filling that gap by exploring how we can interpret some of the enmeshed processes that tend to marginalise specific social groups in the design and operation of local organic food networks. While the historiographies of land and agricultural relationships in the UK differ significantly from the US context, whiteness as a global power structures imposes its weight and burden as much when rendered visible through activism, lived experience and scholarship. Most critical to this research aim is the prevailing notion of ecological sustainability in the majority of expressions of the local organic food narrative in the UK and its failure to understand food as more than merely a nutritional and ecological commodity, but instead as an array of social relations. By taking part in culturally defined patterns of consuming

food, individuals act out their own identities and memberships in specific circles (Delind 2006; Douglas 1996). Food therefore holds a unique position within the environmental discourse, as it shapes personal identities, including racialised identities, in a manner that other socio-ecological issues such as waste, energy and water simply do not. While the way food practices act as a marker of one's diaspora positionality and hybrid identity has been explored in the European academy in fields such as food or diaspora and cultural studies, whiteness as a marker of food practice has been largely void and/or un-named in these research arenas despite its global sway as a power structure. The food justice realm helps to shed light on such discursively unmarked food realms. A better understanding of these processes is urgently needed since bringing about change in the way we produce and consume food will require strong coalitions among *all* social groups in society. At the same time, food justice research may also contribute to a deeper and theoretically more diverse understanding of racialised identity formation given the intimate role of food in the making and performing of personal and collective identities (Alkon/Agyeman 2011). This is particularly important due to the marginalisation of the workings of white agency within the European academy. In exploring and naming whiteness as a marker of food practice, I am hoping to add important new dimensions to the discourse on food in the UK and Europe that revolves almost exclusively around eco-sustainability and/or how racialised diaspora identities are negotiated and ascribed around food.

Becoming Aware of my Role as the Researcher through Re-calibrating Intersectionality

While it can be argued that intersectionality merely reframed an old problem of how numerous types of oppression shape the experiences of women of colour and other marginalised subjects, it did pioneer a unique approach and has been described as the most profound contribution of gender studies to society (McCall 2005). This is because it connected the dots between critical feminist theory on the ramifications of the multiple oppressions and postmodern feminist thought with its methodologies that deconstruct categories and lay bare the pitfalls of the dualistic logic in creating and remedying social disparities (Brah/Phoenix 2004; Choo/Ferree 2010; Hancock 2013). I therefore position intersectionality as an empirical paradigm (Hancock 2013) and it is this epistemological dimension of intersectionality that I want to highlight and develop further in this paper as opposed to merely drawing on single aspects of the triumvirate of race, class and gender seperately in explaining processes of marginalisation. Re-calibrating intersectionality in this way is built on an understanding of how Eurocentric science emerged in opposition to epistemes that were invalidated and/or erased (Santos 2010), and groups of people that were racialised, gendered and/or othered with the aim of producing a rational and empiricist understanding of perceivable phenomena with an immanent binary counterpart (Hill-Collins 2000; Davis 2008). The latter part also applies to most critical academic disciplines including gender studies. When transferring this epistemological insight behind

intersectionality to my empirical data, a deeply diverse realm such as a local organic food network is reconstructed through polarised categories, for example, white vs. diaspora subjects, the academic's expert knowledge vs. the research participant's lay knowledge. Intersectionality's commitment to the 'situatedness of all knowledge' (Haraway 1988) seeks to reverse that process of binary abstraction so fundamental to Eurocentric science by exploring the relations among what are normally considered separate dimensions (Hill-Collins 2000). This can be attempted by extending intersectional analyses by the pivilege-related categories of *whiteness and coloniality* to generate complex patterns from the onset as opposed to inferring from the often dominating triumvirate race-class-gender with its focus on what puts others at a disadvantage (Hill-Collins 2000; Staunæs 2003; Mehrotra 2010;). In this way, whiteness and coloniality stand for relational patterns of power that seek to describe the cultural, economic and epistemic subordination of racialised/ethnic groups by dominant racialised/ethnic groups that continues to play out in contemporary social realities *with or without* the presence of colonial administration (Grosfoguel 2007). Such a reading of whiteness and coloniality does not consider them independent from class, but rather as fabricating and being fabricated by economic inequalities, emphasising the entangled substantiation racialised positionalities can take on. All three therefore can work together to materialise an intersectional process that fulfills the material and aesthetic needs of white-identified subjects (Harper forthcoming 2017).

Adding to the empirical intersectionality with its strong epistemological component that I draw on in this paper is the *academic's* reflexivity by making them embrace their own intersectional position of power in the very conceptualisation and conduction of their research projects (Hill-Collins 2000; Lykke 2005), which has become a key motivation for my scholarship. In developing an overview of my interviews and observations for this study, I looked for emergent multi-level patterns and structured my results accordingly, making sure that the literature, the research subjects' understandings of Organiclea and their as well as my own white positionality inform my data analysis. This process combines both deductive and inductive methodological elements as a result of different levels of causality during the entire research process. The very idea for this study with its analytical focus on whiteness and intersectionality in local organic food networks evolved deductively from studying the literature and my own experience. Yet the extent to which participants are affected by intersecting social relations around whiteness and research processes needed to be explored through inductive interviews and phases of analyses to do justice to the complexity within, between and beyond categories.

Speaking Whiteness to the Righteousness behind Local Organic Food

The 'post-racial'[2] theoretical strand that emerged in Britain in the 1980s gave rise to a new focus on the previously undertheorised fact that we all inhabit a racialised space, which rendered whiteness a racialised and cultural identity of its own (Dyer 1997; Byrne 2006). While there has been a surge in whiteness studies in the US since the early 1990s, this realm continues to hold a rather isolated position in the UK and the wider European cultural and racial discourses despite the Eurocentric roots of white supremacy in bringing about enslavement, colonisation and cultural prototypes. This paper seeks to bring whiteness back into the wider European discussion given its continued destructiveness, which can be observed in current debates about refugees and migrants in both the German and wider European discourse. Whiteness can be defined as an ideology, a marker of privilege that upholds the power or the use of power of white people without necessarily being the effect of their conscious endeavours (Leonardo 2007). It follows from this account that drawing on whiteness as a concept is not to find out who is 'racist' or not, but rather to create an understanding as to the effect of white agency on others (McKinney 2005; Frankenberg 1993), which effectively means that "a white voice stands in relationship of power to a [diaspora] voice" (Byrne 2006: 5-6). This is in line with food justice's wider aim to create a deeper understanding of racialised identity formation, for which I employ the local organic food network Organiclea as a window.

Drawing on the empirical body of work, most interviewees expressed an understanding of the white middle class bias of Organiclea by implicitly or explicitly referring to a dominance of white subjects at Organiclea's outlets. One white volunteer notes that "there is definitely a white middle class core hold" (V7) while another diaspora volunteer adds: "They seem to be varied, but then maybe a lot of them are local, kinda middle class white people/ not all of them. [...] If I was to say if it represents this area of Walthamstow, then no." (V5) In addition, a diaspora subject states:

> People find it strange that I volunteer there [at the Hornbeam café]. But then when I say I'm not the only Black person/ [and] there is that Somalian boy who is there every now and then this person and that person. And then when I say also, there is even this person and that/(...) Yeah/ (...) there is lots of people there who are just completely different from one another. (V9)

While this narrative illustrates how he has to justify to his friends why he volunteers at a café that is coded as white, it also reconfirms that the Hornbeam café is a predominantly white place. This also shows in this diaspora subject's account: "So that Pakistani teenager is a totally different/ (laughs) youth on the stall." (V5)

When trying to explain the white bias, one white volunteer referred to the class markers of education and income:

> The whole white middle class thing I think partly is that it extends from the idea about organic and organic gives you health and it costs more so these people are getting educated to know that organic is better for your health and secondly can afford to pay for that extra couple of quid. (V7)

This overlaps with the standard line of argumentation in organic food scholarship in Britain (Seyfang 2006; Padel et al. 2005) and is also employed by the white demographic involved in US-based alternative food institutions (Guthman 2011; Alkon/Agyeman 2011). Others concluded that it must be down to everyone's personal interest. "It is not your choice personally, it is kind of an interest." (A1) "I definitely think that you need to be leaning towards that type of interest already." (V5). Later on in our conversation the diaspora volunteer embeds the disinterest in 'digging' within the broader context at the meta level:

> I know a lot of kids, for example, who might say 'oh I'm not going to dig in a field'. [...] They are happy with buying food from the supermarket. So it is not just saying this is a good way to live. It is not the way that a lot of people want to live. So I suppose it is negotiating all of that and bringing the ideals to the reality. Because for me, I love it and it is great, but not everyone is going to love that. (laughs) I suppose a lot just stopped farming because it was hard and they wanted to have an easier life. (V5)

Here, she critically reflects on why it may not be appealing to some people by hinting at the local organic food movement's romanticising of horticulture and gardening work, which translates into a rhetoric that disregards the reality of tough livelihoods and exploitation for the vast majority of people involved with agricultural work. While critical theory and political economy theorists would ascribe such accounts to class privilege with its related exclusions, I would like to apply the food justice lense to highlight another layer of privileged access to local organic food growing: whiteness. The wider aim of Organiclea as expressed by a white participant, which is "to facilitate a reconnection with nature and train people up in a relationship with nature" (V8) is conceived from a white ecological identity that blanks out processes of racialisation. This universalist outlook is shaped by invisible whiteness and collective white notions of nature as freeing, easily approachable and emotionally reassuring (Vanderbeck 2008). This stands in stark contrast with the cultural memories of intersectionally subordinated diaspora groups who were and continue to be exposed to genocide, slavery, rape and exploitation for white individuals to have access to 'nature' as a cradle of economic resources as well as recreational and conservation purposes (Deming 2002; Solnit 2007). Drawing on Harper (2009), the white participant's statement above therefore masks the invisible whiteness behind ecological identities that inform one's involvement in local organic food initiatives. Knowles (2008) offers a post-imperial whiteness framing that ascribes rural practices and life in Britain with imperial connotations and associations of oppression and supremacy. Being outdoors and "being involved directly in working the land" (PW8) – as one white participant put it – on the edge of Epping Forest in North London very much

resembles rural life and is thus likely not to have a relaxing therapeutic effect for everybody. Yet the wish to be involved with food growing is universalised by a white participant who reduces it to a matter of simple tasks that resonate with every *body*: "[...] Everyone can connect to food, right. Everyone eats. Uhm. And everyone can do gardening." (A4) Who is meant by 'everyone' and how is 'everyone' reflected at Organiclea's three outlets? How is 'everyone's' food represented at Organiclea's Hornbeam café and the market stall? The following account by a diaspora subject paints a slightly different picture:

> When I tell my friends that I volunteer there, they say 'oh you volunteer with the hippie people'. [...] I'm fine with it. I just say yes I am. I don't see a problem. But I do understand how other people might be like/ they may not want to volunteer there or go there because it is seen as that [...] big purple building on the corner [...] where you can hear strange international music and where all the hippies and all the like sort of strange people go to eat. [...] So it is sort of weird. [...] You just know it is like an environmental place. (V9)

His phenomenology of environmentalism equates Organiclea's community centre with hippies, strange people and being weird, making it not seen as being inviting or interesting. He then continues:

> All of them seem to be vegans as well. There is not a lot of normal everyday/ I wouldn't say like... ok if you are vegan you are not normal but...[...] There is not a lot of variety. Yes, it is a vegan restaurant, but it doesn't cater for everyone else. (V9)

These two accounts indicate how he is wary of denouncing the design, aesthetic and cuisine of the Hornbeam café altogether while at the same time expressing the exclusionary effects that come along with it. This resonates well with Sherriff's (2009) findings that link the green coding of a Manchester local organic food initiative through emotive photographs of world agriculture and permaculture posters to the dominant participation of the "usual environmental clique" (p.81) that he describes as white middle class. Equally, food justice activist Keval has observed how most food initiatives fail to create the spaces for the lived experiences, the recipes and the histories of their highly diverse communities (Keval 2015). After all, as one diaspora participants puts it:

> There is probably potentially a lot more interest than we think. [...] And potentially, many people that live here have a background in food growing and farming where they came from or in their family history. So it is probably something that you could tap into. It is just a case of how you frame it. (V5)

Yet whitened codings and framings as driving forces behind the perceived exclusiveness and feeling uninvited cannot take all the credit in explaining the entanglements behind being engaged and/or disinterested in Organiclea. Another layer for that became visible by applying intersectionality as an overall

research paradigm is an unwillingness on my part to accept a diaspora subject's post-racial epistemology, which turned out to be another key insight into the workings of white agency. In response to the question whether Organiclea was open to a wide range of people, one diaspora apprentice replied: "I think that is what they want. [...] I feel that they want to cater to everyone." (A6) As this merely reiterates Organiclea's mission statement, I then directed the next question to the actual situation on the ground, to which he reacted:

> The thing is we are all human, aren't we. We all breathe air. We have all got hands and feet. It is just the conscience that is different. [...] Do you know what I mean?" [...] And if you haven't got that mentality it is not going to work. It is one part/ (...) one/ it is for everyone. (...) I mean I believe that is Hawkwood's (...) mission statement or/ (...) [...] they got equal opportunities, haven't they? [...] You have to think of everyone as a whole now/ as one. (...) There is no separation. [...] And I (...) can't get into the political part of it though. (A6)

By applying a one-dimensional whiteness lens to this account, I first identified it as strong post-racial rhetoric on the part of a diaspora observer that tries to de-racialise his racialised experience (Valentine/Sporton 2009). Later into the research process I realised that this interpretation could also, however, be the result of what Smith (1990: 48) has termed conceptual imperialism in that I read "the actualities of people's activities as expressions of the already given", namely the academic literature on whiteness theories. This is "to generate ideology, not knowledge" and the result of 'speaking about' as opposed to 'speaking nearby' research subjects (Chen/Minh-ha 1992). Therefore I was at first not able to recognise his 'non-scientific' epistemology as a critique of science through which he was pointing at the fallacy of labelling difference with dichotomous categories. He just used a 'non-scholarly' jargon for emphasising the co-optation of (feminist) science in the production of dichotomous power relations that re-enact and thus uphold the very racialisation they are trying to overcome (Hill-Collins 2000). This became clear to me as I re-read my notes and internalised empirical intersectionality, which calls for questioning the researcher's 'own' science as a technique that re-produces oppression by rejecting non-academic epistemic theorising as 'non-scholarly', biased and over-simplistic. De-centering academic epistemologies could be a good vantage point to lower the barriers around local organic food spaces in order for other voices to co-create and -shape such spaces and initiatives (Guthman 2011). This interview conversation substantiates this call, where I sensed an immense intrusiveness in exploring the whiteness assumptions of food justice scholarship on my part, which led to the interviewee feeling awkward and intimidated and perpetuated the hierarchical power relations between the white researcher and the diaspora research subject. By upholding and projecting the dichotomous category of diaspora onto this participant, I am effectively denying this individual the right to act out on their agency, which they expressed through their discomfort, critique and hesitation. This is a good example of how subjects and identities are formed as an effect of my positioning as a white researcher and 'cultural insider' (Alkon 2011) that is

located in a relationship of authority to their positioning as a diaspora research subject. Here the power structures of whiteness and science intersect to produce a subordinated subject position that can be made visible by employing intersectionality as an empirical paradigm. This finding raises multiple questions for all the academic realms that are being brought together in this study. Does the agency need another term for subjects that are beyond race as a marker? And what does that mean for the cornerstone of critical race studies that informs food justice research and activism, i.e. the dichotomy of white/diaspora?

