

An aerial photograph of a mountain range. At the top, a river flows through a valley, surrounded by dense green forest. The middle section shows a steep, rocky mountain slope with sparse vegetation. The bottom section shows a dense forest of green trees with some yellow and orange foliage, suggesting autumn. The text is overlaid on the top and middle sections.

THE SEVENTH ANNUAL
DIMENSIONS OF POLITICAL ECOLOGY CONFERENCE

DOPE 7

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BLOCK 1
FRIDAY, 8:30-10:10

Conservation and Ecosystems

Chair: Karen Stevens

Martin, Austin (University of Michigan)

Pollinator Conservation, the Agrochemical Industry, and the Cultural Hegemony of the Lawn: A Case in Power and Identity

The honey bee is privileged over other pollinators in conservation efforts. This privileging of the honey bee is a legacy of the European colonizer frontier identity and reinforces the agrochemical industry via intensifying agriculture and the Green Revolution. This is also salient for the cultural hegemony of the North American pastoral lawn, which requires heavy chemical inputs to the detriment of other wild pollinators like native bees. These connected issues reinforce each other and act as a form of violence against the conservation of ecologically important wild pollinator biodiversity. Resistance to this hegemony starts at the level of the lawn.

Compas, Eric (University of Wisconsin-Whitewater)

Defining an ecosystem: An archeology of the Greater Yellowstone

An “ecosystem” is both simultaneously an ecological term with common use in public discourse and an elusive concept that often defies concrete spatial delineation. The Greater Yellowstone Ecosystem (GYE) provides an interesting case study of the term and how it has been reified and redefined for different groups for different purposes. This paper explores the GYE from its early definition for grizzly bear management to expansion by environmental NGOs and federal agencies to more recent redefinitions for continental-scale conservation, e.g. Yellowstone to Yukon. This history reveals the GYE as a hybrid object with political, ecological, and economic ties to local, national, and international scales. As such, the evolution of the GYE concept often reveals more about those who seek to shape management of the region than of the ecology itself and, particularly through its omissions, limits the involvement of particular human actors within the region to participate in its management and decision-making. This is particularly important as the region faces new challenges such as climate change.

MacDougal, Fern (University of Michigan)

Traditional ecological knowledge in canopy science: canopy materiality, knowledge systems, and conservation politics

Canopy ecology is still an emergent field in Western science due to the inaccessibility of tropical forest canopies to ecologists. Much of the body of Western canopy science that exists places an emphasis on species richness, biogeochemical cycling, and forest canopies as an atmospheric interface. I argue that traditions of tree-climbing in tropical forests around the world form a basis for traditional ecological knowledge from a canopy perspective. Western canopy science, which is especially poor in knowledge of species interactions within the canopy, would be greatly enriched by the incorporation of traditional ecological knowledge, but a bias toward communication on the ground continues to render canopy TEK less accessible than other TEK of forests. The bodies of Western scientific knowledge and TEK contrast in purview but also reflect different valuation of forest canopies; an incorporation of TEK into conservation could challenge conservation paradigms that entail conversion of canopies into climate commodities or their enclosure as biodiversity commodities. Traditional canopy knowledge peculiar to specific canopy ecosystems offers a profound broadening of the Western knowledge in terms of physical perspective and lends itself to a conservation that values particularity and whole-ecosystem function.

Kaminsky, Amanda (University of Michigan)

The Chinese Safari: A Political Ecological Approach to Chinese Tourism in Kenya

As Chinese investment partnerships intensify across Sub-Saharan Africa, more and more Chinese tourists are visiting the continent. Scarce attention, however, has been paid to the environmental and social consequences of Chinese tourism expansion. This paper explores how postcolonial narratives of wildlife conservation in Kenya are being restructured to reflect the Chinese tourist gaze. Using survey data, key informant interviews, participant observation, and infrastructure analysis collected during the summer of 2016, I examine how Chinese cultural perceptions of wildlife and biodiversity are reflected throughout the “Chinese safari” experience. I theorize that Chinese safaris are reinforcing stigmas surrounding animals as aesthetic objects, consistent with many animal portrayals in Chinese symbolic culture. I hypothesize that this encourages tourists to develop emotional attachments to certain species, thus encouraging non-consumptive, pro-environmental behavior. However, this objectification of wildlife also oversimplifies the sociocultural and economic challenges of managing protected areas; this incentivizes Chinese operators to ignore local conflicts and remain detached and alienated from their Kenyan peers. By shedding light on a little-studied aspect of China-Africa relations, this paper will help inform biodiversity conservation policies and management strategies in East Africa as we move away from the postcolonial Western safari model and into a new, Chinese-influenced tourism paradigm.

Issac, Laura E. (Florida Atlantic University) and **Megan Davis** (Florida Atlantic University)

Variation of Veliger Hatching, Development, and Growth from Five Strombus gigas Queen Conch Egg Masses: For Restoration in the Bahamas

The Queen Conch, *Strombus gigas*, is a marine gastropod that lives in the warm waters of southern Florida, the Caribbean and Bermuda. Due to the high demand for this species there has been a steep decline in the population numbers in the past 40 years. To help manage the fisheries, the queen conch was listed as a CITES II species (Conservation of International Trade of Endangered Species of Wild Fauna and Flora) in 1992.

Since the 1970's many laboratories and one commercial conch farm developed cultured techniques to grow conch for food and restoration. In 2016, a new experimental hatchery was built on Hummingbird Cay, Great Exuma, Bahamas with the purpose to culture conch for restoration in the Bahamas. The initial experiments investigated the viability of the new hatchery by conducting studies that observed conch egg mass hatch rates and veliger (larval) growth and development. A total of five egg masses were collected from two locations.

The conch egg masses hatched 4 to 6 days after they were laid. The embryos were well developed with velar lobes, shell, and pigmentation on the day of hatch (see photo A.). Hatching occurred in the early evening hours and depending on the egg mass, 35-100% of the eggs hatched on the first night. Average growth rate of veligers varied depending on the source of phytoplankton fed and the egg mass. The range for the first four days was 25 – 50 µm per day. In the first four days the veligers develop from the two velar lobe stage to four velar lobes with the beginning of the sixth set of lobes showing (see photo B.).

Culturing queen conch in the new hatchery demonstrated that there is variation between egg masses and veliger growth and development from different egg masses. Since restoration of a species requires this type of genetic variation, it is recommended that several conch egg masses from nearby locations should be used in a conch restoration program.

Beyond the Anthropocene: A Political Ecology of Futures I

Chair: Carlo Altamirano

Rahder, Micha (Louisiana State University)

Foreshortened Futures: Untangling Violence, Temporalities, and Justice in Guatemalan Forest Conservation

This paper explores conflicting temporalities in forest conservation in Guatemala's Maya Biosphere Reserve (MBR), attending to questions of inequality, violence, and justice in multispecies worlds. The landscape is layered with long histories of violence, from ancient Maya warfare to recent civil war atrocities to current narco-trafficking land grabs. This violence extends to non-human worlds, including rampant forest destruction and conversion of rich ecologies to monocrops or ranchland. Conservation is caught up in this violence, which reconfigures relations between past, present, and future. Institutions officially work on linear modernist time, in which a knowable past and fleeting present open into an infinite, plannable future: NGOs propose projects to funders, management plans are written for national parks, climate change impacts are projected. But extreme violence and inequality undermine planned futures and destabilize the sense of a coherent singular present; pasts do not get left behind but are disruptive co-presences. Contradicting their own official plans, conservationists' practice is anticipatory and reactive: they watch for emerging threats to the forest, shifting and changing tactics and alliances in response to an ever-shifting landscape. Landscape residents and conservationists alike live with what de Sousa Santos (2014) calls the fascism of insecurity: "chronic anxiety and uncertainty vis-a-vis the present and the future for large numbers of people, who thus reduce radically their expectations and become willing to bear huge burdens to achieve the smallest decrease of risk and insecurity." Imagined futures are constrained to short-term statements and disavowals of predictability that go far beyond typical discussions of "uncertainty." The tensions between un-reconciled pasts, multiple conflicting presents, and indeterminate futures contribute to conservationist practices that are contradictory, reactive, and increasingly violent – for example, the increasing use of military park protection alongside participatory community engagements.

Machado, Mario (Clark University)

The limits of resilience: Alternative food systems and ecological change in the Afram Plains, Ghana

In the far northeast corner of the Afram Plains, relocated communities of Ewe farmers and fishermen have adapted their livelihoods from commercial cocoa production to subsistence farming and fishing following the construction of the Akosombo dam. As a function of relative isolation over the past 60 years, these communities have also maintained an independent food system that takes advantage of specific ecological niches for food production and which utilizes community bartering institutions for food distribution. In recent years, and with increasingly unpredictable climate patterns, this food system and its participants have had to absorb and adapt to the uncertainty associated with both social and environmental change.

This research draws upon a combination of qualitative and participatory methods to understand the dynamics of this system in practice. By paying particular attention to the influence of local politics, this work hopes to evaluate in part the capability of this alternative food system in delivering food security in the context of change both now and in the future. While offering much by way of reimagining alternative food systems, this case study also begs important questions about food resilience: namely, what does resilience look like with the looming prospects of modernist development on the horizon? A detailed appreciation of this case study, especially as it relates to forces beyond simply the local scale, provides a unique lens through which to interrogate both the limits of resilience and potential strategies for improving upon it.

Olsen, Tyler (CUNY Graduate Center)

Playing with the Universal - Food Sovereignty and Liberal Right

Abstract bourgeois right--articulated in terms of the human rights of the individual, the sovereign rights of the state, and the property rights of capital--serves as the universal organizing principle of the contemporary era; the "master code" in terms of which political life unfolds. The specific constellation of institutional structures which make these abstractions concrete (i.e. the institutions of the nation-state, of international trade, and international law more generally) have proven to be a positive hindrance to serious efforts to combat the threats of human caused climate change and ecological devastation. Strategies by which the principles of abstract right (and their concrete institutional articulation) could be brought into play, and thus modified, transformed, or redirected in some manner, are more necessary than ever before. I will examine the possibilities of one such practice, food sovereignty, which has been deployed by a variety of organizations associated with La Via Campesina and represents a possible strategy for transforming abstract bourgeois right in emancipatory ways in contexts well beyond its current appearance.

Doezema, Tess (Arizona State University)

Globalizing technologies: geopolitical innovation in the U.S. bioeconomy

The proliferation of bioeconomy strategies, blueprints and plans that have emerged in the last several decades has offered a variety of visions of a world transformed by biotechnology, and prescriptions for pathways to these futures. Though the visions vary, they are unified by the notion that biology holds the potential for profound, cross-sectorial economic transformation with corollary benefits for human wellbeing. They are also unified by the notion that this future depends upon particular commitments in the present—in policy, law, and public investment.

This research looks at a collection of U.S. sites at which the future bioeconomy is imagined, shaped and enacted in the present. I argue that such visions of the bioeconomy reflect an imaginary of innovation-as-governance wherein technoscience is positioned as the primary agent capable of enhancing social wellbeing, with corresponding requirements for the state to facilitate this function. I analyze the U.S. Bioeconomy Blueprint (BEB) together with FDA regulation and broader public discourse around the AquAdvantage Salmon to illustrate how sociotechnical imaginaries inform and are sustained by both political agendas and regulatory practices.