Addressing the White Elephants in the Room of Local Organic Food

This attempt to frame food justice from a UK angle has not only invited us to add more dimensions to looking at local organic food initiatives, but also to help white people *in general* realise and own their racialised space of whiteness, which all too often remains invisible. One of the key white elephants in the room that leads to the disproportionate participation on the part of the diaspora at Organiclea is thus the *unawareness* of how white ecological identities have been formed through historical processes of racialisation and contemporary power patterns of whiteness and coloniality, informing people's involvement in local organic food initiatives accordingly. Contextualising the disproportionate diaspora participation in this way highlights how the white bias of Organiclea might not be so much a result of a lack of interest on the part of the diaspora, but rather a lack of awareness on the part of white participants of what it entails to be racialised as white and having a white ecological identity. Cultivating such an awareness would be a vital starting point for a more multi-dimensional framing of local organic food practice at Organiclea that includes more histories of its diverse community. This finding is not only an important contribution to the UK agri-food discourse, but also to the wider racial and cultural discourses in Europe where the ramifications of whiteness continue to be largely undertheorised despite the Eurocentric roots of white supremacy. This study has shown that white-identified subjects are so entrenched in whiteness that even an intersectional feminist methodology seeking to critique it re-enacts its workings. Ascribing and analysing diaspora identities from a 'speaking about' perspective thus reifies subordinated subject positions of diaspora participants by potentially dismissing their post-racial claims. If the objective of such methodologies is mainly geared towards determining the extent to which the diaspora subject is racialised, it may crush any attempts on their part to break free from their subordinated position. Beginning to have conversations about what we do and do not achieve through such dichotomous methodologies that are commonly applied in the realm of intersectionality may therefore be a good starting point to ensure that this research contributes to: (1) Opening up the local organic food landscape to more multi-dimensional subjectivities (2) preventing a whole new monoculture of its own from taking root.

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Appendix

Table 1. Categorisation of Research participants

Type of involvement	Racialised research status	Anonymous code	Number of subjects
Volunteers (V)	diaspora	V2, V5, V9, V10,	4
	white	V7	1
Apprentices (A)	diaspora	A1, A6	2
	white	A4	1
Project workers (PW)	white	PW3, PW8	2

Remarks

1 'Elephant in the room' is an English idiom referring to a large issue that is obvious, but not addressed or discussed.
2 This discourse argues for a complete rejection of 'race' as a category for it is both analytically flawed and politically vacant (Miles 1989; Gilroy 2000), yet should not be mistaken with neo-conservative framings of 'race-neutral' policies that tend to be called 'post-racial' within the US discourse.

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Intraface: Negotiating Gender-Relations in Agrobiodiversity

Abstract: The diversity of plants and animals in agriculture is a social-ecological artefact per se and the result of long-term interaction between humans and agrobiodiversity, displaying the material resistance of the latter. The conceptual framework intraface aims at the analysis of the gendered organization of varieties in an inter- and transdisciplinary research setting. The "negotiations at the intraface" contribute to synthesizing disciplinary perspectives and life-worldly knowledge with a focus on sustainability outcomes with special emphasis on gendered power and interests. The eminent loss of agrobiodiversity requires transdisciplinary knowledge integration for sustainable transformation. The procedure of intraface analysis is illustrated on the case of paddy-rice diversity in Kerala, South India.

Keywords: agrobiodiversity; negotiations; intraface analytic framework; transdisciplinarity; India.

Intraface:
Die Verhandlung von Geschlechterverhältnissen und Agrobiodiversität

Zusammenfassung: Die Vielfalt an Pflanzen und Tieren in der Landwirtschaft ist ein sozial-ökologisches Artefakt per se und das Ergebnis langfristiger Interaktionen zwischen Menschen und Agrobiodiversität, die durch materiellen Widerstand z.B. von Saatgut geformt ist. Der konzeptuelle Rahmen Intraface zielt auf die Analyse der gendered (geschlechtlichen) Organisation dieser Vielfalt in inter- und transdisziplinärer Forschung. Eine Analyse der „Verhandlungen am Intraface" tragen dazu bei, disziplinäre Perspektiven und lebensweltliches Wissen mit Fokus auf Nachhaltigkeit und geschlechtliche (gendered) Interessen zu synthetisieren. Der rasante Verlust an Artenvielfalt erfordert transdisziplinäre Wissensintegration für nachhaltige Ergebnisse. Das Prozedere der Intraface Analyse wird am Fall der Artenvielfalt von Reis in Südindien demonstriert und zeigt, wie die notwendige Wissensintegration über das Brückenkonzept Intraface ermöglicht wird.

Schlagwörter: Agrobiodiversität; Verhandlungen; Intraface; Indien; Transdsiziplinarität.

Introduction

We meet agrobiodiversity daily, for example in the form of bread we eat for breakfast. Embedded in the variety of the cereal is the breeding, selecting and planting by men and women over the last thirteen thousand years (Diamond 1997). This interaction with the material resistance of plants has turned plants into crops. Material resistance refers to the agency of things and organisms, challenging us to organize accordingly as will be expanded below (The material resistance of body and biodiversity, p. 90). Agrobiodiversity maintenance is a continuous process with deeply inserted notions of gender, as the handling of plants

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and animals are embedded in wider social structures. In this paper I suggest the analytical concept "intraface" as a conceptual framework for transdisciplinary analysis of gender in social-ecological research and exemplify it on the case of agrobiodiversity in Kerala, South India. The approach integrates the gender-dimension into an institutional analysis framework of natural resource management with a focus on sustainability. Agrobiodiversity as the diversity of plants and animals in agriculture is a social-ecological artefact per se and the result of long-term interaction between humans and non-human nature. Intraface tackles the puzzle of bridging separate knowledge domains by establishing the dynamic gendered negotiations as the explanandum. This paper proposes and illustrates intraface as a concept, still awaiting its empirical application.

I suggest a gendered analysis of the reproduction of agricultural diversity with a focus on the role of dynamic negotiations at the intraface governed by masculinities and femininities on the social interpretation of material circumstances. Intraface does so by constituting a social-ecological phenomenon – in this case agrobiodiversity – as having a double identity of a natural resource as well as a cultural asset with social characteristics while equally considering in a transdisciplinary fashion academic and laypersons knowledge. To unravel the "negotiations at the intraface", trans-, inter- and disciplinary perspectives informed by a distinctive gendered analysis of power and interests contribute towards the analysis. Finally, the integrated knowledge on the dynamic negotiations allows deriving transformation knowledge towards sustainability. Applying this perspective, the concept aims at revealing insights that are not elucidated by general frameworks focusing on either social or natural sciences. This paper sketches a trans- and interdisciplinary application of the intraface to the exemplary social-ecological artefact agrobiodiversity in South India. The intraface approach aims to mobilize different disciplinary and life-worldly knowledge to secure their contributions to the analysis of gendered negotiations. The intraface approach may allow for a comparative discussion across cases, for transcending barriers between academics and field practitioners and for deriving recommendations for transformation knowledge towards sustainability.

The Social-Ecological Artefact Agrobiodiversity

To illustrate the scope of such an exercise, I demonstrate intraface analysis using the case of the social-ecological artefact agrobiodiversity. Agrobiodiversity is the diversity and variability of living organisms, which contribute to food security, agriculture and the related knowledge base. The double identity of agrobiodiversity as a natural resource and as a cultural asset with social characteristics is a social-ecological hybrid in essence. Therefore, the regulation of agrobiodiversity requires differentiated approaches which reflect its social as well as the natural-material embeddedness. Contrary to extractable resources, the utilization of agrobiodiversity does not diminish, but rather determines its continuous existence, well encapsulated by the phrase "use it or lose it" (Kotschi 2007: 99). This is the paradoxical attribute of agrobiodiversity's social-ecological

constitution; it poses a central challenge to the social and institutional organization of agrobiodiversity regulation.

The rapid loss of landraces and diversity in agricultural systems, the diminishing of gendered knowledge on cultivars and the economic impoverishment of users and custodians of genetic wealth are a social-ecological problem. Younger generations show less interest in agrobiodiversity as it does not hold prestige nor often offer straightforward income possibilities (Schöley/Padmanabhan forthcoming). The genetic erosion in agriculture is accelerated by the failure of several regulating mechanisms. First, the demand of a growing population for food, water and land along with uncoordinated land use results in the degradation of natural resources. Second, the crowding out of local varieties through formalized breeding (Kotschi 2010) is accompanied by a change in property rights and use patterns with an asymmetric impact on gender relations, posing a threat to indigenous knowledge.. As formalized, individual titles gain currency, layered use-rights often serving as niches for marginal plants and planters disappear. Additionally, agrobiodiversity loss on the one hand implies the vanishing of varieties from the cropping portfolio; on the other hand, it threatens the experimental and practical knowledge of ecological, economic and social characteristics of local cultivars.

The problem of genetic erosion hits women in their practices to use and conserve agrobiodiversity through their knowledge for food security and income generation (Howard 2003). Putting agrobiodiversity into the context of sustainability asks specifically for the dimension of gender relations, intersecting with other categories of class, caste, etc.. Agrobiodiversity loss is caused by economic and ecological, institutional and sociological factors in complex and often unintended ways. Linking this dynamic phenomenon with the normative question of sustainability and fair gender relations is a highly contested issue. Interpretations of sustainability and gender differ due to interests, identity in terms of religion, caste, ethnicity, property rights, dependency and involvement, but also according to gender and age (see Nowak this volume). To rethink agrobiodiversity use and conservation from different disciplinary and transdisciplinary vantage points in the light of sustainability requires a method of knowledge integration. By illuminating the "negotiations at the intraface" contested knowledge is aligned according to a gendered analysis of interests and power.

Already by selecting a specific social-ecological problem, the normative foci are set and serve as a joint goal to be described and investigated. The development of transformation knowledge is a step towards addressing both the social and ecological loss of agrobiodiversity, stressing not only the need for conservation but more importantly societal innovations. Working on the transformation of the current destructive land use system towards sustainable practices, the gender perspective serves as a cross-cutting issue to organize, systematize and synthesize disciplinary results transforming them into instruments for sustainable development. A vital step in transdisciplinary research is the integration of different knowledge forms. This is by no means a trivial task, as Phillips (2011) points out in respect to co-production of knowledge. This applies to intraface in

two respects, as it is interested in the co-production at the intraface, but also in a transdisciplinary sense between researchers and non-scientists.

Gender Analysis and Sustainability Science

Sustainability sciences and gender studies are linked via the social-ecological and normative dimension. They resemble each other in structural and typological patterns. For a long time sustainability sciences have paradigmatically chosen to be natural sciences, claiming objectivity, (gender) neutrality and shielding off possible influences of gender-relations (Hofmeister et al. 2013). Sustainability research and gender studies are both constituted as dealing with normative issues, context and problem focused as well as oriented towards integration. Sustainability challenges science in its self-conception as value-free. It implies thinking about the future guided by ideas of inter- and intragenerational justice and implies openness and flexibility in options for action and creating futures. It further places high demands on the process and actors by which it is created. Transdisciplinarity integrates fragmented knowledge and presents itself as a strategy to recover scientific capabilities for problem solving.

Feminist inquiries call for a critical inspection of power and structures of dominance within each discipline. In the context of sustainability studies, the notion of gender bears two aspects. On the one hand, it analytically questions scientific concepts of nature and their implicit construction of gender-relation; on the other hand, it transports a strong normative component of claims to justice. Through questioning and criticizing conventional conceptualizations of human-nature relations, gender inquiries formulate an emancipatory claim to overcome inequalities (Momsen et al. 2013). Disciplines have theorized and incorporated gender analysis to different degrees, thus allowing or hindering interdisciplinary cooperation and integration. Social-ecological research regards gender-relations as situated in specific contexts and perceived through the lens of a certain problem constellation. An interdisciplinary reading of the category gender operates around the nature vs. culture difference as a converging point of various disciplinary descriptions and definitions. Therefore, it is necessary to describe gender-relations in the historical situation of daily practices again and again (Becker/Jahn 2006: 233). For the sake of intraface analysis, gender encapsulates culture-specific notions of feminity and masculinity intertwined with conceptualization of nature and the body, intersecting among others with class, caste and ethnicity through process, structure and relations.

Social-ecological research supposes gender equity as a central means and outcome of sustainability (Schultz et al. 2010). Therefore, the different specifications of gender relations and their deeper constitutional impact on societal relations to nature and their biophysical-ecological dynamics are central. Social-ecological research views gender as an interdisciplinary category to convey scientific cultures and as a transdisciplinary one to link scientific and everyday knowledge (Mölders 2010:75). The gender dimension serves as a common denominator and thus a bridging concept in a theoretical and methodological manner. Gender

analysis forces disciplines to reflect, expand, accommodate and push boundaries for theoretical and methodological developments. The engagement with gender is a constant challenge because it is contested, fluid and changing over time. The focus is thus on the expression of femininities and masculinities, i.e. what makes a man or a woman in a specific context.

The distinction between sex and gender is a reaction to the rhetoric of naturalizing women, thus transferring the Eurocentric nature vs. culture paradigm and its inherent hierarchy to gender-relations. The notion of gender signals that the hierarchies embedded in the dualism man vs. woman are not taken as biological given, but rather socially created and thus subject to change. Gender can be conceptualized along three dimensions which highlight different, but fundamentally additional aspects. Gender is a process category, a structural category and a relational category (Moeckli/Braun 2001, Kolar and Baerlocher this volume). Gender as a process category is an outcome of social interaction of individuals, which produces gender in every encounter. One is rather "doing" than "being" gender. In this tradition the feminist critique on natural sciences focuses on scientific ways of naturalizing gender and influencing the construction of difference (Subramaniam 2014). Gender as a structural category is recognized as a principle of organizing society, positioning men and women in hierarchical relationships. Therefore, it is important to consider both bodily men and women in the analysis of social and political institutions and how their relationship is shaped and enforced for example by institutions like caste. The emerging masculinities and femininities appear as expressions of gender as "a field of structured and structuring difference […] of extreme localization, of the intimate personal and individualized body […]" (Haraway 1988: 588). Gender as a relational category sets an analytical focus on differences, hierarchies and exclusions in societal arenas, taking also into account the specific context and the organization of intimacy like the body, health and reproduction. This perspective is especially applicable for transdisciplinary enquiries, as the construction of gender-relations appears as a result of the interaction of life-world perceptions and scientific knowledge in their specific cultural, historical and political expressions. As transdisciplinary knowledge aims to be relevant for more sustainable outcomes, strategies for problem solution have to be context and – as I do argue – gender-relation specific.

However, beside all critical reflexive knowledge on the construction of gender, in our case study of agrobiodiversity we are confronted with the lifeworld of bodily humans in Wayanad, governed by strong heteronormativity and stratification via caste. The material handling of seeds, plants and knowledge is organized within this dominant patriarchal context. Thus the division of labor follows rigid sex segregation, though the pattern may vary between communities, i.e. Christian settlers and various Adivasi groups. We are aware of the unstable and mobile nature of gender, entangled with multiple processes of producing identities, power and inequalities (Elmhirst/Darmastuti 2015). For operationalizing gender for empirical research in South India, we work with the self-identified subjectivities heavily influenced by processes homogenizing group identities, regulating gender and ethnicity.

The Material Resistance of Body and Biodiversity

For male and female agriculturalists matter always mattered. Nature is not the silent, blank resource for the exploits of culture, but an agentive, signifying force (Haraway 1988). What I term material resistance is the idiosyncratic characteristic of plants, animals and people bodies to social acting. Just like "dead" material, the living matter poses challenges to making sense and a living in a lifeworldly manner. In this sense resources are a source for regeneration and possibilities in abundance. The abundant source turns into scarce resource when interests come into play. The competition over access and exclusion, use and commodification, distribution and lack points to the involved interests in certain parts of nature. Resource thus reads as a specific interest in living and dead materiality which needs to be unpacked. Haraway (1988: 591) reminds us in her seminal paper on situated knowledge of the particularity and embodiment of all knowledge. Instead of claiming an innocent epistemological position, even subjugated ones can only present embodied objectivity. Rather the feminist limited location creates situated knowledge, which is able to be called into account. These politics and epistemologies of location, positioning and situating acknowledge partiality as a condition to make knowledge claims. In this vein material feminism perceives nature as agentic and its acts have consequences for the human and non-human world (Alaimo/Hekman 2008). The "material turn" in feminist thought aims at bringing back the material into science without losing sight of social constructivism. A new way of understanding the relationship between discourse and matter does not privilege the former to the exclusion of the latter. By doing so, material feminism wants to introduce ethics that overcome the paralysis of cultural relativism. Mind and matter are mutually co-constructed in an on-going process (Wilson 2008).

In her concept of agential realism Barad (2003) asks "how matter comes to matter". She suggests a post-humanist, performative approach to analyze techno-scientific and natural-cultural practices while recognizing the dynamic force of the material. She shifts the focus away from the questions of the representation of reality to practices, actions and doing. A central term in her theory is the notion of intra-action, pointing to the material as an active agent in the world, instead of being kept apart by delineating and maintaining borders between i.e. humans and non-humans. Intra-actions are material, discursive, human, more-than–human, corporal and technological. This posthumanist perspective moves beyond the exemplary situation of humans, but places them among other beings and material. It asks how the border between nature and culture is drawn and continuously maintained. Moreover, nature is pictured as active and having a history on its own. With intra-actions Barad underlines the entity of all human and non-human subjects.

The co-constitutive materiality of human corporality and non-human natures leaves behind the nature-as-wilderness model and rather embraces the materiality of humans, non-humans and material substance as actors. Nevertheless, Grossmann (forthcoming) rightly points to the lack of operationalization of material feminist concepts in empirical research. If "practices are, by nature,

embodied, situated actions" (Alaimo/Hekman 2008: 7), we may start by considering properties of nature components and characteristics of gendered actors who come together in the here and now. Materials like living plants and animals as in agrobiodiversity, but also the soil texture of the paddy field forces organization around particular material resistances. The material resistance of body and biodiversity asks us to consider anew the "relations between body, mind and landscape" (Mortimer-Sandilands 2008). At the "negotiations at the intraface" the influence of scientific framings and the inherent power structures of gender-relations are contested and simultaneously merged. Intraface considers both as situated knowledge (Haraway 1988).

Knowledge Integration in Transdisciplinary Research

Requirements of transdisciplinary research for transformation knowledge give rise to the need for integration in a methodological way. Transdisciplinary research swings between two polar opposites. On the one hand, the life-world research approach pays attention to the participatory involvement of stakeholders in contributing to problem solving in the life-world (Burger/Zierhofer 2007). On the other hand, the science centered research approach starts from debates within academia. An integrated research approach – like social-ecological research – pursues both epistemological orientations simultaneously. The thus arising tension between practical expertise and theoretical frontiers requires a method to integrate both ends of the range of knowledge creation. The intraface approach suggests a multitude of knowledge claims with preeminence given to inherent gendered connotations.

Integration is a fundamental requirement for transdisciplinary research, a scientific principle juxtaposing the continuous differentiation and specialization in science (Bergmann et al. 2012). The dynamic between differentiation and integration appears to be a constitutive characteristic of transdisciplinary science and is in need of a methodological procedure to achieve this. The combination of knowledge domains from various disciplines requires scientific methods of integration (for example, through the development of bridging concepts like the proposed intraface) the more so if social-ecological issues are at stake and non-academic knowledge is involved. As transdisciplinary research aims to provide solutions to social problems not fitting into disciplinary specializations, the task of integration requires communication to overcome terminological differences, coordination of knowledge domains, identification and investigation of knowledge gaps, and creation of methods to establish a common idea of the problem and its parts (Christinck/Padmanabhan 2013). Transdisciplinary research pools specialized disciplines and focuses on very specific, concrete problem constellations.

The Concept of Intraface: Gendered Social Interpretation of Material Circumstances

The concept of intraface places the negotiations over gendered rules at the centre of the analysis (Padmanabhan 2002). The linkage between institutional and gender analysis offers insights into the social organization of social-ecological issues. Gender is a central variable since the institutional environment of rules and regulations differs by gender, intersectioned (see Nowack this volume) by class and caste, as property rights and power, work and responsibilities, and knowledge and values vary accordingly. In the following I want to delineate the ontological pedigree of intraface from the concept interface (Long/Long 1993) and its distinguishing features as well as other influences from institutional analysis.

Norman Long's (2001) concept of the "interface" grounded in development sociology serves as the foundation for intraface. Resting in the tradition of sociology of knowledge, interface is used as a metaphor for the places where knowledge about identity and the world is contested and altered. Interface is rooted in the school of symbolic interaction, which regards the process of interaction in the formation of meanings for individuals as symbolic (Blumer 1969). Attaching meaning is achieved via language and thought and is best observed in humans' practical, interactive relation to their environment and respective sense making. Interface defines the social space where different life-worlds encounter each other. Long developed this concept to analyze the typical situations of different expectations, knowledge claims and aims in a development context, to reconstruct strategies and rationalities of actors. In this vein, interfaces looks for the structural conditions of development actors and frames these processes of interaction as fields of conflict and negotiations.

Gerharz (2014) places interface as a methodology in the tradition of sociology of knowledge. Interface enables to reconstruct and comprehend rationalities and strategies of actors in situations where diverse knowledge claims and expectations meet. It is designed to reveal structural aspects of development cooperation, understand actions of actors and to view processes as fields of conflict and negotiations. Interfaces appear in social situations where actors of different rationalities meet: Their perspectives, world visions and experiences differ as well as power endowments. This has consequences for the significance of induced social change aiming at society's structure. While interface emphasizes the autonomy of actors, the significance of masculinity and femininity in creating meaning is neglected.

However, intraface goes beyond the description of critical points of intersection between life-worlds, social fields, or levels of social organization. Intraface focuses on the gendered asymmetries embedded in social institutions. I find it necessary to specifically highlight the intersection of power(-lessness) according to class and caste entangled with the category gender. Therefore, intraface as an analytical term assigns importance to situated actors with overlapping identities in a gendered setting. Actors' rationalities do differ not only because of class and caste structures, but due to asymmetrical gendered norms and values.

From a sociological point of view, intrafaces capture the gendered conflicting and coercive interests (Padmanabhan 2005). However, my usage of intraface stresses the simultaneous intersectional sameness but gendered difference of human actors.

Inspired by the framing of knowledge encounters, I thought of intraface as the place where the insider/outsider distinction is read along lines of gender in an intersectional fashion. The concept of intraface is able to identify and unravel the negotiations over masculinities and femininities within one life-world on the basis of the social interpretation of material circumstances like natural resources. To analyze the link between the social organization of environmental coordination and the social category of gender, I introduce the term intraface into the "Institutions of Sustainability" (IoS) framework by Hagedorn et al. (2002). In the tradition of classical institutional economics, the conceptual framework dissects the linkage between the natural good and human actors. The IoS captures the dual character of social-ecological systems by asking for the relationship of the properties of transaction of nature components and the characteristic of actors to understand systems performance. It proposes four groups of determinants of institutional change towards sustainability: (1) properties, features and implications of transactions related to nature and the ecosystem; (2) characteristics and objectives of the actors involved in those transactions; (3) the design and distribution of property rights over nature components; and (4) governance structures for agro-environmental relations. The transdisciplinary boundary concept of intraface zooms into these aspects of differences in assets, power, interests, property rights, and resulting negotiations within this institutional framework. Thus, the intraface approach is able to show the dynamic of these negotiations between actors on gendered sustainability outcomes.

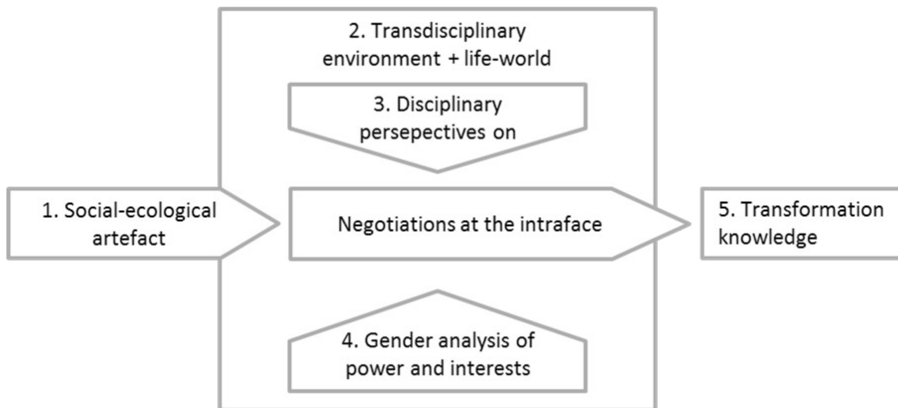

Fig. 1. Negotiations at the intraface (NaI)

Negotiations at the Intraface

Intraface analysis starts off with defining the (1.) social-ecological artefact at hand, which in this case is agrobiodiversity as a mutual cultural asset and natural resource. We will illustrate this with findings from rice-systems in South India. This artefact is embedded in a (2.) transdisciplinary environment and several life worlds, where laypersons like small scale male farmers as well as experts like female breeders attach different meanings to the artefact, thereby expressing the multilayered societal relations to nature. At the "negotiations at the intraface" the influence of scientific framings and the inherent power structures of gender-relations are contested and simultaneously merged. Intraface considers both as situated knowledge (Haraway 1988). Thus (3.) disciplinary perspectives and (4.) a gender analysis of power and interests feed into the "negotiations at the intraface" to produce (5.) transformation knowledge. Therefore, professional and lay actors negotiate at the intraface in a transdisciplinary manner. For conducting an intraface analysis I propose the following analytical questions and will exemplify it at the example of agrobiodiversity in South India:

1. What is the problem description of the social-ecological issue for NaI?
2. Who and what generates tacit knowledge in the transdisciplinary life-world of NaI?
3. What are the disciplinary terms and theories relevant to NaI?
4. What gendered values and means of negotiations do actors have at NaI?
5. What is the emerging transformation knowledge integrated across disciplines?

Intraface analyzes gender-relations and the potentials for change around the social construction of human-nature relations. The concept "intraface" describes the negotiations of actors over gendered social orders within their life-world and allows for a systematic description of differences and similarities of power and interests. Intraface situates the dimension gender at the centre of analysis, i.e. of the social dilemma of agrobiodiversity maintenance and the search for equitable instruments of governance. The boundary spanning concept intraface provides a framework to bundle social and natural science, i.e. ecological, sociological, economic and institutional terms and methods, towards a shared understanding of the system. Intraface is intended to bundle contributions from single disciplinary approaches towards gendered human-nature relations. It sets up a reference matrix to capitalize on the dialogue between disciplines and practitioners. Intraface views the anthropogenic dealing with – for example – agrobiodiversity as a societal tension with the resisting natural phenomenon and is interested precisely in this tension.