The U.S. BEB frames the bioeconomy as a nationally situated and thus parochial project, in that it directs its attention toward U.S. regulation, funding, education, etc. and highlights U.S. job creation and national advantage, but one that is inevitably global—because the knowledge it is based on is universal, the technologies it will generate are placeless and the benefits it will bring (and thus the markets it will engender) will be universal. In the US BEB and the discourse surrounding the engineered salmon, benefits to the entire world and U.S. interests are figured as aligned and overlapping. The notions of universality, placelessness, and globalization are seen as natural and inevitable expressions of a "knowledge economy" even as they are positioned as aspirations that legitimate an outsized role for technical authority in governance.

Eaton, Weston (Penn State University)

Reification of supply and demand: Unpacking economic assumptions in the question of landowner adoption of energy crops in the Northeast

Economic assumptions often underpin expert judgments on technology development, and provide a basis for conceptualizing the causes of social behavior. Drawing from interview and survey data, this paper explores how economic assumptions provide a powerful basis for making sense of lackluster growth in the bioenergy sector of renewable energy technologies. Experts often argue the crux of the problem of bioenergy's plodding growth can be expressed by the "chicken and egg" conundrum of supply and demand. That is, in the absence of a market, landowners, farmers, or other publics will not adopt and supply energy crops for bioenergy development; and without a ready supply of energy crops, investors will not develop the facilities and other infrastructure that would purchase and utilize producers' energy crops. This paper focuses on the supply side of this equation, namely, drivers of landowner adoption of energy crops. We ask, how do actors from two key groups in the bioenergy supply chain—bioenergy experts and landowning publics—conceptualize drivers of landowner adoption of energy crops? Drawing from interview (n=47) and survey data collected in the Northeastern USA, we show how bioenergy experts, including scientists, engineers, and other specialists, draw from ready-made economic arguments that posit landowners as being profit maximizing actors who adopt new technologies, like energy crops, only when convinced of their potential to provide personal economic return. However, landowners tend to minimize the importance of profit potential, and instead emphasize non-economic benefits, such as using their land to achieve more energy or community self-sufficiency. The contradictions between expert and landowner conceptualizations detailed here point to new possibilities for envisioning and performing bioenergy markets.

Breathing life into death: reconciling divergent understandings of death across ecology and the social sciences

Chair: John-Henry Pitas

Allen, Susan (University of Cincinnati)

Out of the Mire of the Past: Reviving Dead 'Ecologies' from a Drained Wetland Landscape in Southern Albania

Radical landscape transformations such as wetland drainage not only alter the physicality of terrain and ecosystems, but also actively suppress place-based narratives of human experience that shape public memory over the long term. The 1940's drainage of the Maliq wetland in southern Albania, a focus of human settlement in the area for more than 7,000 years, provides a compelling example of this coupling. Immediately following World War II, Albanian dictator Enver Hoxha hailed the drainage and eradication of the wetland in southern Albania as one of his great political triumphs over nature. This rhetoric, grounded in the notion of field reclamation, effectively silenced less empowered narratives of death and destruction of the wetland itself, the people engaged in its drainage, and its cultural ecologies. Fragments of these narratives persist in the villages surrounding the wetland. Integration of ethnohistorical, ethnoecological, archaeological, and palaeoenvironmental evidence illuminates these hidden histories and ecologies as experienced in southern Albania, and their implications for suppressing historical and ecological realities.

Ziegler, Amber (University of Idaho)

Corpses as Liminal Bodies: Using the human corpse to bridge disciplinary studies of death

The human-nature dichotomy, while often questioned and resisted in twenty-first century scholarship, still greatly affects Western science. The institutionalization of social sciences and ecology as two separate, typically unrelated groups of disciplines reflects this dichotomy saliently, despite growing recognition of a need to bridge understandings in an interdisciplinary way. How these two groups of disciplines study death also reflect the human-nature dichotomy, with ecology focusing on materialistic aspects such as material and energy flow during decomposition, and the social sciences honing in on the social meaning and impact of death and dying. Corpses themselves, however, do not fit easily into the binary of the human-nature dichotomy. No longer human, they are also not entirely part of the natural world. Corpse disposition processes are informed by social rules and understandings of death, and serve to imbue corpses with social meaning. However, corpses are also subject to natural processes of decomposition. They reside in a liminal space, straddling the conceptual barrier between the social and the natural. As liminal bodies, corpses provide a powerful conceptual tool and a location for examining and filling in the gaps in how different disciplines approach the study of death. This presentation will attempt to provide a framework for how ecologists and social scientists might come together to study death in an integrated way, using the human corpse as a focal point.

Shcheglovitova, Mariya (University of Maryland, Baltimore County)

Is death an ecosystem service? The complicated ethics of urban sustainability

Using city trees as a case study, this presentation examines the relationship between tree death and urban sustainability practices to bring to light how the relational agency of urban nature complicates an ecosystem service approach to sustainability. Cities are increasingly turning to green infrastructure projects such as tree planting initiatives, constructed wetlands, bioswales and green roofs to meet sustainability goals. Green infrastructure is a reminder that sustainable cities are projects produced by humans and nonhumans and require work from both humans and nonhumans to maintain. However, valuing green infrastructure as an ecosystem service, that benefits human society, treats nature as a passive provider of resources for human consumers. This view has been subject to critique based on the recognition of the agency of nature enrolled in ecosystem service production and its relationship to human culture. Death adds an additional dimension to this critique. The death of plants associated with green infrastructure highlights contradictions within the framework of ecosystem services. For instance, the death of city trees removes them from the role of ecosystem service providers, yet their corpse transitions into broader ecological relationships with bacterial and fungal decomposers, wood boring insects and cavity nesting birds. Through the creation of dead ecologies, green infrastructure reveals the hubris of the ecosystem service framework built upon an anthropocentric ethics. Furthermore, when green infrastructure shifts from a living ecosystem service to a dead functioning ecosystem its relationship to humans becomes less about consuming a biophysical service and more about contemplating a relationship to the ecosystem. This presentation explores the human and non-human relationships formed by dead city trees to ask whether a relational approach to urban sustainability can offer an alternative to the value-based approach of ecosystem services.

Gunderman, Hannah (University of Tennessee-Knoxville)

Lifestyle Persuasion through Visual Media: Landscapes of Animal Death in Pro- and Anti-Vegan Rhetoric

Veganism as a short-term eating regime, a long-term diet, or a committed ideological lifestyle is a source of contention for multiple reasons, including discourse in privilege, religion-influenced perceptions of ecology, food accessibility, and animal sentience. A strong factor of contention within veganism and anti-veganism, however, is alienation: landscapes of animal death are presented in a manner that reiterates vegan beliefs, or, concomitantly, shames those who eat animal-derived products. In this presentation, I will present landscapes of animal death as they relate to pro- and anti-vegan rhetoric, with particular attention paid to the marketing techniques of non-profits, food companies, and individual activists, both from the vegan and non-vegan standpoints. My positionality within this research is a vegan activist who is painfully aware of the scare tactics used to “market” the lifestyle which can tend to alienate others from the cause itself. While, as an activist, I do not feel that these landscapes of animal death should be hidden, I do believe that starting a dialogue on how to empathize with other eating choices is extremely necessary. This work will be a critical analysis of the political ecology framework around landscapes of animal death as they relate to influencing consumption ideologies.

Transcending life? Exploring the ecological imaginings of death in a post-biopolitical world

In recent decades Michel Foucault's biopolitics has emerged as one of the premier social theories for understanding humanity's dominance and management of their own biology, and the rest of life on this planet. Foucault famously formulated biopolitics as the practice of "making live and letting die," emphasizing the power to give or perpetuate life. Yet many of the things we encounter in this world, and indeed struggle to manage, are not, biologically speaking, alive. For instance, in order to meet sustainability and environmental goals ecological principles of nutrient cycling are being scaled up and employed in order to manage decaying organic material (dead bodies, detritus, etc) in cities and other places. The object of management is not life in the city, rather the city itself, which necessitates management of both the living and dead. Does biopolitics have power over the dead? No, according to Foucault. Foucault wrote in 1976 that "[biopolitical] power literally ignores death," because only those things which are given life may be governed through such a formulation ("making live and letting die"). Death then marks the limit to biopolitical power in part because biopolitics is grounded in the science of biology, which allows us to rationalize the human as a living animal. This presentation argues that increasingly, we understand the world through ecology, rather than biology, necessitating a re-configuration of Foucault's notion of biopolitics. While we still understand ourselves to be a living animal, we do so within the context of a broader world in which the living, dead, and otherwise all are important and functional parts of a working whole. I argue that a new form of biopolitics founded on ecology has been gradually emerging, one that allows power to grasp death in ways that Foucault could not imagine.

Reading Sustainability for Difference: Place, Community & Development I

Chair: Frederik Aagaard Hagemann

Discussant: Elizabeth S. Barron

Fix, Adam (The SUNY College of Environmental Science and Forestry)

Traditional ecological knowledge, risk, and environmental alliances

Although much work has been done on Indigenous environmental movements and traditional ecological knowledge, very little has focused on the potential of Native/non-Native environmental allyship through the dual (and often-conflicting) lenses of “risk” and “traditional ecological knowledge” (TEK). The act of framing environmental allyship through risk or TEK creates divergent narratives, which, in turn, produce different motivations and privilege different types of relationships. By analyzing these discourses, the influence of dominant and marginalized voices in the environmental narrative is clarified. Specifically, this is done by bringing Robert A. Williams, Jr.’s work of historical and legal analysis, *Savage Anxieties* (2012), into conversation with the literature of TEK and post-structuralist political ecology. This paper concludes by arguing in favor of a “new narrative of life and culture” (Escobar 1996, 341), which can find epistemological foundations and motivation for action through TEK-based allyship.

Riddering, Laura (University of Maryland, Baltimore County)

Weaving Culture into Diverse Economies

This paper aims to contribute to conversations on diverse economies within the context of the global South and to reanimate discussions of economic development beyond binaries of culture/economy or exploited/empowered. In the past, indigenous people relied on diverse economies when they did not have access to monetary resources, however now diverse economies could be a way to improve socio-economic livelihoods. The intersection of two literatures, diverse economies and cultural economies, forms a framework to build knowledge about women weavers’ economic spaces in Guatemala. Through a case study of weavers in San Juan la Laguna who formed collectives to sell their art directly to tourists, I analyze the cultural components of a diverse economy in an indigenous Tz’utujil Mayan town. Drawing on participant observation and semi-structured interviews with 48 residents (33 women), I argue that diverse economies and culture are intricately woven together. The economy and culture are sometimes treated as a binary; yet for diverse economies to offer alternative development strategies this binary should be dissolved. This cultural-diverse economy has implications for future action research and development praxis. It is vital, especially for indigenous people working in the arts, that research and policy privilege neither the economic nor the cultural.

Robinson, Nicholas (University of California, Davis)

Place-based Consequences of European “Renewable” Energy Development Goals - Hydropower and Farming in Iceland’s Thjórsá River Va

This research examines the localized context of European regional renewable energy development goals through a case study of a small rural community in South Iceland. The proposed development of an international interconnector electricity cable which would link Iceland’s electricity grid to that of the United Kingdom and/or other countries in the EU is currently branded as part of the UK’s “green” energy portfolio necessary for meeting its renewable energy goals. Iceland’s energy production sector is considered to be one of the “greenest” in the world, utilizing what are commonly, yet controversially defined as renewable resources for all primary energy generation. However, the ecological, economic, and cultural costs of Iceland’s energy infrastructure as it has been historically structured politically, economically, and biophysically have not been adequately investigated relative to claims of its sustainability. This analysis situates the effects of increased domestic energy production in the river valley of Thjórsá—Iceland’s longest and most heavily dammed river—the inhabitants of which are primarily farmers. Hydropower development associated with increased electricity production is controversial amongst many of these residents due to their historical experiences of the ecological, economic, and cultural outcomes associated with the interaction between transnational and domestic political-economic forces and the place of the Thjórsá river valley. This study utilizes qualitative research methods to understand the relationship between rural residents in the Thjórsá River valley with the various current and proposed hydropower developments along the river. It examines the cultural, productive, ecological, and spiritual values currently and historically associated with the place of the Thjórsá river valley. It theorizes some locally contextualized ways in which transnational capitalist actors, regional and foreign state governments, and domestic institutions have enacted sustainability discourse, specifically through the performance of renewability, in order to repackaging the imposition of neoliberal modes of governance and market restructuring.