Since the negotiations concerned take place between genders within a shared life-world, intraface is a succinct concept for describing both the situation of cultural, ethnic, and life-world sameness and the gendered differences. Intraface is a critical point at which different normative values and interests within

entities of social groups occur. At intrafaces we observe cooperation alongside obvious and subtle conflicts within. The analysis of the intraface is concerned with negotiations and power issues between actors sharing a common life-world. For example, do male and female farmers interact with the same nature components for their reference but encounter different social structures and norms due to their gender. The term intraface covers the simultaneity of the commonly perceived framework of a group of actors and the distinct room to maneuver according to respective masculinities and femininities. Thus, the sociological concept of intraface incorporates the gender dimension into the institutional analysis. The focus is on situations in which different perceptions encounter each other and on the subsequent process of negotiation.

The intrafaces appear along with gendered actors, who might hold contradictory views about the validity, significance, completeness and appropriateness of different contents and forms of knowledge. The researcher has to reflect this in the design of the study, the choice of topic and focus, informants and translators and, finally, data analysis. The intraface brings to the forefront the social embeddedness of scientific and local knowledge and asks for reflexivity. Negotiations at the intraface are concerned with existing knowledge in the pursuit to create transformation knowledge. At the core, negotiations at the intraface arise around the questions of 1) what is the issue, 2) what is legitimate, 3) what is valid, 4) what is the goal and 5) who contributes, who benefits in the long run? By conducting an intraface analysis, disciplines are challenged to enter a discourse of methodological, ontological and epistemological nature.

The concept of intraface sets the analytical focus on negotiations of formal and informal gendered rules. Institutions and rules are contested at the intraface, which makes gendered interests and negotiations observable. Power relations differ not only between actor groups but also within a group. Bargaining power and access to information as well as voice differ greatly between men and women. For example, decisions made by men in agrobiodiversity management e.g. regarding crop rotation or species selection may influence women's food security and fallback position. The social construction of nature and gender are important ideological devices to perpetuate asymmetries in decision-making.

The eminent loss of agrobiodiversity requires transdisciplinary knowledge integration for a transformation towards sustainability. Sustainability research requires the integration of scientific knowledge from different disciplines and practical know-how of various stakeholders (Hunecke 2011). Transdisciplinarity rethinks the relationship between science and society and changes the mode of research into one of a knowledge network, linking academic and non-academic actors around a problem in a discursive manner (Dusseldorp/Sautter 2011). As transdisciplinarity aims at contributing to problem solving, transformation knowledge – defined as the operational strategies of achieving sustainability goals under existing conditions – is without gender analysis and a gendered problem framing less likely to be attained. The users of transformation knowledge always happen to be gendered. Thus taking the category gender into account

demands to rethink the expectations, experiences and possible consequences of knowledge outcomes. Gender-relations act as a marker for social differences and intersectionality in general (Becker/Jahn 2006, see Kaijser and Kronsell this volume). Therefore, transformation knowledge needs to be gender-specific to produce problem solving strategies that are context sensitive and thus relevant. In the following I want to delineate how intraface is able to support the synthesis and integration of contributions from different disciplinary origins.

Integrating Institutions and Gender for Sustainability

The analytical questions posed to "negotiations at the intraface" prepare the integration of different trans- and disciplinary contributions towards a transdisciplinary synthesis. Gendered interactions between nature and actors as well as institutions of environmental coordination contribute to understanding gendered negotiations at the interface. Merging the sociological perspective with the institutional approach overcomes altruistic and reductionist assumptions about the household as a gender-neutral site (Waller/Jennings 1990) and differentiates the process of negotiation on the grounds of an actor's power, property rights, and co-ordination. The Institutions of Sustainability framework (IoS) serves as a heuristic framework to organize the inquiry into institutions that affect the natural environment and ecological systems through production and consumption activities and self-organization (Hagedorn et al. 2002).

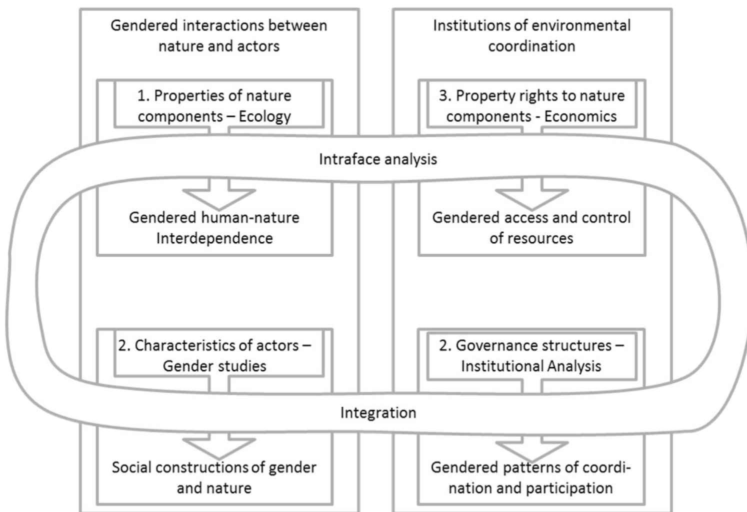

Fig. 2. Intraface and the conceptual framework for institutional and gender analysis (based on Hagedorn et al. 2002 and Padmanabhan 2005)

The gendered interactions between nature and actors are of concern in the left column of the heuristic framework. What has become labeled as material feminism is debated in development studies and rural sociology as the properties of nature components and their resulting effects on human-nature interdependencies. Informed by a critical perspective on the social construction of gendered actors and nature we may understand agrobiodiversity practices like selecting, storing and consuming as the bodily performance within a patriarchal structure evoking particular situated masculinities and femininities. The right column asks for the institutions that mediate the interaction between gendered bodies and environmental material via regimes of access, control and participation.

An integration concept starts from the analytical core of terms and takes care of securing compatibility with social as well as with natural science approaches. In intraface analysis the starting point lies in the disciplinary elaboration of the term gender. It is vital to link the concept to disciplinary terms and theories (Padmanabhan et al. 2010). Considering "negotiations at the intraface" is thus a first step towards synthesizing transdisciplinary and disciplinary knowledge in an interdisciplinary fashion. The critical contribution of the intraface to different disciplines is the extracting of the rich knowledge on gender-relations from within disciplines and practices. The unearthing of knowledge and its conditionality provides for the necessary debate among interdisciplinary researchers to arrive at a synthesis.

Negotiating Agrobiodiversity at the Intraface

In the following I suggest ways to make the notion of intraface productive by linking it to the disciplinary contexts of ecology, economics, institutions and governance. This illustrates the possibility of integration via intraface. Intraface engenders the institutional analysis of human-nature interaction. Four dimensions influence the institutional arrangements in resource management in a specific context. The case of agrobiodiversity in South India demonstrates the gendered lens of intraface analysis:

Ecology: Gendered Human/Nature Interdependence

Gendered interactions between nature and actors are shaped by the properties of nature's components and its material resistance. For example, agroecology illuminates the interaction of anthropogenic utilization and ecological dynamics (Ghazoul 2007). The human-nature interdependence finds its expression in farmer's gendered knowledge and management practices. Ethnobiology has emerged as a hybrid discipline to design and implement more inclusive research by considering gender-based spatial and temporal exposure to ecosystems resulting in gendered ecological knowledge (Pfeiffer/Butz 2005). To explore the ecological and agricultural knowledge of local people and social transformation processes Betz et al. (2014) developed the social-ecological web as a bridging concept to integrate

knowledge from social and natural sciences. The social-ecological web is a useful method to highlight differences between communities, to foster interdisciplinary analysis of both social and ecological changes, and to reflect on the challenges of integrating several disciplines and stakeholders.

Women's responsibilities in and knowledge of biodiversity management is widely documented (Howard 2003), as is their variation among contexts and cultures. Emerging as common to women's contribution to agrobiodiversity management is that the selection, storing, pruning, tending and other activities are generally not considered actions in their own right, but rather extensions of women's reproductive cores. Such intellectual and manual tasks become invisible when transactions take place in the realm of another reproductive task. This is particularly the case of the Adivasis Paniya, landless daily wage laborers or wild food gathers in Wayanad, South India: The tacit knowledge women apply to their work is not perceived as an additional value added to a specific site but as an extension of "women's nature." The false perception of women's work as their essential character and not as a part of their labor is still a powerful tool to dilute women's contributions and respective claims (Padmanabhan 2011).

Gender Studies: Social Construction of Gender and Nature

Gendered interactions between nature and actors are influenced by the characteristics of actors and how they construct the relationship between gender and nature (Moeckli/Braun 2001). Rural sociology and gender studies provide two aspects towards the understanding of social-ecological issues: the analysis of gender relations de-naturalizes power relations between genders, thus pointing at socially crafted and therefore changeable inequalities (Agarwal 1991). Furthermore, feminist epistemologies demand for dealing with objectivity, subjectivity and reflexivity of research (Kunze/Padmanabhan 2014), thus offering a foundation for the cooperation of disciplines (Jackson 2006). The analysis of intrafaces creates insights into the social organization of agrobiodiversity and the human struggles with the double trouble of being social-ecological beings.

Agrarian change and social reorganization reshape gender-nature relations in the Adivasi community of Kuruma in Wayanad, India (Kunze forthcoming). Gendered subjectivities question the socially constructed image of women being closer to nature or protectors of agrobiodiversity, as this aspect plays a less significant role in the everyday lives of Kuruma women. Instead, it is rather men who reinforce the dichotomy between traditional/modern agriculture. They construct a self-identity of Kuruma people as being "traditional agriculturalists" cultivating sustainably in environmental and economic terms. Agriculture is categorized as a masculine domain which not only constitutes social relations of power and authority between female and male Kuruma farmers but also denies women the right to claim agricultural knowledge. Kuruma women's subjectivities are now strongly reshaped by social reorganization determined by access to education, mobility and increased employment opportunities. The construction

of women as conservers overlooks their agency for change and their rejection of care responsibilities.

Economics: Gendered Access and Control of Resource

Property rights to nature's components are an outcome of institutions of environmental coordination. They decide about access to and control over benefit streams, which may vary decisively between genders in intersectional ways. They may limit women's stake in decision-making through particular property rights institutions or grant them access through common pool titles. Household decision-making affects the welfare of individuals under conditions of socially generated gender asymmetries in access to opportunity, power and assets (Quisumbing 2003). The intraface can be observed at the analysis of gender-relations and the potentials for change in terms of welfare, employment and income as well as indirect benefit streams like ecosystem services (see Kolar/Baerlocher this volume).

For example access to seeds is crucial and we observe the exclusion of women across caste and class from formal seed networks in the case of Wayanad, South India (Schöley/Padmanabhan forthcoming). The handling of seeds and exchange highlights the gendered organization of agrobiodiversity. Masculinities and femininities differ in the face of coexisting formal and informal institutions seed systems in Wayanad. Male farmers draw on a larger number of paddy seed source. Their social networks include the formal breeding system as well as landraces selected from farmers' fields. In contrast, women farmers procure rice seed by and large from within informal networks. Women collaborate not only on the field but also in seed storage, thus actually taking care of and acting out on maintenance. Both men and women heavily depend on collaboration in their paddy cultivation and seed management strategies, with joint purchase of seeds on the formal market by pooling transport. The differentiated collaboration patterns demonstrate that paddy cultivation relies on cooperation, a consequence of ecological requirements and resulting material resistance. Interestingly, this ability of men to choose from a wider array of seed sources is evident across different Adivasi communities. Shared masculinities dominate access and control. All communities report a shrinking concern of younger farmers in seed management.

Governance Structures: Gendered Patterns of Co-ordination and Participation

The governance structures of agrobiodiversity centre on cooperation and coordination with implicit gendered rules and regulations (Padmanabhan/Jungcurt 2012). Governance structures include institutions of environmental coordination which lead to gendered patterns of participation. Power becomes a central focus of inquiry in the analysis of institutions in order to describe and understand how institutions embody certain sets of gendered power relations. Looking at the

institutional nature of gender is one promising approach to studying gender and the environment (Zein-Elabdin 1996). Intrafaces arise when connecting gender, institutions and power to establish gender as a crucial dimension of how norms operate within institutions.
In Kerala, South India, Suma/Großmann (forthcoming) observe an increased participation of women in political bodies, while at the same time their agro-ecological knowledge is neglected and disempowered. Within ongoing processes of decentralization, rural local councils (Panchayats) have been revitalized and a number of institutions of local self-government, including women's self-help groups (Kudumbasree) established. Kudumbasree in Wayanad enhance women's presence, representation and decision-making power as well as their self-confidence and capacities. Women's farming groups upgraded women from the position of agricultural laborers to group farmers as well as giving women at least access to land and agricultural credit systems. Yet the latter tend to reproduce asymmetrically gendered power relations in agricultural production and minimize women's management for agriculture. Men still hold virtually all of the decision-making power over the most valuable resources: seeds and land. Kurichya women have vast knowledge about rice cultivation, but cannot use it for actively cultivating rice on their own, as they have no access to traditional rice seeds and land in the rainy season. However, integration and enhancement of the traditional knowledge of Kurichya women in the state-designed women's group program has not been taking place, as it promotes high-yielding seeds and fertilizers. In fact, some women have now become the vehicle for introducing high-yielding seeds and fertilizers into local agricultural practices, as it is impossible for them to access traditional rice seed regarded and guarded as the domain of men. Therefore, the widely held notion of women being preservers of agrobiodiversity does not seem to be in evidence in the case of Kurichya women and traditional rice-seed varieties.

Analyzing negotiations at the intraface occurring over the meaning of agrobiodiversity reveals the material resistance of the social-ecological artefact to illuminate the social interests in gendering nature components and related actions. This multifaceted debate at the intraface provides a shared understanding of the symbolic interaction over agrobiodiversity. Thinking about different dimensions of agrobiodiversity as a gendered issue is the puzzle intraface aims to solve in a transdisciplinary manner to foster sustainability outcomes. Following the analytical questions proposed to reveal the negotiations at the intraface in the case of agrobiodiversity in Wayanad, India, we observe a contested landscape around the material resistance of seeds.

1. The emerging social-ecological issue is the vital seed that relies nevertheless on humans' gendered interests and capabilities to continue as the source for a diverse agriculture. The intraface helps to arrive at an inter- and transdisciplinary problem description.

2 In the exemplary case of rice-farming in the district of Kerala, especially Adivasi farmers stock not only the material seed but accompanying tacit knowledge on storing, planting, processing etc. according to the gendered division of labor and access rights. Intraface analysis enables to look into the knowledge and material dynamics behind patriarchal norms.
3 To capture the material resistance of agrobiodiversity, ecological, economic and social concepts frame the inquiry, whereby the challenge of all inter- and transdisciplinary endeavor remains in integrating different knowledge claims of contributing disciplines at the intraface into a coherent narrative.
4 Intraface analysis shows the different institutional and normative mechanisms at work to amplify or negate contributions to agrobiodiversity by stating and institutionalizing knowledge claims as in the case of Adivasi masculinities.
5 Last not least, the analysis of negotiations at the intraface provides a common ground to derive transformations knowledge. Showing the knowledge linked to notions of femininity and masculinity and subversive circumvention of this confinement highlights possibilities but also dangers in ignoring the gendered connotation of negotiations at the intraface.

Intraface Analysis for Transformation Towards Sustainability

The development of the conceptual term intraface in this paper has been exemplified on the example of agrobiodiversity. Establishing intraface as a bridging concept serves the process of knowledge integration. A bridging concept is a common conceptual framework and links researchers in an analytical way in the joint research- process (Deppisch/Hasibovic 2013).

We may distinguish three phases of this transdisciplinary process (Jahn et al. 2012). Problem transformation is the first step from an identified real-world problem to an academically framed research agenda. It is an iterative process, moving between building research theory and reconnecting it to the real-life situation. Here intraface can provide orientation by jointly arriving at a working definition of the social-ecological artefact. Second, interdisciplinary integration requires identifying, explicating and recognizing differences, such as between different scientific disciplines and schools of thought. Here intraface proposes gendered interests and power as a boundary object for integration. Last not least, transdisciplinary integration requires dialogue and action-based tools for integrating the knowledge, views, values and skills of non-academic and academic stakeholders alike. In this vain "negotiations at the intraface" are meant literally, it makes implicit gendered assumptions available for analytical scrutiny. The task of integration has to be achieved at various levels simultaneously: on the epistemic, i.e. recognizing the limits of concepts or findings, regarding social-organizational by connecting and reconciling structures and on the communicative level by finding a 'common language.'

So far I have proposed intraface analysis and illustrated it at the example of agrobiodiversity for its capacity to compare across multiple case studies, to

transcend knowledge barriers and to serve as a bridging concept to contribute transformation knowledge to social-ecological problems.

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Gespräch

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Why We Need Critical Interdisciplinarity: A Dialogue on Feminist Science Technology Studies, Postcolonial Issues, and EcoDiversity

A Dialogue between Banu Subramaniam and Sigrid Schmitz

The following dialogue between two biologists and Feminist Science and Technology Studies (STS) scholars, Banu Subramaniam and Sigrid Schmitz, took place on June 16th, 2016 at the Albert-Ludwigs-University of Freiburg. Banu Subramaniam gave a talk on "Interdisciplinary Hauntings: The Ghostly Words of Naturecultures." Afterwards both researchers discussed the linkages between feminist science studies, postcolonial perspectives, and eco-diversity discourses.[1]

Sigrid Schmitz: In your previous talk "Interdisciplinary Hauntings: The Ghostly Words of Naturecultures" that is based on your publication *Ghost Stories for Darwin*[2] (2014) you have asked what morning glory flowers or alien plant and animal species have to do with the histories of gender, race, or eugenics. You trace the genealogies of ecology and evolutionary biology to demonstrate how foundational ideas of "variation" in biology are inextricably connected to ideas of "diversity" and "difference" in the humanities. Making a passionate case for interdisciplinary work across the humanities, the natural sciences, and the social sciences, you have explored how histories and concepts of gender and race shape contemporary biological theories and what lessons we can learn about the relationships between natures and cultures.

I would like to start our discussion on the potentials and limits of the inclusion of current feminist science studies and postcolonial perspectives into ecodiversity discourses, and on their importance for questions of environmental governance. You've shown how deep the linkages are between the categorization of animals and plants as good/bad, native/alien on the one hand, and the simultaneously used terminology concerning worldwide migrant politics on the other hand. If I have got it right, you argued that we *should rethink* the constraints we place on our scientific politics, and perhaps how we could change these politics – and consequently maybe also change eco-politics as well as migrant politics. And I refer to the end of your lecture where you talked about the monarch butterfly that could provide a different framing for an alien; as something we may welcome a little bit more.

Banu Subramaniam: We live in surreal times. Across the world, we are seeing a turn to nationalist and nativist politics; we talk of walls and electrified fences to keep the undesirables out. The rhetoric is in the air. The world is separated into binaries, good and evil; natural and unnatural; native and alien; rational and irrational; sacred and profane; white and black.

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What interests me are the narratives of fear and apocalypse, and how these narratives are connected to particular histories of colonialism, race, and gender. The solution seems to be to eradicate all invasive, foreign, and exotic species, and to return to a native planet, where everything is in its "proper" place. What is that imagination of a native planet? For me it is a fundamentally anti-evolutionary argument. Because central to evolution and evolutionary biology is change, is chance, and random mutations. Nature never stays still. And so this idea that we have to fix the good and desirable planet on some arbitrary point in the ecological evolution of the planet is fundamentally anti-biological for me.

The metaphor of the ghost – as I have used in my talk – emerged in the landscapes of Southern California. This began as a collaborative project on invasion biology. As a biologist, I was keen to understand and explain the shifting landscape – why are native species dwindling in numbers and why are exotic and foreign species growing? Engaged in the feminist studies of science, I was interested in invasion biology's articulations of space and belonging. The idea of invasion is predicated on understanding nature as being "in place" or "out of place." This idea of "nature in place" was first outlined by English botanist John Henslow in 1835. "Nativeness" and the familiar native/alien binary thus emerged in the botanical world so that botanists could define "a true British flora". In our recent genealogy of invasion biology, Charles Elton's book *The Ecology of Invasions* (1958) is often cited as the classic book. According to the United States Department of Agriculture (USDA), "[i]nvasive plants are introduced species that can thrive in areas beyond their natural range of dispersal. These plants are characteristically adaptable, aggressive, and have a high reproductive capacity. Their vigor combined with a lack of natural enemies often leads to outbreak populations." While we have seen policies to limit the free flow of biota across borders, it was only in the 1990s that "invasion biology" as a field or discipline of its own emerged, leading to an explosion of work over the last two decades. Indeed, this is now fertile ground for research and policy. Most governmental and non-governmental organizations that deal with the plants and animals, such as the USDA, state governments, National Science Foundation (NSF) committees, as well as environmental groups such as The Nature Conservancy and The Sierra Club all have invasive species programs.

As I argue in my recent book, *Ghost Stories for Darwin*, the relationship of nation states and the natural world have varied historically in numerous and diverse ways. To give you a few examples, Alfred Cosby in his influential book, *Ecological Imperialism* (2004), argues that the roots of European domination of the Western world have a critical biological and ecological component. Where Europeans went, their agriculture and animals thrived and indigenous and local ecosystems collapsed. In the late 19th century and early 20th century, the USDA sent biologists as "explorers" around the globe to find new and interesting plants of economic and aesthetic interest. For instance, Dr. Douglas Fairchild, director of USDA's Seed and Plant Introduction Section from 1898-1928, is said to have introduced over 80,000 species and varieties into the United States. Likewise, the American Acclimatization Society attempted to introduce all of the bird species in Shakespeare's works to New York City's Central Park in the

1890s. However, by the end of the 19th century we see an end to the open and laissez-faire U.S. policy towards the "foreign." This, historians argue, is in part due to America's changing relationship with nature. In the decades after the Civil War, industrialization, urbanization, and westward expansion transformed the nation's landscapes and redefined Americans' relationship with nature. A new "love of nature" was evidenced in the dramatic growth of "nature lovers," and Americans saw their love of nature as *the* quality that distinguished the "natives" from the new immigrants. As Philip Pauly notes in 1996, the paradigm of the nativist approach was the Chinese Exclusion Act, passed at the insistence of California workingmen in 1882, a year after the state's quarantine law. After World War I, Congress expanded this law to introduce limitations on entries of all European immigrant groups in the Immigration Act of 1924. Thus, we need to understand the biogeography of the world in these varied circuits of history and politics. Seemingly innocent ideas such as biological variation become entangled and translated into complex ideas of difference. Which landscapes are superior or inferior? What constitutes home and abroad? Who is deemed native and alien?

Sigrid Schmitz: As an evolutionary biologist and feminist STS scholar your interdisciplinary research integrates – inter alia grounded in Donna Haraway's natureculture concepts – expertise in natural sciences with methodologies of the humanities. If you conceive invasive species as a case study to show how "naturecultures" work, what does it mean if we don't think of plants and animal immigrants as natural and human immigrants as cultural, but if we think naturecutlurally about these different agents, agencies, and diverse ontologies?

Banu Subramaniam: When we fail to see nature and culture as "naturecultures," we fail to see the underlying structures that shape discourses across natures and cultures. It is indeed ironic that in this era of globalization as the world is ostensibly getting "smaller" that we see a renewed call for the importance of the "local" and the protection of the indigenous. With the increased permeability of nations and their borders, and the increased consumption and celebration of our common natures and cultures, we have begun to obsess about our different natures and cultures with a fervent nationalism, stressing the need to close our borders to those "outsiders." The globalization of markets and the real and perceived lack of local control feed nationalist discourse. High unemployment rates coupled with outsourcing and the easing of immigration have increasingly been perceived as threats to local employment. These shifts continue to be interpreted by some elements of both the right and the left as a problem of immigration.

What a naturecultural analysis allows us to see is the circulation of knowledge – that these represent the same anxieties, the same problem our cultural anxieties of a fast-changing world; our anxieties that we, and ("our kind") will be left behind.

In my book, I tried to explore what it means to think about morning glory flowers and invasive species through a naturecultural lens. I explored the history of evolutionary biology, and the history of eugenics came tumbling out. I use the metaphor of the "ghost" to refer to the histories, and the people affected by those histories that we often render invisible within scientific disciplinary logic. Eugenics today evokes the holocaust, racial hygiene, genocide, mass sterilizations of peoples considered "inferior," horrors of the unholy alliance of science and politics. Eugenics was without doubt an important and fundamental aspect of many key movements in the last two centuries, intimately linked to ideologies of race, nation, and sex, and also a part of several institutions such as population control, social hygiene, state hospitals, colonial governance, and the welfare state. Yet, eugenics had very different biological and political valances at different periods, embraced by an astonishing number and range of scientists with diverse political persuasions. Eugenics was thus less about a clear set of scientific principles but rather a "modern" way to discuss social problems in scientific terms; to promote social policy under the guise of objective and apolitical language of science and the laws of nature. Their goals were varied, as were their understandings of biology, nature, and culture. Our theories of inheritance, heredity, and genetics have not been static and have evolved alongside raging debates on eugenics and the relationship of nature and culture. The history of eugenics reminds us that science is never monolithic; at any historical moment there are always debates and disagreements. There were debates about eugenics, just as there are debates today about how we should understand our changing landscapes and borders.

Sigrid Schmitz: I'll refer here to Thomas Kuhn's famous 1962 paper that argued against the myth of a linear enlightenment progress and instead said changes in scientific paradigms appear in times of crisis. Today we witness the notions of crises, as political crises, ecological crisis, crisis of pollution, or whatever we perceive as a crisis today. I think you are definitely right that crises bring up fear, and they point to our politics of getting the "not known" out and of closing borders to save the "own and known."

But the question for me is also whether crises could also have positive impacts and might have the possibility to change our way of thinking. As diversity decreases and species variety is reduced, is there perhaps a changing notion that migrant "species" not only could be welcomed but could enrich the native ecodiversity? Drawing the line again to your case of the welcoming of the alien "monarch butterfly," I'd like to explicate my ambivalent (positively and cautions) thinking and feeling about this case. You have talked about the "monarch butterfly" as a naturecultural vision that contrasts with strong anti-immigration slogans such as "Deport! Deport!" With the "monarch butterfly" arose a different campaign, one that mobilized the insect about the naturalness of migration. But it is my impression that the monarch butterfly is not only, so to say, "welcomed." It remains assigned as "the other," and "othering" is "according to postcolonial perspectives" the most powerful Western notion of separation and distinguishing one's own collective from the "others," to assign characteristics to the "self"

versus the "other," as civilized versus un-civilized, cultured versus naturalized, or exceptionalist versus inferior, to name only a view ascriptions that are used to ensure the own group identity against the foreigner and to legitimize powerful policies. And this is my point. Colonial policies always also argue in humanist manner with a missionary note to "improve" the perceived inferior status of the other. So, is there also some source in the "monarch butterfly's migration case" that is argued in a missionary manner referring to the question of crisis of ecodiversity. "Representation is never innocent!" – With this phrase Abi-Sara Machold started a talk at the 2005 Film Festival *Diagonale* in Graz. The crucial point is, whose knowledge counts, is heard, and gets into political action. In 2007 María do Mar Castro Varela and Nikita Dhawan have connected these questions of knowledge production with migrant politics. I assume that the question behind the obvious policies is whether there are shifts in categorizing and framing the value of a "migrant species." And last but not least there is the question of whether the naturalization of the other, even in terms of "positive" naturalization, again bears powerful assignments of culture over nature and may result in or be utilized for legitimizations of in- and exclusions, rights and violations.