Meriläinen, Eija (HUMLOG Institute / Hanken School of Economics)

The House That “Jack” Built : Resilience and Urban Informality

Focus on resilience in disaster reconstruction could at best draw the focus to the wellbeing and agency of the affected communities, rather than to instrumental solutions. Yet it may also decrease the accountability of the aiding organizations towards the communities, while leaving the systemic makings of disaster untouched. If in disaster reconstruction a house is not a house, but a process for improving lives, who is responsible if it does not have fitting walls or its inhabitants lack continuity of tenure? The paper debates whether resilience discourse facilitates the empowerment of people in informal settlements, or whether it draws their self-organization into the margins of the Empire, squashing their resistance. It builds on ethnographic case study on the Valparaíso fire of 2014 and a discourse analysis on the communication of two NGOs involved in housing reconstruction.

Gendered Approaches and Feminist Methodologies

Chair: Lydia Shanklin Roll

Miranda, Veronica (University of Kentucky)

Midwifery, Autonomy, and Indigeneity at the Margins of the Mexican State

This paper uses testimonio narrative from Elena, an empirically trained Yucatec Maya midwife, to discuss the politics of maternal health care in rural Yucatan, Mexico. Elena is in her early forties and from a rural indigenous community located in the southern interior of the Yucatan peninsula. As a daughter of a well-respected midwife, Elena was exposed to midwifery and maternal health early on in her life. And like her mother, Elena expanded her knowledge of birth and women's health by attending classes sponsored by the government. Her work as a registered midwife requires her to work with local doctors and comply with state bureaucratic procedures such as filling out paperwork. But her relationship with clinic doctors is one-sided and inconsistent. Within a history of government neglect, rural Yucatan women trust and rely upon indigenous midwives, like Elena, to meet their maternal health needs. Yet, this practice of granting legitimacy to indigenous midwifery is at odds with Mexican federal health ideologies and policies that promote an exclusively biomedical approach. Elena's life and work exists at the margins of the Mexican government's concerns, policies, and resources. Yet, even at the margins the influence and power of state ideology and policies intimately affect the lives of rural indigenous midwives. It is in the margins of the state where indigenous women's maternal health is reproduced through moments of engagement, contestation, and abandonment.

Sumner, Daniel (Virginia Tech)

Gendered space and mobility: Using participatory mapping to document access to information about Conservation Agriculture

This presentation explores the intersection between space, movement, and men's and women's access to agricultural information and knowledge, within the context of a research-for-development project promoting Conservation Agriculture. We draw on 47 in-depth interviews in Battambang province of rural Cambodia, where numerous environmental and economic challenges impact the ability of smallholder farmers to achieve sustainable livelihoods. Conservation Agriculture (CA) has been promoted as a pathway for addressing these challenges. Understanding how gendered practices, beliefs and knowledge structure how and where men and women are able access information about CA is integral to understanding the potential impact of Conservation Agriculture on rural livelihoods. Using a mixed methods approach, including Focus Group Discussions (FGD)s, semi-structured interviews, household surveys, and participatory mapping, participants identified, mapped and discussed where they receive and share information about CA. Participants also described the social interactions that occur within the spaces where they share agricultural information. We situate this study within recent research on gendered space and mobilities. We examine how broader socio-cultural perceptions and norms shape one's ability to move and access information about CA. Linked to mobility, men's and women's perceived roles and decision-making spheres within the farming household define the spaces of everyday life where men and women share agricultural information. Access to information must be understood acknowledging the intersection between gender, space and mobility. Complex interactions link men's and women's spaces, challenging notion of separate gendered space and gendered access to knowledge.

Spangler, Kaitlyn (Virginia Polytechnic Institute and State University)

Exploring the gendered implications of the adaptation of integrated pest management practices in Nepal

This presentation seeks input and feedback on a student research proposal to investigate how an ongoing research-for-development project can contribute to the feminist political ecology (FPE) literature. It seeks to explore how integrated pest management (IPM) practices both affect and are affected by gender roles within the Surkhet District of Nepal. Using an FPE approach, we aim to use gender as a critical variable in understanding how households participating in the project adapt IPM practices to their lifestyles. The feminization of agriculture literature serves as a lens to understand the importance and growing interest in women's participation in agricultural labor whereby globalizing forces such as migration shape the role of the women farmer. Three main questions guide the research: 1) How does male out-migration influence the gendered allocation of household and farm labor and how do household expectations affect decision-making over IPM practices? 2) How does IPM adaptation affect the workload of women and girls within the household?, and 3) How does participation in a women's empowerment initiative in the same district affect women's capacity and willingness to adapt IPM practices to their lifestyle? We will use semi-structured interviews, focus group discussions, and household surveys to explore situated knowledges and subjective realities. Participants' voices will help guide the research process. Overall, we hope to contribute to the debate on how the feminization of agriculture shapes the empowerment of women. Feedback on this presentation will be considered and integrated before data collection begins in May of 2017 to help deepen the potential of the research process.

Christie, Maria Elisa (Virginia Tech)

Feminist political ecologists in multidisciplinary teams: Why we don't want a random sample to study soils and local knowledges

This presentation reflects on a research-for-development project working with small farmers in the Philippines to investigate local knowledge of soils. A team of feminist political ecologists together with a soil scientist found challenges beyond the usual difficulties of accessing men and women farmers in equal numbers and interviewing them separately in Focus Group Discussions and at the household level. The objectives of the research were to: a) identify and compare men and women smallholder farmers' local soil knowledge and perceptions of soils and b) compare these with fertility of farmers' soils to determine if the laboratory analyses support the qualitative findings. Coming from fundamentally different professional perspectives, our sampling strategies illustrate the conflict between prioritizing partial, situated knowledges on one hand and seeking a neutral, objective truth on the other. Accepting the partiality and uncertainties in both physical and social processes, our approach was based on the recognition of the importance of an interrelationship between local knowledge, gender, and scientific knowledge of soil. The population sample consisted of 83 participants. The selection method was developed as a stratified judgment sample (Marshall, 1996), then reduced to ensure we only included farmers that owned less than 10 hectares and were married (with the exception of the widow and widower who were purposely selected). Soil sampling and analyses were conducted on the best and worst soils as identified by farmers, resulting in a total of 52 samples. Both men and women farmers expressed a lack of confidence in women's choices of the worst soil, but the analyses showed that women did indeed choose soil that was less fertile than their best soil, as did the men. This shows that women also have local knowledge of soils, even if they do not spend the same amount of time in the field as the men.

Global Beads and Local Needs: Tourism and Zulu Beadwork in Durban, South Africa

The impact of foreign purchases on culturally important artifacts continues across sub-Saharan Africa, India and Southeast Asia where indigenous and traditional craftwork has become a globalized market. This ethnographic study, set in Durban, South Africa, examines how foreign purchase of traditional Zulu beadwork has affected the lives of rural Zulu women as well as the cultural meaning of the Zulu beadwork itself. The bead shape, color, and design patterns of Zulu beadwork were originally produced to represent one's social, economic and marital status. A clear cultural connection has developed since the introduction of the glass, colored beads in the mid-1800s. However, after the Zulu beadwork became a source of income and was more commercialized, modern craftswomen altered their traditional bead designs and color patterns to match the demands of the consumer. I argue that these changes have both positive and negative consequences as Zulu beadwork has begun selling to a global market. The positive consequences are poverty alleviation and increased awareness of gender inequality amongst rural Zulu women. The negative consequences are that long standing traditional Zulu meanings surrounding the beadwork are being diluted.

Consumption, Development, and Costs

Chair: Hugh Deaner

Babb, Angela (Indiana University)

Making Neoliberal Consumer Subjects – A Political Ecology of Nutrition Assistance in the US

The Thrifty Food Plan (TFP) represents a minimal cost nutritious diet and determines the maximum food stamp allotment under the Supplemental Nutrition Assistance Program (SNAP). In this paper, I provide a brief history of the TFP, including the political economic influences on the calculation and the material and ideological implications of its use in nutrition assistance policy. Drawing on interviews, archival work and discourse analysis, I investigate the power relations and the practice of neoliberalization at the individual level of state actors calculating the TFP. In this regard, I draw connections between the neoliberal food regime that requires SNAP as an outlet for surplus commodities and the individual practice of neoliberalization within the USDA. I argue that the TFP calculation embodies problematic ideologies of race, class and neoliberalism that have adverse material implications for low-income and food-insecure Americans. Ultimately, I argue the mathematical optimization process used to calculate the TFP should be restructured, and I provide recommendations for doing so.

Azenha, Gustavo (Columbia University)

Sustainable Development in “Postneoliberal” Brazil: Contemporary Natures and the Reproduction of Differentiated Citizenship

Through exploring the ongoing and intensified struggles between traditional peoples over land and natural resource rights and uses in Brazil, I analyze the limitations of current forms of environmental decision-making and socioeconomic inclusion, and the contradictory impulses of sustainable development in which these are embedded. I critically examine policies for economic development, the environment, and traditional rights accompanying the “postneoliberal” turn of the early 2000s, and in the re-entrenchment of a developmentalist neoliberalism that has accompanied Brazil’s current political and economic crisis. Although over the last 15 years there has been a seemingly favorable shift in the valuation of nature and traditional peoples accompanying and promoted by various projects legitimated under the guise of sustainable development (e.g., poverty alleviation, socioeconomic inclusion, and participatory resource management efforts), their agency has continued to be subordinated by economic and scientific agencies, posing serious challenges for cultivating a just and sustainable future.

With the current political and economic crisis, these ongoing tensions and contradictions have come to the fore and there has been an intensifying erosion of traditional peoples’ influence in environmental policies and an undermining of traditional land and resource rights, reproducing longstanding patterns of inequality and differentiated socioenvironmental citizenship. Because of the inseparable links between nature and state-making in Brazil, and the important role Brazil plays in international environmental governance, my analysis of contested ecologies in Brazil brings insights into the broader contradictions and limitations of global sustainable development efforts and the persistent challenges to cultivating more inclusive forms of environmental governance.

Huber, Matt (Syracuse University)

Costly Politics: Neoliberalism, Environment and the Political Ontology of Costs

This paper argues that at the core of neoliberal governance is what I'm calling a "political ontology of cost." Even more than an establishing a "free market", neoliberalism has been a political project focused on the reduction of costs (at all costs). Although the market and competition are constructed as the best mechanism to achieve this, the goal of cost-reduction needs to be more emphasized. I historically trace this to the 1970s crisis of inflation and concerns over the "cost of living." I suggest that the political shifts of that decade ushered in a broad project to cut and contain costs at several levels: state (austerity), labor (deunionization), and capital (offshoring, lean production). It is precisely during this era where a specifically environmental politics of "cost internalization" emerged (e.g. green taxes, emission trading, etc). I argue that the logic of "cost internalization" believed that environmental problems could only be solved if they were visible in the market as costs. This logic has become so "common sense" that the "carbon tax" – a thoroughly neoliberal policy that believes the price mechanism can guide us to a clean energy future – has become accepted as a "radical" political project worth pursuing by many within the climate movement (from James Hansen to Bernie Sanders). I suggest this form of politics is a dead end for a left political ecology. A politics of "cost internalization" ultimately falls prey to an existing populism resistant to increasing costs via environmental policies (to put it crudely, as liberal elite conspiracies to tax the struggling hard working masses). A left environmental politics must abandon this language of cost and construct a politics based on delivering cheaper energy, green jobs, and increased economic security through energy infrastructure and ecological restoration.

Satheesh, Silpa (University of South Florida)

Postcolonial development, Resource Alienation and Neocolonial forms of Spatial Exclusion: The political ecology of Endosulphan

The increasing instances of ecological distribution conflicts in India raise pertinent questions about the complexity interwoven into the relationship between state, development, natural resources and people. The modernist development project adopted by the postcolonial Indian state is guided by the colonial inexorable logic of natural resource exploitation. The attempt here is to unravel the impacts of development on resource access of the local people in the context of a pesticide disaster in a south Indian state, Kerala. The disaster was the result of unscientific aerial spraying of the pesticide Endosulphan in the cashew plantations owned by the Plantation Corporation of Kerala (PCK), a state enterprise. The paper uses ethnographic interviews conducted with the people in disaffected regions and compliments it with media reports and document analysis to understand the perception of local people on PCK and its resource management strategies. The unequal power relations between the state and the people make the political ecology of the issue central to its making. The paper employs a postcolonial theoretical lens to understand the consequences of developmentalism in the region and argues that the plantations, introduced in the name of development and employment generation, employ neo-colonial forms of centralized and exclusionary resource control mechanisms in the region. The subordination of the local people to the dominant idea of development and power structure makes the disaffected people 'subalterns' who are dispossessed of their resource rights and are forced to suffer the environmental burdens. The paper argues that the modernist development project created resource conflicts and resource alienation for the local people who were spatially excluded from the local resources and hence, the process of development through internal colonialism. This research calls into question the idea of development from the standpoints of resource sustainability, human rights and environmental justice.

Velednitsky, Stepha (University of Wisconsin- Madison)

Fabricating Sovereignty: Labor, Water, and Microprocessor Manufacturing in Israel

Fab 28 is a manufacturing facility that produces microprocessors in Qiryat Gat, Israel. Owned and operated by Intel Corporation, the top-earning producer of computer chips worldwide, Fab 28 ensures Intel's status as Israel's second biggest source of export revenue. Intel's corporate image is marked by discourses of cleanliness and ecological responsibility. At the same time, the facility's water-intensive operations, which draw groundwater from the Jordan River, operate within a hydropolitical climate that is defined by gross disparities in water access. While current geographic scholarship on Israel and Palestine tends to focus on militarized systems of displacement and environmental privatization in their most egregious forms, this work examines the role that Fab 28's mundane spaces of digital production play in structuring the territorial relations of industry and landscape. In particular, this work asks: how did a facility which uses millions of gallons of water daily come to operate in the Negev Desert? And how, throughout its operation, has Fab 28 shaped the geopoliticization of bodies and landscapes within a contested hydropolitical terrain?

Arrested Succession: The Interplay of Dominance, Tolerance & Disturbance in Forest Production & Conservation

Chair: UK PEWG

Schmitz, Marissa (University of Minnesota)

Beyond Production? Considering postindustrial forestry in an age of ecosystem service markets

For the last half century, commercial US forestry has been on a trajectory from industrial to postindustrial forest management, characterized by declines in timber production intensity, increases in management for ecosystem services, heightened regulatory oversight and constraint, and rising social pressure for ‘sustainable’ and ‘natural’ forest management. Yet while the idea of the postindustrial forest has been previously theorized and debated, few studies have tested this concept empirically, in spite of shifting economic, social, and political forest management realities. Here, I consider how emerging ecosystem markets—including California’s regulatory forest carbon offset program—are operating on private forestland across the US, and suggest how this fits into a context of postindustrial forestry. Using review of project design documents and in-depth interviewing with forest offset program participants, I analyze the mechanisms that constrain and enable access to ecosystem markets across diverse forest ownership structures and consider how carbon monetization is being integrated alongside preexisting forest management goals and objectives. Finally I infer implications for postindustrial forest management if ecosystem service programs endure as viable market opportunities, exploring in particular the possibility of tension between production of wood products and production of ecosystem services as commodities, increasing market access among conservation landowners, due to their higher environmental cachet and social credibility, and centralization of forest governance via state administration of highly regulated ecosystem service methodologies.

Navalkha, Chandni (Yale University)

Forest Transitions: Conservation in the Communities of Oaxaca, Mexico

This paper will present the findings from three months of ethnographic research conducted with four forest communities in Oaxaca, Mexico. While two communities decided to formally dedicate areas of their territory to conservation as part of their management and use of forest commons, two communities opted to informally conserve parts of their land area. This presentation will include a comparison of community members’ perceptions of conservation alongside an analysis of the use of forest commons across formal and informal management regimes. Questions addressed will include: how have discourses of conservation been adapted into community institutions, and with what consequences? What are the social and cultural effects of conservation as perceived by community members? What is the role of informality in the management of these forest commons, and how is this reflected by the “nature” of the forest itself? Preliminary findings suggest that the evolution of conservation in the commons is part of an ongoing renegotiation – an adaptive strategy- of cultural and territorial autonomy and self-governance in indigenous Oaxacan communities facing major social and ecological change.

The Invisible Lines of the Forest: Mapping Forest Degradation onto Spaces, Places and People in Peruvian Amazon

Deforestation and forest degradation are uncertain scientific terms that have largely gained traction and legitimacy through the science of remote sensing. While such information has been useful for engaging people and governments in tropical rainforest destruction, it also privileges specific ways of valuing the forest. This paper looks at the ways in which deforestation is experienced and represented as contingent on existing historical, political, and social processes. I focus on one specific case of an oil palm plantation encroaching on the ancestral territory of the Shipibo Village of Santa Clara de Uchunya, which has resulted in deforestation of anywhere from 72% - 99% of the land acquired. I make the point that by valuing a certain type of forest and employing techniques such as remote sensing, we also create a different type of forest.

Producing Illicit Agricultures and Natures I: Scholar Session

Chair: Garrett Graddy-Lovelace and Nicholas Padilla

Discussant: Garrett Graddy-Lovelace

Plants and humans have developed intimate relationships throughout human history, and the nature of those relationships has frequently been fraught with conflicting values and meanings. As such, we seek to examine a wide breadth of topics in this session that explore (il)licit natures and agricultures, from sacred plants – like Mama Coca and peyote – to the global War on Drugs, from re-legalized hemp and taboo tobacco to agricultural trade embargoes and blockades--and all the political ecologies therein. We recognize that illicit plants maintain long histories as foodstuffs, medicines, cultural signifiers and commodities, and we ground our session in the lived realities of planting and harvesting crops deemed illicit. We are primarily interested in the experiences of growers themselves, though we welcome research on the broader dynamics entangling law officials, police, processors, distributors, consumers, public health, alternative medicine, and the military and prison industrial complexes and their roles in (re)producing illicit agricultures and natures. We welcome analyses that emphasize illicit crops (or the illegality of crops as such) analyzed from the perspective of agrarian viability, agrarian heritage, agrarian crisis, or agrarian change. We also welcome analyses of how the law itself is constructed, enforced, and manifested in farmer decisions and in agricultural fields themselves. Finally, we invite reflections on the methodological challenges of working at the fringes of licitness and how important potential research is foreclosed by the subject matter's very illegality.

In keeping with a recent Dimensions of Political Ecology practice of community-scholar conversations on Kentucky agrarian issues, this scholarly paper session will be followed by a local practitioner panel. Kentucky hemp growers, medical marijuana advocates, and local activists against the War on Drugs' racialized incarceration will gather to discuss the power dynamics and political ecologies at work in local illicit agricultures. Join us.

McKeithen, William (University of Washington)

Carceral Ecologies: Towards a Political Ecology of Women's Incarceration

The intimate imbrications across body and environment, though ubiquitous, become all the more severe under the pressures of prison. Yet, incarceration has remained largely absent within political ecology debates. Ironically, the same exercises of discipline, control, and rationalization that throw human-environment relations into relief also obscure the prison as an ecological, more-than-human space. Prisons are still often thought as cold, inorganic, hermetically sealed spaces. This presentation challenges this framing. It explores the notion of carceral ecology as a first step towards bringing the conceptual tools of political ecology to bear on incarceration, understood as a socionatural, political economic, and diffuse state project that manifests both within and beyond prison walls (Moran, 2015). This presentation draws on preliminary research into experiences of women's incarceration at a US state prison. This presentation examines how US-based carceral logics and institutional practices have sought to rationalize, regulate, co-opt, and negotiate the more-than-human relationships that incarcerated humans develop with a range of environmental and nonhuman actors – headaches from fluorescent lighting, bodily change in response to prison diets, forced health checkups, food hoarding and contraband, communicable sickness, rehabilitative organic farming work, rural landscapes. In closing, this presentation will focus a specific aspect of these dynamics: an ongoing conflict over prison diets, health, and justice. Taking incarceration seriously as a political ecology asks how formations of punishment, surplus, rehabilitation, criminality, citizenship and justice are not only political but also biological, environmental, and ecological.

Cafer, Anne (University of Mississippi)

Khat: Short-term Security, Long-term Vulnerability

Khat (*Catha edulis*) is perennial bush originating in East Africa. This shrub's leaves and twigs are sold in East African and Middle Eastern markets for their narcotic effect. Also known as chat, qat, or mirra, khat has become an exceedingly popular topic in both the health and policy arenas. Dating back to 1984, there have been no less than 20 separate international conferences dedicated to the discourse of use, health, and addiction associated with khat use, and a growing concern for issues related to khat production and use related to terrorism. There have been a number of papers and conference presentations related to cardiovascular and oral health, mental health and cognitive processes, and monitoring and policy. However, there has been relatively little research on khat's association with food security (see Gezon 2012), which is foundational to human health and well-being, or its place in the agrifood system. Furthermore, research linking khat to validated cross-cultural measures of food security is nonexistent. The majority of studies contextualizing khat production in terms of food security, focus on khat's displacement of food crops, namely cereals. In this study 115 farmers in the Amhara Region of Ethiopia were surveyed. Data revealed khat to be positively associated with food security, as measured through the Household Food Insecurity Access Scale. This study also found khat producers do, in fact, continue to dedicate portions of their land to food crop production. However, there is reason for caution before embracing khat as a community resilience strategy, given its heavy reliance on irrigation for intensive production, and the relatively unregulated nature of water withdraws in Ethiopia combined with the detrimental health impacts of khat addiction endemic in the region today.

Milanzi, Tony (University of Kentucky)

Tobacco and the Tobacco Industry in Malawi: Producing a Livelihood Crisis at the Margins of Legality

Changes in the global system of agricultural production have been extensively studied by scholars in the agro-food studies tradition. Studies have shown that a restructuring global agriculture (as a result of trade liberalization, changing production and consumption patterns) has had negative impacts on agrarian populations of growers, workers and communities (Goodman and Watts 1997, Craig 2005, Bacon 2005, Ambinakudige 2009, Wilson 2010). The implicit assumption has been that agrarian crises are an inevitable part of economic restructuring. The role of histories and power dynamics within industry institutions in producing, shaping and mediating livelihood crises has not been adequately investigated (Fraser et al 2014; Hausserman and Eakin 2008).