Fig. 1. Poster that uses a variety of Native American and natural symbolism (Facebook/César Maxit).[3]

Banu Subramaniam: Yes, as I mentioned in my talk, Nadine Bloch, one blogger used the "monarch butterfly" to make a case for migration: "Consider (…) the monarch butterfly as a graphic representation of the migrant. Beloved for its beauty and its seemingly miraculous migration across huge distances, the monarch embodies hope for those who must travel great distances to survive and find opportunity. Their pattern of migration takes monarchs from Mexico to Canada through the United States, spanning lives of several generations; no one butterfly makes the whole trip. How new generations know to return to their ancestral grounds is still the stuff of scientific mystery. And for the activist artists who support immigrants, this mystery conveys the message that holding on to one's cultural heritage across generations can be a wellspring of strength for a long struggle. Migration and transformation, in fact, are what make us beautiful."

Also there is the "Dandelion Rising" project,[4] which reminds us that in desolate times and a fast-changing planet, the freedom and beauty of dandelions are resources we need. Such naturecultural visions allow us to reorient immigration, and develop a new politics of migration that are attendant to history, biology, and environmentally responsible naturecutural thinking.

But the nativist politics obscures and renders invisible that the "natural" world is replete with multiplicity and copious border crossings. Nativist conceptions that develop rigid boundaries around ideas of nation, as well as sex, gender, race, class, and sexuality, have resulted in the endless suffering of groups who remain at the margins. These are the ghostly figures. Ghosts thus are a symbol of the unacknowledged injustices of history. Thinking naturecultrually means listening to these ghosts. Living with ghosts forces you to confront the past; the dead never go away, history never sleeps, the truth can never be erased, forgotten, or foreclosed by modernity.
Ultimately as I argue in the book, society will revisit, reshape, and rethink its ideas of national belonging and of natives and aliens for centuries to come. As long as we do not resolve the fundamental questions – "What do we do with variation? What of diversity? What of difference?"– these debates will continue to rage in science and society, in defining our natural and cultural worlds. And to be sure, each time these debates are renewed, we will debate them as new, novel problems that we have never encountered before!

Sigrid Schmitz: At this point, I would like to talk about some aspects of Donna Haraway's article "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin," published 2015 in the journal *Environmental Humanities*. Her privileged term in this triad is Chthulucene, a call for a strategy "to join" – as she writes – "forces to reconstitute refuges, to make possible partial and robust biological-cultural-political-technological recuperation and recomposition" (Haraway 2015: 160).

Banu Subramaniam: I think I am one of the many people who have been deeply influenced by Donna Haraway and her work. Her work has profoundly shaped my own. But this was one piece that got me upset, and I disagree with

her joining the bandwagon of the overpopulation camp. Instead of saying "making kin not babies," I wish she had said "making kin and babies" or "making babies as kin." I think we can make babies without reproducing the heterosexual family unit.

Sigrid Schmitz: I'm not quite sure about that. It has this connotation, but it also resonates with her 1988 published idea of "Situated Knowledges," where she developed the concept of networks; scientific, political, activist networks; networks not by identity, but by affinity. This is a very crucial moment, or it was for me, because it touches all of these questions of whether we need identity categories for "woman" or "animals" or "plants" or whatever. Haraway argues – and I follow her in this line – that we don't need identity categories to come together for a particular target in a particular situatedness, instead should fight together in affinity. This touches the never-ending question in feminist debate of the need of "identity" for political action. "Making kin not babies" is referring to kinship not as a biological concept, or a genealogical concept, but kinship by affinity.

For a moment, let me go far afield: Last year I organized a conference in Vienna; there was one panel on climate change. Sheila Jasanoff from Harvard University gave the keynote. She is one of the main – I would not say founders, but one of the main – forces, who started STS with us in the early 1980s. She argued that we should look for local knowledges, for local politics and policies, getting more attention on the contextualization of strategies, locally, not only globally.

Well, on the second day, two colleagues who work prominently at the intersection of research, climate change research, and politics, started to develop a very distinct line of what has to be done by Western science, what "we" know and should bring to the Third World to meet the challenges of pollution by all these very dangerous substances, such as Bisphenol A, that cover the sea, earth and atmosphere. And then Sheila, she is a very polite person, said: "To me that sounds colonial. What is with the knowledge of these local communities?" And then the situation became difficult. We had to struggle with the gap between Western science and these questions of hearing local knowledge and giving local knowledge a voice, considering local strategies. It was the point in a very communicative conference with members from very different disciplines, from the natural, social, and cultural sciences, from science-policy workers to queer feminist STS scholars, where the postcolonial arguments came up. Indeed, all colleagues wanted to get to good strategies and improved policies, but referring only to Western scientific knowledge as the solution was a bit of a benevolent science? It is difficult, absolutely difficult, to discuss in these circumstances, because it is not that *you* are bad or have motives of exploitation, it's all for good aims.

So, I come back to Haraway and with her I want to emphasize the question of joint forces and the question: what could be a strategy, to come to joint forces, a joint "we"? Or, is the question moreover whether we can count on a seemingly joint "we" as a target? Who is the "we"? Who can be the "we"? What are the alli-

ances? Or do we need other alliances? This is my question to face diversity and a plurality of strategies, how can we deal with this?

Banu Subramaniam: Firstly, regarding the example you give, it's just that you really have to pay attention to power. Of who has power, who is framing the questions, and how the problem is being named. So in this particular case the problem clearly becomes the Third World – they're having too many babies, they're over-reproducing, contributing to a world overpopulation problem, and they're producing too much pollution. But within science studies, others would say that if you look at how much pollution the average individual is producing, the problem is the First World, they are overproducing, right? So even within STS there is a debate on how one should frame the problem. I think that naming and framing the problem seems to be really important to how you locate what's going on. It shifts what the problem is, who is to blame and what the solutions are.

Secondly, at this moment with respect to climate change is the role of – for lack of a better word – I'm going to say neo-liberalism, of huge privatized industry and NGOs trying to solve these problems. Sometimes they are working with communities, but it's all about producing some kind of product that will help, right? But that is all caught up with an economic system that is just furthering whatever inequalities already exist. And the other aspect that complicates it for me with respect to India, which is where my recent work has been on, is the rise of Hindu nationalism and its own claims about indigenous and local knowledge. So I am very wary about local knowledges. I am very wary about going back to the past as this site of unique pure knowledge that we all have to go back to. For those people, who were marginalized in that world of the past-women, people oppressed by the caste system –, that wasn't Eden for them. So I am also very nervous about blindly embracing local knowledges and valorizing them as sites of decolonization and liberation. Even while I recognize that Western science has silenced much of the world and that there is much knowledge in the histories of all countries that we need to go back to, I don't think it can be done by an unproblematic embrace of old knowledges or an attitude of local knowledges as always right. So we need to create something different, and to me I don't think it's only about epistemology, to me it's fundamentally about power and politics.

Sigrid Schmitz: I agree with you, and because of that I try not to use the term "indigenous knowledge," because I think it's a very difficult term. But to make it a little bit more precise, the point in the discussion was not that Western scientists said the problem for climate change is the Third World, they cause our problems, but that Western scientists prefer solutions for the whole planet. That was the problematic discourse. So, again it was the question of how could we come to strategies of joint forces.

And I want to add, the question of what role do we have as Feminist STS scholars to develop such strategies and politics? What would be if we could integrate one course of STS or, even better, one course of feminist postcolonial queer STS in each study, so that every student has to take a course like this? I

refer to Hannah Arendt, who says when you get people start to think, they will start to think critically, reflectively. I don't claim that scientists don't think, no, but they need to think about their own situatedness, the way of producing disciplines and knowledge. In 1992 Anne-Fausto Sterling had already proclaimed an interdisciplinary way of teaching as a two-way-street, so that the social and cultural scientists have to learn something about nature from the biologists and the other way around. We do need a negotiation of different forms of knowledge-production.

Question from the audience: For me it was very convincing that the eugenics movement or the aliens-concept are influencing the research or the concepts in biology and I also would like to put it the other way around. So the question is how would you say the environmental research is influencing the discourse on politics, because I would say the biological discourse was very important in other fields, for example in fields of brain research or some scientists discuss much more variety if you're looking at races of humans than concepts are telling us.

Banu Subramaniam: The history of science shows that things always move from nature to culture and culture to nature and so on. In the particular case of invasive species I would argue that the headlines place the environmental problems squarely at the feet of the "foreign." Foreigners! And so I would argue that environmentalists in using such sensational language are doing that precise work of making a general xenophobic environment across the natural and cultural worlds. So ultimately what we end up thinking is that "oh my god, there's a problem with foreigners: a problem of those human foreigners, there are problems with these carps, there are these problems with these plants," right? We "see" globalization as doing all of this harm, we are losing our jobs or refugees are coming, they begin to appear like independent problems. And part of what I'm arguing is that they're all the same problem. It's all the same symptom. It's just because of the ways in which we have compartmentalized knowledge, that we see these "problems" as independent. So when we see environmentalists making these kinds of campaigns on native species, to me we should see them as the same issue as, you know, a nativist politician making that argument. All the work that's happening in the environmental field by environmentalists is feeding the same politics with humans and vice versa.

Sigrid Schmitz: You posed the question of variety, which is in the brain and everywhere. I would – from my field of research on brain sciences and neurocultures – question plasticity, the changes in corporeality that are always interacting with culture, experience, our bodies, our behavior and thinking. Coming from a feminist science studies perspective, we have praised this plasticity argument as something which is good in breaking up nature-culture boundaries. Today, the potential change of biology by culture ends up in the call for optimizing our bodies and brains, and optimization may also be a central argument to get diversity again into ecosystems. It's all about potential, progress, optimization.

So this is a very crucial point for me to think about, the usage or the discourses on plasticity, variety, changing, if they are, as I would say, utilized in global, neoliberal thinking. Not speaking for general concepts per se, this notion of progress, of economic/political progress, and of permanent growth is a very leading theme of recent discourse. And the inclusion of plasticity into concepts and norms of growth and power satirizes all what is our concept of breaking boundaries between natures and cultures is parsing out: mutual interactions between biology and the social not as an opening up of possibilities but as a re-normalization under the realm of optimization. So we have to discuss these points always additionally in reflection on powerful structures and normative values in society.

Banu Subramaniam: Yes, if we use the word naturecultures or think nature-culturally it will not necessarily always be progressive. I think it can be appropriated, in all kinds of ways, to all kinds of ends. I was thinking in respect to plasticity that one of the things that's really surprised me is the recent research in epigenetics. When epigenetics initially emerged as a field it seemed like such a site of naturecultural coproduction, as a site that recognized that the environment matters, culture matters, politics matters, inequality matters, that all of this can ultimately transform and shape our bodies and that the body embodies this history and politics and can be passed down a few generations. Yet in reading the popular media, much of this work is just ending up policing women's bodies more. So women are always potentially pregnant, they need to watch what they eat, drink and how they live, always responsible.

So it's really to me a reminder that concepts by themselves can never do anything by themselves. It's those larger politics that shape how ideas get taken up; any concept can be appropriated towards any end sometimes. As much as the concept of plasticity or epigenetics can transform our vision of a natural body into a naturecultural vision, in practice we haven't seen that happen. Last year there was this piece in *Nature* by Claire Ainsworth finally arguing that it is not quite clear, what "sex" means. Thinking sex and gender through the genome was much more complicated than initially imagined. Yet in the entire piece there was not one mention of any feminist work. It was as if geneticists had come to it all by themselves. But this happens time and time again, old ideas in so-called marginalized fields getting reinvented as completely new and original within mainstream disciplines, there's an erasure of these other fields and other kinds of knowledges constantly.

Sigrid Schmitz: Perhaps even the term, "could it be progressive" is problematic, because we get attached or entangled in the concept of progress uncritically.

Banu Subramaniam: Agreed. I think STS needs to become part of the knowledge-making apparatus; we do need knowledge about the naturecultural world. As I have said in my talk, I always dreamed of a joint research program in biology and women's studies, exploring how the feminist and the cultural studies of science could inform the experimental practices of science. Rather than leave

the sciences, women's studies gives me the tools to understand my experiences of being a third world woman in the hallways of science, and renewed my passion for science, for thinking and doing biology. We need to build laboratories of our own.

Sigrid Schmitz: Coming back or going ahead to the point of feminist post-colonial STS perspective: we could state a change in possible strategies from Audrey Lorde's 1984 famous phrase "The master's tools will never dismantle the master's house," where she argues that we can only change powerful and discriminating systems from outside, to Gayatri Spivak's recent approaches of "affirmative sabotage" in 2012, i.e. the use of those tools and policies – also from natural sciences – "with which we are in sympathy, enough to subvert!" (Spivak 2012: 4). Nikita Dhawan (2014) has outlined in detail the various standpoints in enlightenment discourse over the last 200 years which turns out to be not only a single imperialist endeavor. Following Spivak, she argues that the Enlightenment ideals are eminently indispensable, even as their coercive mobilization in service of the continued justification of imperialism must be contested and the current challenges is to "employ the master's tools to dismantle the masters house" (Dhawan 2014: 71). Like you, I am a hybrid of biology and feminist STS, and both affinities are part of my heart and brain. Promoting the critical dialogue within me and between the fields of science and feminist postcolonial STS, as having pointed out above, for me seems to be the most affirmative strategy of sabotage. What is yours?

Banu Subramaniam: We need to start producing knowledge about knowledge. We cannot have "nature" entirely defined only by theories and methods from the sciences. It's a political issue – of how we imagine knowledge and the academy. There are a lot of great scientists who are already on board, but the problem is that there are structural issues in place that make it difficult for them to work. Similarly, many humanists and social scientists are interested in naturecultural questions, but disciplines make it difficult for them to pursue these questions. I really think we need to start creating those sites of possibilities, we need to develop projects that develop biological knowledge, either by retooling ourselves or in collaboration with biologists who are interested in these projects, and I'm convinced there are lots of biologists that are very interested in such projects.