This paper examines the role of institutions in the tobacco industry in the production of a livelihood crisis among smallholder tobacco growers in Malawi. Specifically, the author examines the strategic actions of tobacco companies as evidenced by levels of investment and projections of future growth in relation to 1) discourses around the future of tobacco production and consumption in the face of global anti-tobacco campaigns, and 2) discourses around the livelihood crisis resulting from fluctuating and generally declining prices paid to smallholder tobacco growers in Malawi. The author argues that transnational tobacco companies selectively adopt and use contradictory discourses to marginalize growers and hold them in a constant state of crisis. The crisis in the tobacco industry in Malawi is not an inevitable outcome of global agricultural restructuring, but the result of machinations of an industry that lords over a crop grown on contested margins of legality.

Unpacking Land-Grabbing: Subjects, Performances, and the State in Ghana's 'Small-Scale' Gold Mining Sector

Following the 2008 global financial crisis, gold-backed reserves became a safe haven for capital investment. Gold prices quickly climbed to historic highs, resulting in profound land-use changes as “small-scale” mining operations exploded across the globe. In Ghana, alluvial gold mining sites are often unregulated, unreclaimed and operated by foreigners, all “illegal” practices under Ghanaian minerals law. This paper untangles the shifting subjectivities and practices of various actors mediating foreign gold mining operations. For instance, Ghanaian “big men” perform official bureaucratic roles managing cacao production, and, in other moments, bankroll mining operations that destroy cacao farms. I argue performances and co-productions between “legal” and “illegal” domains break down ontological binaries—e.g. legal/illegal, rational/irrational, official/unofficial—used to uphold an image of state legitimacy and cohesion (see also, Boyce et al. 2015). The Ghanaian state is not a monolithic or “weak” state; rather, it is made up of prosaic workings, conflicts and shifting performances. Finally, in central Ghana, “small-scale” land deals for gold extraction are ecologically destructive, spatially extensive and occur quickly with less red tape and time for organized resistance. I thus urge land grab scholars not to dismiss the importance of small-scale deals alongside larger transactions.

BLOCK 2
FRIDAY, 10:30-12:10

Beyond the Anthropocene: A Political Ecology of Futures II

Chair: Tess Doezema

Altamirano, Carlo (Arizona State University)

Between Progress and Contention: The futures of energy transition in Mexico

Sustainable energy access is one of the key drivers for global equity, justice, and human development. Meeting the energy challenge is critical to alleviating poverty, enhancing economic growth, and promoting human well being.

It has been demonstrated that the use of renewable technologies to address energy poverty is not necessarily linked to improved living conditions and a reduction of inequalities for community groups. Unidirectional approaches to clean energy transitions have dominated international cooperation for development in terms of policy recipes that are often blind from different contexts and worldviews. Pursuant to a free market to find ‘solutions’ for the developing world, issues of ecological and social justice are often marginalized, while policy ambitions center mostly in the most affordable technology to safeguard these efforts.

This paper explores the geographies of energy in Mexico’s imaginaries of sustainability and progress in the light of current social and structural inequalities in the wind energy field. What does the contesting visions of the future reveal about values and shared understandings on what a clean energy transition should look like? How could opening up spaces for deliberation about these futures shape existing material configurations, power relations, and perceived avenues of action?

Throughout these theoretical explorations, I argue that in order to maximize energy’s social value, we must be able to comprehend how different cultures relate to energy, use energy for their own thriving, and imagine their future with better and robust systems. In order to achieve and unlock these dialogues and imaginations, engagement must go beyond the empty ritual of participation. The question of ‘agency’ is often ignored when talking about and for the poor. The politics of innovation, technology, urban and rural designs must feed into new governance models that are inclusive of values of justice and sustainability, and a collective vision of the future. A demand-driven energy system that is coherent with human development frameworks must account for a reliable capacity to be able to measure and anticipate the different pathways that the demand will follow.

Goldstein, Jesse (Virginia Commonwealth University)

Geofuturism: Learning how to let go and love other worlds

This Fall, I am collaborating with students on a project called Geofuturism. We are exploring how visions of possible and unexpected futures can help reveal the multi-dimensional depths of the increasingly grim and unavoidable reality of global climate disruptions, while at the same time leaving open a space for the possibility of radical transformation. Our project attempts to reclaim the future from, on the one hand, utopian visions of technological salvation, and on the other, dystopian visions of apocalyptic collapse. Teams of students are developing ‘geofuturist’ revisionings of the world, focused on specific, taken-for-granted aspects of modern life, from the local and mundane (lawns, refrigerators, fast food) to the systemic and pervasive (mass incarceration, highways, the internet) to the ubiquitous and concealed (sites of extraction, industrial water use, petroleum byproducts). After revealing the complex sociotechnical and environmental assemblages underlying these seemingly discrete aspects of life in late capitalism, we explore what it would mean to ‘eliminate’ them, tracing out the implications for other possible worlds. As such, it is an exercise in learning to let go of core elements that define petromodernity/coloniality, seeing how they pattern our lives, desires, subjectivities and even futurities, and then asking what worlds might be possible beyond these rhythms.

What forms of innovative and experimental practices might our proposed eliminations open up (and for whom)? Where would the new (and the old) enter in to fill these gaps? And most importantly, can we think future possibilities without falling into the well-trodden and all too predictable narratives of apocalyptic collapse and dystopian social

disintegration? For my presentation, I would reflect on this project, its pedagogical successes and limitations, and on the role that speculative and reconstructive futurism can play within critical – and vibrant – environmentalisms.

Surprise, Kevin (Mount Holyoke College)

The logics of solar geoengineering: Preemption, Grand Strategy, and biospheric security

Discussions of climate security and solar geoengineering have proliferated over the last decade. Indeed, solar geoengineering – the modification of Earth’s albedo to reflect solar radiation and counteract climate change – is moving to the fore in key international institutions and research academies in industrialized nation-states. Yet, climate security and solar geoengineering are rarely examined together. When linked, the default position expounds the unethical aspects of solar geoengineering as a potential driver of international conflict. Rather, my aim in this paper is twofold: explicate the systemic logics of solar geoengineering as a security tactic to preempt the emergence of destabilizing climate change, and examine the geopolitical implications of solar geoengineering as a mechanism for maintaining US hegemony in the liberal international order. I begin by reviewing geoengineering and security debates, which suggest that solar geoengineering presents two core security concerns: managing uncertainty and ensuring cooperation. I demonstrate that these concerns can be managed from within existing US security strategy through an examination of The RAND Corporation – first exploring RAND’s role in shaping U.S. security strategy during the Cold War, then turning to three contemporary RAND projects: Robust Decision Making, Threats Without Threateners, and Strategic Rethink. RAND analysis suggests that solar geoengineering can be enfolded into existing and emerging logics of U.S. security strategy predicated on the doctrine of preemption. Utilizing the work of Giovanni Arrighi, I conclude by exploring the potential futures for US hegemony in the Anthropocene, particularly speculating on the ways in which planetary-scale technologies such as solar geoengineering may foster a spatio-organizational expansion of US hegemony.

Cavin Barnes, Jessica (North Carolina State University)

Engineering Futures in Biodiversity Conservation

Over the past few years, the conservation community has been divided by an internal rift that emerges partially from divergent visions of the future. While some conservationists are propelled by the idea that pockets of wilderness can and should be protected in an unaltered state apart from people, so-called “new conservationists” see a future where human influence in the landscape is inevitable and ubiquitous. These divergent perspectives are materialized in the goals of conservation projects and in decisions about the social and physical technologies -- from protected areas to economic development -- that are implemented to achieve those goals. Disagreement over how conservation should be done is likely to intensify with the development of new genetic engineering technologies that promise to provide conservationists with the ability to assist threatened species, resurrect lost ones, and re-wild landscapes. The application of genetic engineering to large-scale conservation is arguably most tangible in the proposed use of transgenic American chestnut trees to rescue the functionally extinct species throughout its historical range in the eastern United States. Other approaches for resurrecting the American chestnut, including traditional breeding and hybridization, continue to be pursued even though transgenic trees have demonstrated higher levels of resistance to chestnut blight, the fungal pathogen that decimated the species in the early 1900s. Drawing on participant observation and interviews with scientists, activists, and volunteers both involved in and suspicious of American chestnut reintroduction, this paper explores how anticipations of the future of a species, a technology, and a regional landscape influence which approaches to biodiversity conservation are employed in the present. Each mechanism of blight-resistance will have its own political and ecological ramifications, now and in the future; these material consequences of imagined futures are also considered here.

Getting on Together: Interspecies Responses to Crisis in Troubling Times

Chair: Sophie Sapp Moore

Discussant: Juanita Sundberg

Gross-Wyrtzen, Leslie (Clark University)

More-than-human resistance and agency at the Morocco-EU border

In the last two decades, the number of border walls and fences has exploded. Despite this multiplication of bordering across the world, the number of migrants attempting to cross borders has also increased. This “crisis” of migration has resulted in discursive productions of migrants as nonhuman “swarms” and “floods” in the anti-immigrant rhetoric of current politics, or helpless victims driven from their homes according to humanitarian logic. These characterizations work to depoliticize and consequently dehumanize migrants, translating their economic and social vulnerability into a more fundamental ontological precarity.

Following other border scholars, I argue that the foundational move that dehumanizes migrants derives from modernity’s border between human and nonhuman, subject and object. If we are to be serious about recuperating the migrant as fully human, then we need also to challenge this fundamental dichotomization. To that end, I will draw from the case of sub-Saharan migration at the Moroccan-Spanish border to imagine alternative possibilities for political subjectivity that are animated by more-than-human assemblages.

Building on Juanita Sundberg’s (2011) theorization of multi-species agency, I present three moments of more-than-human resistance ongoing today at the Moroccan-Spanish border. Each of them represents a different modality of resistance in bordering or political ecology literature expanded to encompass the nonhuman relationships that manifest with migrants’ engagements against the border regime. Thinking through collaborations between humans and nonhumans provides openings for alternative understandings of what constitutes subjectivity that in turn begin to seal up the less-than-human void into which some humans fall.

Parish, Erin (Duke University)

When the Tigers Don’t Leave: Absence and Abundance in Emotional Ecologies of Aftermath

“The weeds have eaten my home,” was a common refrain of those first returning to their land in the rural Colombian community of San Carlos after over a decade of exile. Over and over again, people spoke of the deep pain they felt upon returning to see their homes and fields overgrown. Nature didn’t simply continue in people’s absence. It thrived. An abundance of unwanted nature, from weeds to mountain lions, were far more than physical nuisances. Instead, the ease with which certain forms of life took over in people’s absence were psychic reminders of the fragility and impermanence of human life.

Nature that was invasive and predatory—such as weeds and mountain lions—held some of the same qualities as the armed actors that preceded and precipitated their emergence. Thus, these forms of nature represented a lasting—and living—legacy of war. Nature served as a living archive for past pain. This archive, however, was dynamic, malleable and often mobile. This paper examines how weeds, mountain lions and other forms of nature serve as powerful living memorials to war. The emotions these natural memorials elicit are environmental variables in their own right which impinge upon or enhance life the same as climate or terrain.

O'Connor, Anne (University of California, Davis)

Aedes do bem and frankenskeeters: Transgenic Mosquitoes in the Zika crisis between Piracicaba and Key West

This talk is centered on a transgenic mosquito in two sites: Piracicaba, Brazil and Key Haven, Florida in the context of a widespread panic concerning the Zika virus and its effects. Based on interviews and ethnographic fieldwork conducted in the Summer of 2016, I argue that claims about civic engagement, scientific legitimacy, and appropriate modes of interspecies sexual intimacy are made through and as claims about the body of the mosquito. By contrasting “aedes do bem” in Piracicaba and “frankenskeeters” in Florida, I show how a genetically identical organism comes to exist as radically different things in these two contexts. In both sites, natures of the insect were inextricable from beliefs and risk assessments of the Zika virus, for which it is heavily marketed as protection. Contentious efforts to stabilize the nature of both virus and mosquito together, then, are also arguments about appropriate and inappropriate modes of citizenship and interspecies relation in the midst of large scale biomedical/ecological intervention. This work delves not only into new interspecies relationships created around the crisis, but into unique forms of interspecies life designed around these relationships and the modulation of threats we pose to one another.

Gaalaas Mullaney, Emma (Bucknell University)

Resilience and the Politics of (Interspecies) Recognition

This paper draws on two research sites – persistent peasant maize farms in central Mexico, and emerging Black community farms in Detroit, Michigan – to explore the limitations and harmful potential of dominant models for assessing and achieving resilience. Emerging work on resilience in geography has made important headway in critically analyzing the concept of the “resilient subject” which, under neoliberalism, operates to hold individuals responsible for navigating risk – while absolving the state and the privileged – and encourage adaptation over resistance to oppressive and unjust conditions. The field of political ecology has extended this critique to argue for greater attention to more-than-human relationships as crucial to the pursuit of resilience. In these literatures, agricultural systems offer rich case studies for highlighting the complex socio-ecological interdependencies at stake in surviving, or thriving, in the context of political, economic, and environmental change.

However, in these critical approaches, there remains an unattended tension between what we imagine resilience looks like, and how we categorize (or recognize) those lives capable of resilience. This paper seeks to 1) identify patterns in how we have valued certain taxonomies and forms of life over others, with concerning implications for socio-ecological justice; and 2) look to cutting edge ecological science that suggests our current metrics of resilience cannot adequately capture the interdependencies of certain undervalued forms of diversity.

This paper proposes feminist, postcolonial, interspecies, and peasant studies as offering the analytical tools needed to tackle the above questions, and to critically examine the baselines and categories we rely on to define and measure resilience. Such work also reminds us how many lives, ways of living, and socioecological relationships are erased or targeted for eradication by our current methods for assessing resilience in food systems.

Reading Sustainability for Difference: Place, Community & Development II

Chair: Elizabeth S. Barron

Discussant: Nathaniel Gabriel

Zimmerman, Kathryn (Independent researcher)

Sustainability rhetoric & sustainability practice: findings from a case study of Las Vegas

Addressing a session on “reading sustainability for difference: place, community & development,” this research draws from a case study to present specific findings about sustainability rhetoric and sustainability practice. Specifically, three models will be discussed that were developed within a six-year critical examination in resource management of the Las Vegas metropolitan sustainability campaign: (1) sustainability rhetoric model; (2) energy rift model; and, (3) sustainability practices model. These specific models demonstrate a “spectrum of meaning” in sustainability discourse and identify some of the practices used to hide true environmental, societal, and economic costs. While the original study streamlined findings into a critique of sustainability policy (to address how leaders reconstruct problems), this presentation focuses on these three models to expose how marketed “sustainability” can misrepresent the needs of human life. (Zimmerman, 2014: <http://digitalcommons.cwu.edu/etd/281/>)

Daigneault, Jacqueline (University of Minnesota)

Sustainability as Aporia: Reflecting on the Meaning and Value of “Sustainable” Development in Practice

Sustainability as a concept in development and academic discourses first emerged from a concern for curtailing the harmful and destructive environmental effects of economic development, yet scholars have pointed to the ways in which the term’s meaning has shifted over time. While debates over the conceptual strength of the term illuminate the slipperiness of “sustainability,” it is far from a meaningless concept when considering its use as an idea and ideal within development practice, both to practitioners as well as the communities in which they work. I focus on one particular use of the word “sustainable,” a meaning that diverges from its original association with environmental concerns, and one that is less explored in academic literatures on sustainability. This meaning is tied to a more holistic sense of how development interventions may last, and indeed flourish, after the initial point of encounter, based on a transference of knowledge and skills rather than material resources or aid. This meaning of sustainability has provoked a number strong critiques from scholars who powerfully demonstrate the limits of this concept not only analytically but also in practice as it circulates among development practitioners and communities. Carefully considering these critiques, I suggest that while the notion of sustainability begs for transformation rather than disavowal, it also represents a vexing and irresolvable concept for critical development scholars.

Sustainability: equitable acknowledgement of the three pillars in government documents

Sustainability can function as a key concept examining the functioning of the current and future human-environment. A comprehensive understanding of sustainability is inclusive of social equity and diverse economies as well as environmental health; this approach is commonly known as the "three-pillars" of sustainability. However, critics (Fricker 1998, Agyeman 2008) argue that sustainability emphasizes the environmental pillar at the expense of the other two. I propose to test this critique through examination of government planning and assessment documents. Considering an applicable scale, we are studying this as the level of the Fox River Watershed in Wisconsin. First, I will examine if sustainability appears in government documents, either implicitly or explicitly. Government documents including those from the Environmental Protection Agency, Wisconsin Department of Natural Resources, The Oneida Tribe of Indians of Wisconsin, the Department of Health and Human Services, and Wisconsin's Department of Public Instruction are included in the review. Second, I will investigate if environmental, equity, and economic concerns appear, and in what capacities throughout the planning documents. If government documents do favor the environmental pillar, as critics suggest, I argue this could be problematic when applying effective comprehensive sustainability measures because the Fox River is a designated EPA superfund site (Wisconsin Department of Health and Family Services Division of Public Health 2006). There are human health concerns regarding prenatal exposure if mothers have eaten particular fish from the Fox River Watershed (Science Applications International Corporation 1988). Women and children are more likely to be affected by contaminants than men, and only 40% of women know of the consumption advisories in place (Wisconsin Department of Health and Family Services Division of Public Health 2006). This is just one dimension of sustainability I will be examining. The results suggest of the work to be done in the future to ensure comprehensive measures of the three-pillar approach to sustainability in the watershed.

Aagaard Hagemann, Frederik (Lund University)

Critical Dimensions of Sustainability: Beyond the Stakeholder-Perspective

In the scientific literature on sustainability, critical scholars have pointed out how the concept's rooting in environmental science foregrounds biophysical dimensions (reviewed in Boström 2012). Some suggest that conceptualizing sustainability should focus more explicitly on issues of social justice and on diversifying the economy (Fricker 1998, Agyeman 2008, Escobar 2007, Gibson-Graham 2016). These issues have been broadly conceptualized as 'human dimensions' of sustainability (Seghezze 2009). The scientific literature on sustainability has widely addressed human dimensions by seeking to represent and engage 'stakeholders', such as local communities, businesses or interest-groups in research (Cash et al. 2003, Reed 2008, UNEP 2015). I will refer to a strong polemic surrounding a minor shoreline-restoration project in Winnebago County to emphasize the importance of the way local communities are engaged and represented in sustainability-research. Here, local citizens vocally opposed a relatively simple measure to sustain a healthy ecosystem, due to reported transgressions on their aesthetic enjoyment of the lake. The stakeholder-perspective and the critical discourse on sustainability shares common aspirations to engage local communities in sustainability-research, but an epistemological tension arises as the former applies descriptive metrics while the latter calls into attention the iteration of local difference and political transformations as central concerns. Reviewing the critical literature, I will argue that the stakeholder-perspective in sustainability-research yields a static model for participation and freezes community-engagement in pre-identified and partial interests, as well as it fails to stay open to transformative potentials of place. At the shoreline-restoration I will probe a research-process for sustainability centered on emerging notions of community and place. This attempt to operationalize the human dimensions of sustainability as a process in communities and places will hypothetically allow social justice issues and local economic possibilities to be iterated while keeping the future of the shared environment, the shoreline, as a central concern.

Historical Dimensions of Political Ecology I: Natural Resources

Chair: Chris Knudson

Deaner, Hugh (University of Kentucky)

Wildcatting, kerosene lighting, and driving: Kindling the social energies of Fordism

The problem of petro-capital accumulation in *socioecological* political economy inspires a vital body of geographical scholarship. Primary subjects of concern not surprisingly tend towards the contradictions and crises of productivism. Often left understated, yet of decisive interest to a smaller camp, are detailed articulations of American capital accumulation and postwar petro-consumerism of foodstuffs, plastic, automobiles, and household chemicals. What can be understood of the formative conditions of this petro-infused political economy, my paper asks, by pushing back a theoretical analysis to account for the century-long regime of American petroleum consumerism that *preceded* the New Deal? My approach puts historical accounts in conversation with the theoretical tenets of Fordism to identify resonances in two cases of petro-consumerism, beginning with 19th century gas lighting and lamp illuminant followed by 20th century automobiles up to the Great Depression, all within the context of booming American resource extraction. This teases out historical Fordist precursors, which emerged in fits and starts of petro-production and enticements of petro-fired commodities. Appetites for kerosene illuminant were less subsuming than 20th century automobility, housing, and entertainment to follow; yet by the 1850s the new petroleum industry had reorganized towards individual as opposed to municipal and industrial markets, locating the 19th century roots of American petro-capitalism and consumerism. Most striking is how—decades prior to new household spatialities—surging early automobile consumption by itself engendered convulsive capital subsumption far in excess of then-prevailing standards of social capacity.

Sica, Carlo (Syracuse University)

Keynesian roots of neoliberal natures: parsing US natural gas governance 1938-1978

Neoliberal natures literatures chronicle recent nature-society geographies that are driven by the logic of capital. This literature examines processes such as freeing markets from extra-economic controls, privatization of commonly-held resources, accumulation by dispossession, and replacement of state-led provisioning with market exchange. Frequently these literatures approach the prelude to neoliberalism as a backdrop for examining contemporary nature-society relations in capitalist contexts and are apt to pass over the socionatural relations of Keynesianism/Fordism. I argue that the scholarship would benefit from a conceptualization of ‘Fordist natures’ and/or ‘Keynesian natures.’ In making this point I explain the crisis of Keynesian natural gas governance that led to the deregulation of natural gas. In November 1978, Congress passed the Natural Gas Policy Act (NGPA), intending to incentivize gas production and counteract supply shortages. Beginning in the Great Depression, accelerating during World War II, and continuing in the post-war period, the federal government enforced cheap natural gas prices while expanding pipeline infrastructure. By the early 1960s, natural gas surpassed coal, oil and hydroelectricity to become the single most important source of fuel for the industrial and commercial sectors of the US economy. Low prices and expanded infrastructure made massive and growing consumption of natural gas possible while also disincentivizing exploration for new supplies. The combination of inadequate incentives to produce with a widening consumer base led to severe shortages, which were only solved by reverting to market-led pricing as a part of the wider neoliberal turn. In this case, Keynesianism was at least partially undone through a socionatural relation that made natural gas overly cheap, too-widely available, and not profitable enough for capitalist oil and gas firms.