This workshop is being hosted by the college for natural resources. That is great. There are whole fields of environmental sustainability and natural resources where people want to create on-the-ground solutions for the vast environmental problems we face. I've always been frustrated within STS and sometimes even feminist STS when it comes to "oh, we will look at scientific knowledge and critique it. We want that objective view from outside to talk about how science is functioning." There's a real reluctance to get into the knowledge-making process itself. And I think the knowledge-making process is messy. When we do it people will critique us, but that's how knowledge builds, right? You have to open yourself to understanding that if we don't use categories such

as "native" or "alien" what other categories can we understand? All theories and frameworks always come with both possibilities and challenges.

Clearly there are vast shifts in our ecologies and environments; clearly species are changing and in not random ways. So, what kind of environment do we want? What should our relationship to the environment be? Should we care about species diversity; should we care about bio-diversity? Is the main issue that we don't want things to go extinct? Which variable are we trying to attend to and address? These are all biological categories, and we need to figure out, as a society, which of these categories matter to us. How do we want to imagine nature? And so, to me, these are all joint projects that have to happen interdisciplinarily. Biologists are very helpful in being able to tell us that some things are not biologically possible; there are limits to what is possible "biologically." I think that STS should not stay on the sidelines, but needs to become part of the knowledge-making apparatus.

Marion Mangelsdorf: I would propose some more visionary ideas and questions, and I refer to the STS philosopher Bruno Latour, who together with Peter Weibel had an exhibition at the Center for Art and Media (ZKM) in Karlsruhe called "Making Things Public. Atmospheres of Democracy." This was a format where an inter-media approach was developed to discuss alternative forms of politics. Hybrid spaces in between arts, science, and the humanities were created. We are always concentrated on words, right? If we talk about human and non-human agencies and actors and about people from different countries, different backgrounds, I think we need alternative formats like this to come together. Do you have some ideas to think about these formats to build up different forms of politics?

Banu Subramaniam: Well, I think we should all start with writing fiction. If the real world is a problem and we are not happy, how might we reimagine it? So I think we need to start imagining what those worlds would look like, imagine the best of people coming together and dealing with a particular problem and play it out in the best possible way. So I think that maybe, since the world is difficult, creating imagined worlds is at least a good starting place in thinking about what that might look like, and that that might be about ideas.

Sigrid Schmitz: Thank you very much, Banu, for this interesting dialogue!

Remarks

1 The talk and dialogue was organised in cooperation with the Freiburger Gender Studies Journal [Freiburger Zeitschrift für GeschlechterStudien, fzg], the Zentrum für Anthropologie und Gender Studies [ZAG], the Professor of Sustainability & Environmental Governance, Michael Pregernig, of the Albert-Ludwigs-University Freiburg and the 'Carl-Schurz-Haus' Freiburg. This written version is based on the transcript of our dialogue and the script of the talk of Banu Subramaniam. A big thanks goes to Marion Mangelsdorf for organizing this event together with Michael Pregernig, and to her, Kristian Gäckle, and Nicholas Hittner-Cunnigham for the transcription and editing of our dialogue.

2 In 2016 Banu Subramaniam was awarded the Fleck Prize of the Society for Social Studies of Science (4S) *for Ghost Stories for Darwin: The Science of Variation and the Politics of Diversity*, published in 2014.

3 Taken from: <http://wagingnonviolence.org/feature/of-monarchs-and-migrants-the-arts-of-theimmigra/on-movement/> (accessed August 29 2016).

4 "The purpose of ‚The Dandelion Project' is to empower better understanding and acceptance of humanity's diversity by embracing and promoting the vision of one community for all individuals." <http://www.thedandelionproject.org/> (accessed June 2, 2016).

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Rezensionen

Peter Kronenberg

Cherokee Gender Decolonization: Reweaving Two-Spirit Memory

Qwo-Li Driskill (2016): Asegi Stories: Cherokee Queer and Two-Spirit Memory. Tucson: The University of Arizona Press (approx. € 28,00, 224 pp.)

In *Asegi Stories* Cherokee author Qwo-Li Driskill uses the traditional craft of basketweaving as a guiding metaphor for theorizing about Cherokee Two-Spirit[1] and queer people. Driskill's interest lies in a peculiar kind of basketry: the double-woven, double-wall basket. Driskill explains how, weaving such basket themselves, a double-woven basket allows the craftsperson to simultaneously weave two differently designed baskets at a time, creating a hidden space between the two basket walls. A double-woven basket allows the craftsperson to put sweetgrass between the basket walls without anybody but themselves noticing it. This hidden, third space between the basket walls symbolizes the spaces and the stories Cherokee Two-Spirit and queer people in (post)colonial America inhabit – a hidden space, a zone trapped between the walls of heteropatriarchical gender binaries and colonized sexualities. It is a space established through relentless colonization of the lands, bodies and sexualities of Two-Spirit and Indigenous queer people for centuries. With *Asegi Stories* ("asegi" translating as "strange," used as a synonym for "queer" in Cherokee) it is Driskill's aim to recognize these *asegi*/queer spaces again, to reimagine Cherokee Two-Spirit and queer stories hidden between the walls, and to revive traditional, pre-colonial memories of sexuality and gender diversity. With this agenda, Driskill's work employs a radical decolonial agenda, countering ongoing settler-colonial heteropatriarchical hierarchies of the U.S.

In the introductory chapter Driskill addresses the reader personally, asking: "Whose land are you on, dear reader? What are the specific names of the Native nation(s) who have historical claim to the territory on which you currently read this book?" (23). It is with this charged tone that the author calls modern queer studies to account for a troubled academic alliance of the discipline with Native American and Indigenous studies. Driskill expresses severe disappointment that Two-Spirit and queer Indigenous people's concerns and scholarly works are still largely absent from the established field of queer scholarship. Driskill acknowledges queer studies to possess a radical political agenda with many tools to untangle nationalist-imperial strategies and counter heteropatriarchy. It is, nonetheless, queer studies' missing analysis of ongoing colonialism and the only marginal recognition of Native people's concerns that continue to render Two-Spirit critiques invisible.

With the second and third chapter, Driskill undertakes extensive archival work to undo the invisibility of queer bodies from Cherokee history writing. Examining heteropatriarchical violence in colonial discourse, Driskill outlines seven routes of first Spanish and then British conquerors, cutting into Cherokee territory, colonizing Cherokee bodies and violently oppressing Indigenous cul-

tures and their traditional societal structures. The colonial expeditions created "literal and figurative maps across the Southeast" (43), as each route did not merely provide geographical guidance for the next expedition, but also "mapped gendered colonial violence" (ibid.) onto Cherokee bodies. Most written archival accounts, composed by the British and Spanish emperors, early anthropologists and missionaries, render Indigenous people's ways of living savage and primitive in comparison to the European framework, as well as in desperate need for rule and order offered by the colonizers. With this, all Cherokee bodies are recorded either as rebellious, hence a threat to colonial power, or as "desiring colonizations and subservient to male colonial power" (44). Additionally, the matrilineal and matrifocal structures of the Cherokee portrayed many individuals queer to the heteronormative Eurocentric framework of the colonizer. Indigenous men got characterized as being feminine and weak, whereas women were depicted as masculinely powerful, but thereby not feminine in accordance to continental norms.

The 1540 expedition of the Spaniard Hernando De Soto outlines the first colonial contact on Cherokee territory with the Cofitachequi nation and their female leader, referred to as the "Lady of Cofitachequi." The story provides a well-documented account of heteropatriarchical colonial control over Indigenous bodies, as De Soto's crew takes the Lady of Cofitachequi hostage for safe guidance through neighboring territories. Driskill's analysis of the archival sources uncovers great distinctions between the different chronicles, arguing that these ruptures allow us to explore a *asegi*/queer reading of the story. The Lady of Cofitachequi is rendered queer in the colonial gaze as her behavior, resisting De Soto's imperialism, and social status, occupying a leadership position, does not fit the accustomed frameworks of the Spaniards. Described as a submissive loyal servant in support of De Soto's colonial agenda, other narratives denounce her as savage and heathen as soon as she manages to flee the colonizers' hold. Driskill's analysis of the De Soto expedition is a powerful account of how central gender and sexual violence were to the imperial project. Indigenous resistance irritated colonizers and enabled Indigenous communities to rebalance themselves. With the story of the Lady of Cofitachequi, Driskill portrays the confusion and the incapability of colonizers to deal with individuals not coherent with Eurocentric binary gender categories.

Further expeditions through Cherokee territory continued to outline the systematic colonization of Indigenous genders and bodies. Driskill borrows the term *gendercide* to describe the brutal intolerance of colonizing forces. Through the colonizers' performative demonstrations of violence towards groups and individuals with "deviating" gender, Indigenous communities understood that obedience to such brutality were central for the survival of the rest of the community. Whereas some accounts describe the invasions in a distinct scientific tone, classifying Indigenous people "alongside the flora and fauna" (91), other ones are characterized by their overly erotic depiction of Indigenous bodies. Here stories idolize Cherokee lands as a "sexual playground for European men" (80). Descriptions of "young, innocent Cherokee virgins" and lustful depictions of scenes in which "strawberries stain their lips and cheeks as they wantonly tantalize each

other" (91) occur repeatedly and emphasize the Cherokee female bodies' sexual availability to the white, male colonizer. The accounts of romanticized sexual violence leave Driskill searching for (and finding) queer spaces which "disrupt[s] colonial gendered and sexualized deployments of power" (99).

The colonial contact with Spanish and British forces mark a decisive breach in the history of the Cherokee Nation, as colonial concepts of gender and sexuality influenced Cherokee communities' development substantially. Cherokee culture, traditionally based upon a matrifocal and matrilineal clan system, rapidly shifted in attempts to respond to "civilizing projects" initiated by colonial, often missionary, forces. With the adoption of Euro-American laws and cultural practices, the Cherokee turned from hunting to space-saving farming practices and got accustomed to employ chattel slavery. Especially slavery provided a stepping stone for the imperial powers to spread anti-black racism, combatting fears of Red-Black alliances. The convergence towards European systems of governance do not present attempts of voluntary assimilation, but prove the Cherokee people's wish to remain sovereign and escape colonial control by portraying "proper" sovereignty. At the edge of removal, Cherokee values around gender and sexuality quickly converted into European Christian values and the governance practices embraced patriarchy and colonial hierarchies between women and men, people of European, Indigenous, and African origin. Even though most missionaries were largely concerned with regulating family structures through Christian marriage rites, Driskill presumes *asegi*/queer spaces to have nonetheless resisted the encapsulating binary gender system. Though there are barely any written documents of queer Indigenous people's activities, customs and ways of surviving, Driskill's in-depth reflection on missionaries' accounts open up distinct ceremonies that enables us to reimagine queer spaces vividly. The John Howard Payne papers, for example, offer interesting stories in which a Cherokee ceremony of "perpetual friendship" is described. Driskill states:

> In an attempt to erase or minimize same-gendered love by explaining it as friendship, his [John Payne's] writing consistently points to an *asegi* presence. I speculate that […] Payne [was not] sure how to frame such information within a nineteenth-century white Christian male worldview. (142)

Payne's writings are a striking example for a strictly Eurocentric gender binary perspective, hiding queer presences in the colonial narrative as "perpetual friendship". Such accounts point at Cherokee history and uncover how "the past is not 'straight'" (146) and individuals which might nowadays be referred to as Two-Spirit or queer resisted colonial suppression.

Towards the final chapters, Qwo-Li Driskill's focus shifts from historical archival analysis to a contemporary theorizing of queer and Two-Spirit activism. Chapter four, "Beautiful as the Red Rainbow: Cherokee Two-Spirits Rebeautifying Erotic Memory," conceptualizes sexuality and erotics as a powerful tool of decolonization. Quoting Daniel Heath Justice, Driskill argues that ignoring sexual pleasure would "ignore one of our greatest resources" and "[e]very orgasm can be an act of decolonization" (138-139). The imposition of

colonial gender system has turned Indigenous bodies and sexualities against themselves. The regulation of behaviors and bodies can be powerfully combatted and deregulated through the revival of gender diversity and sexual liberation, forwarding a sovereign erotic for *every* body. With this radical agenda of decolonization Driskill invites the reader to reimagine Cherokee erotic history and gender diversity in a contemporary setting. Ultimately, Driskill concludes, "we must dismantle the entire construction of 'gender' and 'sexuality' as a part of a larger work to dismantle all forms of colonial heteropatriarchy" (167-168). Herewith, a remaking and a rebeautification is possible, disrupting stories of ongoing colonial violence.

Driskill's *Asegi Stories* builds upon recent publications of Native American/Indigenous Two-Spirit scholarly works. They continue the work Driskill and their colleagues Chris Finley, Brian Joseph Gilley, Scott Lauria Morgensen, Daniel Heath Justice, Deborah Miranda, and Lisa Tatonetti started with their 2011 publications of *Queer Indigenous Studies: Critical Interventions in Theory, Politics and Literature* and *Sovereign Erotics: A Collection of Two-Spirit Literature.* Collaborating in research their works have been forwarding a radical Two-Spirit critique towards ongoing settler-colonialism, reimagining new alliances of Two-Spirit activism and academic work, always forwarding issues of social justice and decolonization. In *Asegi Stories* Driskill presents a close investigation of tribal-specific analysis of his autobiographical Cherokee roots. Thus it is surprising that the discussion of contemporary Cherokee queer and Two-Spirit cultures appears to be one of the few weak spots of the book. Although briefly mentioning events such as the ban on same-sex marriage of the Cherokee nation in 2004, Driskill lets the reader wish for a more detailed discussion of contemporary Cherokee Two-Spirit activism. The gap between academic scholarship and grassroots activism leave the reader with questions on the applicability of Driskill's decolonial agenda. Nonetheless, *Asegi Stories* is a powerful manifesto, which gains authenticity with Driskill's sharing of personal memories in beautiful, often prose-like sections, enriching the book. Interweaving theory, history, and creative work along the metaphor of basket weaving, *Asegi Stories* offers a powerful rereading of European colonialism and encourages a reimagination of traditional Cherokee gender and sexuality.