Grace-McCaskey, Cynthia (East Carolina University)

The Political Ecology of Fisheries Management in St. Croix, USVI

Currently, there is widespread debate regarding the overall status of the world's fisheries, with some researchers projecting their total collapse in only a few decades, and others concluding the situation is not quite as bleak. Additional debates include what strategies should be used to manage fisheries at various scales, and further research is needed to determine which strategies are most appropriate for use in particular situations and locales, as context is critical. Recently, prominent common pool resources scholars have expressed the need for ethnographic approaches to studying resource management institutions in order to move beyond the current focus of simply identifying the factors and conditions that lead to the self-organization of resource users and long-term sustainability of management institutions. These authors describe the need for examining the larger context in which management institutions exist and taking various historical, political, and sociocultural factors into account when examining common pool resources. This research is a response to that request. Based on over 20 months of ethnographic research in St. Croix, USVI, this research draws on research in political ecology and anthropological critiques of common pool resource institutions in order to describe the historical, social, and political factors that influence how fisheries management occurs at the federal and territorial levels, and how commercial fishers, managers, and other stakeholders experience and participate in multi-scale management processes. Ethnographic data suggest that there are a variety of historical, social, and political factors that influence how commercial fishers, managers, and other stakeholders perceive the federal fisheries management process, the extent of their participation in that process, as well as interactions within and between stakeholder groups. Additionally, the mismatch that exists between the centralized management structure of the US federal system and the small-scale, multi-method nature of St. Croix's fishery creates a complex management environment in which few stakeholders participate.

Davis, George (Marshall University)

Constructing Coal Country: Coal, Capital, and Cultural Identity in the "Discovery" of Central Appalachia

Taking a historical perspective, this paper explores the construction of Central Appalachian of the United States as what the geographer Gavin Bridge calls "commodity supply space," focusing specifically on the connections between geographical, economic, and cultural identity in the region.

In the first part of this paper I explain what Bridge means by the concept of "commodity supply space" and examine its utility in analyzing the interrelationships of nature and culture in the Central Appalachia.

In the second part of the paper I explore how two coterminous narratives play a role in shaping the regional identity during the period just after the "discovery" of coal in the late 1800s and early 1900s. The first set of narratives is scientific: Exploring surveys, maps, and other geographical and geological texts, I examine how the identity of the region becomes shaped in a way that its natural resources (in this case coal) are posited as among the few things in Central Appalachia with significant value. The second set of narratives revolve around economic development, and here I look at how politicians and economic developers of the time draw from scientific narratives to promote the region's "natural wealth" or "value" as the one component making the region attractive for outside investors.

In the final part of the paper I provide a brief analysis of more contemporary coal narratives, exploring how the scientific and economic narratives discussed above play a role, historically, in shaping not only the region's economic identity but also its cultural identity.

Excavating the history of SMCRA: a political ecological account of work, reclamation, and bankruptcy in Appalachia

Appalachia is often described as an internal resource colony pillaged by extreme forms of fossil fuel extraction. The recent bankruptcy filings of major US coal producers highlight the material and metaphorical “holes” left by generations of mining, but also position the region as one of many facing economic contraction and poverty that inhibit the realization of a viable post-industrial economy (Bridge, 2015; Anglin, 2016). This paper revisits historical debates surrounding the federal regulation of surface mining beginning with the Appalachian Regional Development Act in 1965 and culminating in the Surface Mining Control and Reclamation Act of 1977 (SMCRA). Adopted in the wake of the energy crisis with the support of the United Mine Workers and industry, SMCRA addressed the dual national priorities of reliable, cheap energy and job creation. Relatively permissive environmental regulations that allowed companies to defer payment for mine reclamation charted a myopic trajectory towards increasing the size of surface mining operations, which ironically led to the collapse of organized labor. In response to the call for a political ecological approach to sociotechnical energy transitions (Lawhon and Murphy, 2011), this paper draws attention to the experience of workers following the adoption of SMCRA as a parable relevant to the contemporary bankruptcy proceedings. I articulate the historical development of surface mining to unravel both the central role of labor in producing the landscape of the coalfields and how labor has become another circuit of accumulation for mining companies.

Producing Illicit Agricultures and Natures II: Local Practitioner Panel

Chairs:

Garrett Graddy-Lovelace (American University School of International Service) and
Heather Hyden (North Limestone Community Development)

Panelists:

Mike Lewis (farmer, founder of Growing Warriors)
Jane Harrod (farmer, owner-operator Jane's Native Seed)
Hoppy Henton (farmer, Waverly Farm, USDA consultant)
Jim Embry (urban agriculturalist, founder of Sustainable Communities Network, Terra Madre
representative)
Lonzo & Leroy Ballew (farmers, Madison County)

In keeping with a recent Dimensions of Political Ecology practice of community-scholar conversations on Kentucky agrarian issues, this scholarly paper session will be followed by a local practitioner panel. Kentucky hemp growers, medical marijuana advocates, and local activists against the War on Drugs' racialized incarceration will gather to discuss the power dynamics and political ecologies at work in local illicit agricultures.

Political Ecology of Non-Human Actors

Chair: Phillip Drake

Margulies, Jared (University of Maryland Baltimore County)

Lively commodities, deathly encounter: the biopolitics of 'human-wildlife conflict' in Bandipur Tiger Reserve, India

This paper suggests ways in which political ecology is well-equipped to engage with animals as lively political subjects. To do so, I examine through empirical example how conservation acts as a form of “biopolitical rule” reshaping valuations of bovine, human, and wild-lives through an analysis of the narrative of ‘human-wildlife conflict’ in Bandipur Tiger Reserve in Karnataka, India (Biermann and Mansfield, 2014: 258). While increasing attention is being paid to the commodified value of nonhuman species as living things and human encounter with them (Collard and Dempsey, 2013; Barua, 2016), questions remain for how to also theorize animals as lively, political subjects enrolled in enactments of injustice (Hobson, 2006). To contribute to this effort, I examine the uses of ‘human-wildlife conflict’ as a truth discourse employed by conservation managers and scientists positioning marginalized peasants in opposition to endangered species conservation. Employing ethnographic, cattle census, and demographic data, I discuss how ‘human-wildlife conflict’ as a biopolitical discourse masks the underlying complexities of shifting multispecies relations between peasants, cows, and tigers in reaction to conservation enforcement practices, labor shortages, and a rapidly transforming regional economy. Rather than representing an intractable conflict between humans and animals in competition for resources and space, this paper fleshes out how a political ecological approach to analyzing the discourse of ‘human-wildlife conflict’ reveals the underlying economic forces driving these politically fraught relations, and the ways in which animals disrupt efforts by the state to govern them as subjects. This research contributes to studies of the biopolitics of conservation by attending to the political lives of nonhuman subjects in order to show how doing so can enliven what have become otherwise stagnant debates on the uses of conservation in the management of life by the state.

Drake, Phillip (University of Kansas)

Encounters with the Most Animal Other: Rabies, Biopolitics, and Disease Prevention in Bali

Since 2008, rabies has killed several thousand semi-feral dogs in Bali, but hundreds of thousands of dogs have been killed by government officials to control the disease, which continues to spread. This article tracks this rabies outbreak and the efforts to contain the disease, noting frictions that emerged between officials and animal welfare activists. The former depict the dogs as a nuisance that should be exterminated, while the latter showcase the dogs’ cultural and scientific importance. This biopolitical contest hinges on formulations of animality that position dogs in opposition to humans. Rabies complicates this conflict as it not only violates human/animal boundaries, rendering both human and nonhuman communities vulnerable to infection, but also transforms those who are infected into radically animal (violent, unreasonable, frothing) individuals. By rethinking animality via rabies, we may better recognize and counter articulations of animality that render vulnerable populations killable.

Das, Suchismita (University of Chicago)

Forests of Cedar and Forests of Sal: Trees, Affects and Politics of Recognition on the Himalayan Frontier

In India's politics of multiculturalism, animated by the motto of "unity in diversity", its north-eastern frontier state of Sikkim captures the national imagination as a pristine, alpine tourism destination. Travel brochures depict this erstwhile outlier Himalayan kingdom as pine forest-dotted hill-slopes inhabited by colorfully-clad, prayer-wheel spinning Buddhist mountain communities living in harmony with nature. In the project of territorial encompassment of national margins, this visually distinct nature and culture gets framed as a biocultural diversity hotspot and repository of "authenticity". Domestic tourists are thus interpellated as economic contributors to nature conservation and as agents of multicultural recognition interacting with marginal communities.

Thus an "authentic" Sikkimese landscape comes to be associated largely with subtropical pine forests, dominated by the Japanese cedar (*Cryptomeria Japonica*). This paper asks about the contours and consequences of this affective articulation. Counter to the iconic cedar are Sikkim's sub-tropical deciduous forests, dominated by Sal (*Shorea robusta*), Chilaune (*Schima Wallichii*) etc. Less visually diverse than the mainland landscapes, Sal trees characterize the regions' lower reaches. How are these two distinct landscapes depicted in tourism brochures, conservation literature and everyday tourism practices? What distinct affect does each engender and what is the resultant politics of recognition? Since plants can be "markers of humans' presence on the land and....contested symbols of human projects of rule" (Besky and Padwe 2016:10), which community's presence do particular plants invested with particular sets of affects legitimize and why? How are non-Buddhist Nepali communities living by the deciduous forests integrated or excluded from the expression of "unity in diversity"? In reading the cedar and sal's natural and social life as indexical of contested situatedness of people in landscapes, this paper highlights how trees, "enrolled in material [and] representational projects [of] territorial practice" (ibid:14) play a mediating role in claims and counter-claims about national and subnational belonging.

Sarmiento, Eric (Texas State University)

More-than-human subjectivities in Oklahoma City's local food movement

Building on recent scholarly deployments of assemblage thinking in analyses of subject (trans)formation, this paper examines the multifarious ways that a nascent food hub in Oklahoma City actively mediates the subjectivities of participants in Oklahoma's statewide local food movement. Drawing on extensive fieldwork in the area, I demonstrate that as an infrastructural and retail hub, the site holds significant potential for expanding the growing network of local food production, distribution, and consumption. The broader political import of the site however only becomes clear when the site is also examined as a component of urban redevelopment initiatives in Oklahoma City, in which role the food hub anchors efforts to create a revitalized Farmers Market District. I offer several vignettes that illustrate how tensions between the site's dual identities are reflected in dissonant elements within the multiple subject positions occupied by those involved in the local food movement. Deploying the work of Deleuze and Guattari, I argue that these subjective ruptures are best viewed as vectors of deterritorialization, lines of flight towards other ways of organizing food systems and urban space. The forces shaping these emergent subjects of the food hub, I conclude, are not strictly human or nonhuman, but rather the product of interactions between humans and a range of more-than-human actors.

Black Geographies and Cooperative Economics: Cultivating Food Democracy and Collective Power through Community-based Economics

Organizers and Panelists:

Rosalind Harris (University of Kentucky,
Department of Community & Leadership Development)
Heather Hyden (North Limestone Community Development
Corporation, Director of Community & Cultural Initiatives)
Drew Shackleford (Community Organizer,
Tweens Nutrition & Fitness Coalition)

Panelists:

Cubaka Nehemia (Tweens Nutrition & Fitness Coalition)
Shirley Carter (Tweens Nutrition & Fitness Coalition)
Joy Harris (Tweens Nutrition & Fitness Coalition)
Anna Meeker (Tweens Nutrition & Fitness Coalition)

A food justice movement is being cultivated across Kentucky by bringing together communities that have minimal access to fresh produce with local farmers seeking sustainability through guaranteed markets, fair prices and new community relationships. Employing a cooperative economics model rooted in the historical cooperative movements of African Americans (Nembhard-Gordon, 2014) neighbors are organizing values-based supply chains that are grounded in anti-racist, feminist spatial politics, which prioritizes the relations that constitute space ahead of built infrastructure (Massey, 2006; Slocum, et al, 2015). The resulting “Fresh Stop Markets” are emergent socio-economic spaces where constant negotiations are responsive to the needs and demands of the diverse community leaders and farmers who organize them.