Remarks

1 Since the third Native American/First Nations gay and lesbian conference in Winnipeg in 1990, the umbrella term "Two-Spirit" stands for gender constructions and roles occurring outside the colonial gender binary. "Two-Spirit" refers to historically native gender systems and was intentionally chosen to create distance from non-Native queer people.

Anna Schreiner

„Der Wunsch nach einem Normkind ist nicht feministisch"[1]

Kirsten Achtelik (2015): Selbstbestimmte Norm. Feminismus, Pränataldiagnostik, Abtreibung. Berlin: Verbrecher Verlag (€ 18,00, 224 S.)

Mit ihrem Buch „Selbstbestimmte Norm. Feminismus, Pränataldiagnostik, Abtreibung" lotet Kirsten Achtelik ein vielschichtiges Spannungsfeld aus. Denn Debatten um Schwangerschaftsabbrüche werden nicht nur in feministischen Zusammenhängen geführt, sondern auch in behindertenpolitischen und solchen selbsternannter „Lebensschützer".

Interessenspolitik von und für Menschen mit Behinderung und Feminismus spielt die Autorin nicht gegeneinander aus. Stattdessen macht sie Konfliktlinien und Berührungspunkte verständlich. Überzeugend legt sie dar, dass es konsequent ist, sowohl für die prinzipielle Straffreiheit von Schwangerschaftsabbrüchen, als auch gegen selektive Abtreibung normabweichender Embryos zu argumentieren. Einige Untersuchungen der Pränataldiagnostik (PND) brächten keinen gesundheitlichen Mehrwert mit sich. Entsprechend seien sie nicht als Prävention, sondern als Entscheidungsgrundlage für Selektion zu verstehen. Indem sie auf gesellschaftliche Normierungen verweist, illustriert die Autorin, dass gegenwärtige feministische Verständnisse von Selbstbestimmung zu kurz greifen.

Die Forderung nach der Abschaffung des Abtreibungsparagraphen § 218 StGB und die Kritik an selektierender PND gehören zusammen – so die zentrale These des Textes. In ihrer Kritik an selektiven Schwangerschaftsabbrüchen wehrt Achtelik den Schulterschluss mit rechtsgerichteten religiös-konservativen Abtreibungsgegner*innen[2] ab, die sich gegenwärtig häufig als Anwält*innen von Menschen mit Behinderung inszenieren. Im Gegensatz zu Vertreter*innen der *Pro-Life* Bewegungen gehe es Achtelik weniger um konkrete Embryos, deren Geburt verhindert wird. Sie betont vielmehr, dass durch Schwangerschaftsabbrüche aufgrund vermuteter Behinderungen die Norm von Gesundheit und Leistungsfähigkeit reproduziert und die Existenzberechtigung von Menschen mit Einschränkungen infrage gestellt werde. Folglich kritisiert die Autorin nicht allein Pränataldiagnostik, sondern auch Präimplantationsdiagnostik, mit Hilfe derer die Chance auf ein gesundes Kind optimiert werde. All das leistet sie durch eine differenzierte historische und gegenwärtige Kontextualisierung: Bezogen auf medizinisch-juristische Diskurse und Regulierungen erklärt die Sozialwissenschaftlerin, dass ein Schwangerschaftsabbruch in der Bundesrepublik Deutschland auch nach der zwölften Schwangerschaftswoche unter bestimmten Bedingungen, sogenannten Indikationen, straffrei bleibt (vgl. 39ff.). Im diskutierten Zusammenhang hebt sie insbesondere die embryopathische Indikation hervor, die auch als ‚eugenische Indikation' bezeichnet wird. Diese bezieht sich auf den Zustand des Embryos, über den mittels PND eine Aussage getroffen werden soll. Dem im Grundgesetz verankerten Diskriminierungsverbot entsprechend, wurde diese Indikation im Jahre 1995 abgeschafft – aufgrund

einer sogenannten Behinderung darf ein Embryo nicht abgetrieben werden. Im Widerspruch zu diesem Aspekt der Rechtsprechung finden selektive Schwangerschaftsabbrüche jedoch weiterhin statt – so die Autorin. Begründet werden diese allerdings auf Grundlage der ‚medizinischen Indikation', die sich auf den Zustand der schwangeren Person und nicht auf den des Embryos bezieht. Ist ihr Leib und Leben bedroht, bleibt ein Schwangerschaftsabbruch über die zwölfte Woche hinaus straffrei. Reflexartig werde von einer untragbaren psychischen Belastung der schwangeren Person ausgegangen, wenn pränataldiagnostische Befunde auf eine physiologische oder genetische Normabweichung des Kindes hindeuteten, die einen Verdacht auf eine sogenannte Behinderung begründen. Auf diese Weise wird die medizinische Indikation in den Dienst eugenischer Annahmen gestellt. Pointiert fasst Achtelik zusammen, dass das „Ziel [von PND] eben nicht die Prävention, sondern die Selektion ist. Nicht der Entstehung von Krankheit oder Behinderung wird vorgebeugt, sondern der Geburt eines behinderten Kindes" (129). Dass eugenisch begründete Schwangerschaftsabbrüche als solche nicht mehr dokumentiert werden, weil sie offiziell nicht erlaubt sind, erschwere Kritik an ebenjener Praxis.

Diskurse und Praktiken der Eugenik bettet Achtelik in ihre jeweiligen historischen Kontexte ein und zeigt Kontinuitäten dies- aber auch jenseits des Nationalsozialismus auf. Rassenhygienisches Denken sei kein Alleinstellungsmerkmal von Nationalsozialist*innen. Ähnliche Abwägungen über gesellschaftliche Kosten und Nutzen seien weit verbreitet gewesen – auch innerhalb frauenrechtlicher und linker Strömungen.

Bewegungsgeschichtlich bezieht Achtelik sich insbesondere auf feministischen und behindertenpolitischen Aktivismus, deren Konfliktlinien und gemeinsame Anliegen sie differenziert rekonstruiert (vgl. 77ff.). Sie diskutiert, inwiefern sich beispielsweise die Gruppierung ‚rot und Rosen' in ihrem feministischen Standardwerk „Frauenhandbuch Nr. 1" (1972) behindertenfeindliche (ableistische) Argumentationsfiguren zu eigen machte.

Als zentrales Konzept feministisch geführter (Abtreibungs-)Debatten diskutiert Achtelik den Begriff der ‚Selbstbestimmung' in Bezug auf Schwangerschaftsabbrüche. Der bekannte Slogan ‚Mein Bauch gehört mir' brachte insbesondere in den 1970er Jahren zum Ausdruck, dass schwangeren Personen eine selbstbestimmte Entscheidung zustehe, ob sie ein Kind austragen oder nicht. Achtelik erläutert, dass ein verkürztes Verständnis von Selbstbestimmung einer individualisierenden Zuschreibung von Verantwortlichkeit Vorschub leiste. Dies sei wenig emanzipatorisch, sondern lasse sich leicht mit neoliberalen (Selbst-)Optimierungszwängen in Einklang bringen. Mit anderen Worten: Die Abtreibung von Embryos, denen eine Normabweichung diagnostiziert wurde, wird zur individuellen Entscheidung und Verantwortlichkeit schwangerer Personen stilisiert – dabei werde der gegenwärtig wirkmächtigen gesellschaftlichen Verwertungslogik und dem behindertenfeindlichen sozialen Klima kaum Rechnung getragen. Die Relevanz dieser Engführung unterstreicht die Autorin durch die Betitelung ihres Werkes: „Selbstbestimmte Norm". Sie plädiert für eine theoretische Neuverortung des Konzepts der Selbstbestimmung und warnt, dieses

undifferenziert als kleinsten gemeinsamen Nenner feministischer Strömungen zu bemühen.

Die ableistische Problematik selektiver Abtreibungen normabweichender Embryos macht Achtelik durch den Vergleich mit selektiven Abtreibungen aufgrund des Geschlechts begreiflich. Dass ein weibliches* Kind mancherorts eine Bürde darstelle, werde anders als bei Kindern mit sogenannter Behinderung nicht als legitimer Grund für einen Schwangerschaftsabbruch gewertet.

Eine der wenigen Schwächen von Achteliks Ausführungen findet sich in ihrem Ausflug in die Tierethik (vgl. 107ff.). Zu Recht übt sie Kritik an Peter Singers Philosophie des Utilitarismus und an dessen ableistischen Folgerungen, dass in bestimmten Fällen stark eingeschränkten Säuglingen weniger Lebensrecht zuzusprechen wäre als beispielsweise Menschenaffen. Ohne Not spielt jedoch auch Achtelik behindertenpolitische und tierethische Anliegen implizit gegeneinander aus. Die notwendige kritische Auseinandersetzung mit Singers Thesen muss nicht in der gegenläufigen Argumentation münden: Das Lebensrecht von Säuglingen mit sogenannter Behinderung anzuerkennen, muss nicht das Lebensrecht von Tieren infrage stellen. Die gesellschaftliche Tendenz, die Frage nach Tierrechten auszublenden, greift Kirsten Achtelik nicht ausreichend kritisch auf. So reproduziert auch sie die Entrechtung von Tieren implizit als Norm. Angesichts Achteliks Anspruch, verschiedene bewegungspolitische Anliegen zusammenzudenken, ist es betrüblich, dass ihr dies in Zusammenhang mit Tierethik nicht gelingt.

Im letzten Kapitel „Selbstbestimmung ohne Selektion" liefert Achtelik konkrete Veränderungsvorschläge für die gegenwärtige medizinisch-rechtliche Praxis (vgl. 185ff.). Neben der eher vage formulierten Einforderung einer „wirklich inklusiven Gesellschaft" (189), pocht sie darauf, dass schwangere Personen bereits vor der Inanspruchnahme von PND beraten werden sollen. Aktuell werde ihnen suggeriert, durch PND einen unverzichtbaren Beitrag zur Gesundheit ihres Kindes zu leisten. Wie oben dargelegt, dienen einige standardmäßig durchgeführte Untersuchungen jedoch nicht der prä-, peri- und postnatalen Gesundheitsförderung, sondern zur Aussortierung normabweichender Embryos. Entsprechend leitet die Autorin den Vorschlag ab, dass diejenigen pränataldiagnostischen Untersuchungen, die im Dienste der Selektion stehen, keine durch Gesundheitskassen finanzierte – und damit als normal und notwendig wahrgenommene – Regelleistungen sein dürfen. Auch könne über ein gesetzliches Verbot bestimmter Untersuchungen nachgedacht werden.

Abschließend konstatiert Achtelik jedoch, dass individuelle Entscheidungen schwangerer Personen für PND und Schwangerschaftsabbrüche zu respektieren und nicht als manipuliert zu werten seien (197). Obwohl die Autorin zuvor die gesellschaftspolitisch-theoretischen Implikationen des Selbstbestimmungskonzepts anmahnt, scheint dieser Rückbezug ihre Verortung im Geflecht feministischer Diskurse und Positionierungen zu unterstreichen. Dies mag manchen als Versuch anmuten, nach einer Partie auf dünnem Eis nun wieder den festen Boden feministischer Political Correctness zu erreichen. Letztlich verweist der Appell, auf Selbstbestimmung zu bestehen, in Verbindung mit der vorausgegangenen Analyse gesellschaftlicher Zwänge und Verwertungslogiken jedoch

darauf, dass es Widersprüche auszuhalten gilt: Auch wenn die tatsächliche Möglichkeit selbstbestimmter Entscheidungen als solche zu bezweifeln ist, sind individuelle Entscheidungen zu würdigen und in ihrem jeweiligen Kontext zu betrachten.

Alles in allem ist das Buch ein lange überfälliger und unbedingt empfehlenswerter Beitrag zur Debatte um ‚Feminismus, Pränataldiagnostik, Abtreibung'. Feministisch und zugleich Ableismus-kritisch zu sein, bedeutet konkret: Die Entscheidung für oder gegen Kinder muss im Sinne reproduktiver Selbstbestimmung eigenständig getroffen werden können.

> Ist eine Schwangerschaft aber angenommen, kann das angenommene ‚Kind' nicht wieder ‚zurückgegeben' werden. Einmal geht es darum, dass die Frau* kein Kind haben möchte, im anderen Fall möchte sie *dieses* ‚Kind' nicht mehr bekommen – wegen gewisser diagnostizierter Eigenschaften. Das macht den ganzen Unterschied. (196)

Anmerkungen

1 Dieser Titel entstammt einem Zitat aus dem Zeitungsartikel Vorsamer, Barbara/Achtelik, Kirsten (2015): Es gibt feministische Argumente gegen Abtreibungen. Interview. In: Süddeutsche Zeitung. <http://www.sueddeutsche.de/leben/praenataldiagnostik-es-gibt-feministische-argumente-gegen-abtreibungen-1.2751102> (Zugriff am 26.02.2016).

2 Das Sternchen soll Leser*innen daran erinnern, dass die binären Kategorien Frau und Mann unzureichend sind, um geschlechtliche Identitäten von Personen zu beschreiben.

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Peter Kronenberg is a first cohort Liberal Arts and Sciences Bachelor student at the Uni-versity College Freiburg, majoring in Culture and History. His research interest in postcolonial, indigenous, and queer studies was sparked during his time at Portland State University, Oregon. Learning about indigenous queer/Two-Spirit culture, academic work and activism at Portland's Native American Student and Community Center, he had the chance to attend a Two-Spirit gathering where he met Qwo-Li Driskill. Currently, he is writing his Bachelor's thesis, exploring gender decolonizing methodologies.

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sions between effective scientific policy advice ('evidence-based policy-making') and democratic inclusivity; as well as on the possibilities and limits of inter- and transdisciplinarity in research and teaching.

Sigrid Schmitz is currently visiting professor for Gender and Science at the HU Berlin. Coming from Biology, she was university lecturer at the University of Freiburg, where she headed the Forum of Competence "Gender Studies in Computer and Natural Sciences" [gin] together with Britta Schinzel. She has held professorships of Gender Studies at the Universities of Vienna, Graz, HU Berlin, and Oldenburg. Sigrid's research and teaching has covered Feminist Science Technology Studies for 30 years, with particular focus on brain research, neurocultures, body discourses in neo-liberal societies, and feminist epistemologies.

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