This session will bring together community leaders, farmers and members of the UK community involved in the Fresh Stop movement to discuss the intersectional complexities of gender, race, class and urban-rural locality within alternative food movement building. We hope to share our stories reflecting the creativity, agency and resiliency of every day food justice mobilizations happening at the grassroots level. We will also focus on questions of ownership and representation in the context of the local food movement including who gets to define food injustice(s) and what solutions are seen as legitimate.

BLOCK 3
FRIDAY, 3:20-5:00

Food and Markets

Chair: UK PEWG

Brown, Lillian (Indiana University)

Taste in seafood politics and ecology

Food is multivalent. It has shifting meanings across place and space. One way that scholars understand this multivalence is through taste. Taste is both a sensuous experience (Hayes-Conroy, 2008) and a theory for class and social distinction (Bourdieu, 1984). Dr. Amy Trubek makes a compelling argument that the cultural politics of terroir, or the taste of place, is a powerful tool that we can use to reclaim our food systems through affective knowledge production (Trubek, 2008). Disassembling the hegemonic machine that is corporate, industrial, and transnational food production has never tasted so good.

But alternative food movements are also notorious for their exclusionary oversights. As Dr. Julie Guthman argues, food justice in the US is highly racialized. “Current [food] activism reflects white desires more than those of the communities they putatively serve” (Guthman, 2008). Class is another way of framing this problem. Economic conditions, social status and cultural identity affect consumer choice. Consumer based activism frequently overlook class difference—economic, social, and cultural capital—when they employ taste as a political tool (see Michael Pollan, et. al.).

Political ecologists have long considered both social unity and cultural variation together. Why not with food, taste and change? Paul Robbins argues that most political ecologists dwell somewhere in between constructivism and universalism (Robbins, 2011, p. 125). This paper uses taste to examine constructivist and universalist aesthetics in food politics and ecology. Most example will focus on the link between consumer tastes and preferences with market values in seafood consumption.

Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Harvard University Press.

Guthman, J. (2008). Bringing good food to others: Investigating the subjects of alternative food practice. *Cultural geographies*, 15(4), 431-447.

Trubek, A. B. (2008). *The taste of place: A cultural journey into terroir* (Vol. 20). Univ of California Press.

Mook, Anne (University of Florida)

Does Fairtrade Fulfill its Expectations? An Importance-Performance Analysis among Fairtrade Producers

Fairtrade is a label that promotes fair prices and decent working conditions for producers in developing countries. So far few studies have systematically evaluated whether Fairtrade as a non-state policy delivers its promised benefits to producers. Furthermore, academics differ in their interpretations on the impact of certification. In this paper, we identify three literature-based mechanisms by which Fairtrade delivers benefits: a social justice mechanism that stimulates social equality; a market-incentive mechanism that provides market advantage; and an agriculture mechanism that helps increase yields and quality. We survey FLO-Cert certified producers and compare their expectations along these three benefits to their satisfactions. According to producers in our study, Fairtrade does not operate well as a sustainable agriculture mechanism and farmers assigned low importance to this benefit as well; it is most effective in providing greater social justice. Market incentives did not fully meet producers’ expectations, but are most important in predicting a producer’s overall satisfaction with Fairtrade. We explore the implications of these gaps for Fairtrade as a non-state policy mechanism.

Metz, John (Northern Kentucky University)

Farmers Markets as Keystones: Viability of Markets of Greater Cincinnati

Farmers markets have been labelled “keystones” to a more healthy, just, and sustainable food system, so this presentation reviews the history of the markets of Greater Cincinnati over the last 35 years to evaluate their sustainability. In 1980 three “Legacy” markets, begun in the 19th century, still operated, and a group of farmers and social change activists were organizing a system of “Tailgate Markets” that would be scattered through the region. By 1983 18 markets operated and the number fluctuated between 18 and 23 until 2004; from 2004 to 2005 5 more markets emerged, grew to 27 by 2009, and then jumped to 42 in 2014; 39 markets operated in 2016. There has been a significant turnover in markets since 1980: of the 79 markets that have operated, 39 have folded. Most of the closed markets had too few consumers and/or too few farmers, but the lack of effective managers also caused many closures. Markets rely overwhelmingly on voluntary labor, virtually all of it being women. Of the 39 markets operating in 2016 three were managed by government employees as part of their broader duties, one had two managers each earning \$5000/season, five had managers earning \$10 to \$20/hour for 10 to 20 hour work-weeks, two had token payments, and 29 were managed by volunteers. Only 4 markets have organized boards governing and assisting managers. By 2016 many of the volunteers are burning out, and two of the most successful markets need new managers and community support or they will fold. In addition to the challenges of drawing poor and minority customers and of competing with corporate groceries, sustainability requires financial and community support for the managers who guide market affairs. Cincinnati’s experience suggests another dimension of fragility which activists and their communities must overcome.

Schmid, Mary Elizabeth (University of Kentucky)

Time, Enterprises and Seeds: Fresh-Market Tomato Industry of Southern Appalachia

Drawing on the diverse voices of tomato industry workers, this paper offers a multi-sited ethnographic view of largely unrecognized practices in the conventional, field-grown fresh-market wholesale tomato industry in the southeastern U.S. The paper describes the regional tomato circuit from the standpoint of southern Appalachia. Bringing together the stories and insights of tomato industry workers, including agricultural cooperative extension agents, farmers, labor contractors, seed breeders, brokers, marketers and harvesters, the paper present their distinctive perspectives on production-exchange relations, temporal-spatial enterprise strategies, cultivation practices and what I call political economic temporalities found throughout the southeastern U.S. tomato circuit. I argue that by considering the roles that social time plays in political economic contexts we can better recognize potential points for intervention in our socio-natural order. Cultural assumptions about time, enterprise relations and temporal-spatial strategies have political economic and ecological effects. The paper shows how an ethnographically-informed picture of a regional tomato industry circuit reveals commonly unrecognized examples of how redistributive flows and shifting production-exchange relations are linked to cultivation practices and societal change. To conclude, I suggest that fresh-market produce enterprise arrangements should be analyzed to advance our understandings of the organization of agro-food systems and the relations and beliefs that shape food cultivation practices.

Greenwell, Madeline (University of Kentucky)

Sustainable Food Systems

In the United States, neither the current environmental policies, nor the ones soon to be implemented, are strong enough in the fight for sustainability. The environmental destruction caused by mass factory-farming is carried out and profited on by large corporations. Degradation of land, life, and resources are permissible by inadequate laws and regulations. A redesigned system with strengthened environmental regulations placed on food corporations will help us provide the necessary resources for current and future generations.

Activisms, Race, and Identity Politics

Chair: UK PEWG

Tseng, Yi-Ling (University of Cincinnati)

Alliance, Activism and Identity Politics in the Indigenous Land Rights Movement in Taiwan

This study addresses the postcolonial identity politics entangled in the indigenous land rights movement in modern democratic Taiwan. While the Indigenous Peoples Basic Law was passed in 2005, Taiwan indigenous peoples still strive for land rights and autonomy in Taiwan's Han-dominated political society; yet, increasingly many young Han are voicing support as allies and collaborators in this movement. Most studies on land rights focus almost exclusively on minority movements and minority involvement in these politics. Few studies have looked at the role of majorities as allies and collaborators in these justice movements. Consequently, this article will discuss why and how majority Han increasingly collaborate as allies in the indigenous land rights movement and explore Han perceptions of indigeneity. Drawing on two months of ethnographic fieldwork in Taitung, Taiwan and interviews with both indigenous and Han activists as well as local residents, this study demonstrates that Han consume and internalize anthropological representations of indigeneity through the higher education system, an outgrowth of Taiwan's colonial past and Han privileged status as majorities. Enabled young Han formulate their identities as allies and collaborators around these representations; however, indigenous people critique Han allyship as a remnant of colonial misrepresentation and domination. In conclusion, this paper will discuss more integrated paths forward for future collaboration that privileges indigenous voices.

McCoy, Ember (University of Michigan)

The Color of Pollution: Assessing racial demographics and coal-fired power plant siting between 1950-1980

A variety of studies have been conducted that provide evidence for the relationship between air pollution from coal power plants and adverse human health impacts. Moreover, there is significant evidence that these risks are primarily and disproportionately burdened on low-income communities and communities of color. Much of existing environmental sociology research, however, provides insight on the current social distribution of environmental hazards through "cross-sectional" analyses examining only one point in time, leaving out discussion on disparities at the time of coal plant siting and post-siting demographic change. The establishment of current racial and socioeconomic disparities amongst populations surrounding coal-fired power plants (CFPPs), along with research focusing on other environmental hazards, has prompted scholars and policymakers to search for explanations of why, how, and when these disparities occur. This project focuses on the latter of those questions, when, by evaluating the racial demographics surrounding CFPPs using the U.S. Census Bureau's decennial data in the 1950's and 1960's compared to those of CFPPs sited in the 1970's and 1980's, after heightened environmental awareness through the Clean Air and Water Acts. This analysis utilizes ArcGIS and the areal apportionment method to evaluate racial demographics in a 3-mile buffer around CFPPs, testing the hypothesis that racial disparities were present in the communities near CFPPs prior to plant siting and that those disparities increased as knowledge of the adverse impacts of air pollution throughout the 1970's and 1980's increased.

Reese, Kelsey (University of Cincinnati)

Race, Place and Restoration: Exploring the Impact of Ecological Restoration Efforts on Community 'Sense of Place' in Cincinnati

This paper examines how ecological restoration and redevelopment efforts impact community members' diverse sense(s) of place in a small urban neighborhood in Cincinnati, Ohio. The purpose of this study was to understand sense of place, with an emphasis on crucial differences between white and black residents, as well as implications for future place-making in the neighborhood. By employing sense of place and the closely related term place identity as theoretical "tools", this thesis unveils a hidden politics of place in the context of ecological restoration, a highly normative human-ecological goal that often escapes a critical lens.

Qualitative research methods including semi-structured interviews were the primary source of information for this study. Secondary methods consisted of more creative methodology such as walking interviews including photographic documentation performed by participants.

Results found that current senses of place and place meanings for many white residents and community members in South Fairmount emanate from remembered personal and community engagements with the physical and social landscape of the neighborhood in the past. In contrast, current sense of place and place meanings for many black residents emanate from current engagements with the physical and social landscape of South Fairmount and the underlying structural poverty, neglect, and alienation that undermine their ability to form ties and reservoirs of memory from which to envision future landscapes.

Jean, Melissa (Lesley University)

Emotional Geographies of Animal Rights Activists

This qualitative research project aims to build upon a small body of literature that describes the experiences and motivations of animal rights activists. Within the animal rights community, past decades have seen conversations about whether emotions or "rationality" are the best bases for animal activism—or whether this is a false dichotomy that reveals deeply-embedded and gendered notions about power and knowledge. This project aims to explicitly describe the emotional landscapes and histories of animal rights activists, analyzing participants' early experiences with non-human animals and the ways in which these emotional histories have been affected by places and communities. By including a mapping activity that allows participants to spatially depict their emotions and experiences, this project draws upon the literature of emotional geography, including discourses about gender, rationality, the human/non-human animal dichotomy, and place. The discipline of human geography is an apt framework for this investigation, because in addition to providing interesting literal information about the place-based experiences of animal rights activists, this research project also provides a site for interrogating modern ecological, commodified, and emotional relationships between human and non-human animals, and the ways in which animal rights activism grows out of activists' feelings about these modern relationships.

Bennett, Alex (University of Michigan)

Hegemony in the Water: Gramsci, Environmental Justice, and the Flint Water Crisis

The Flint water crisis is perhaps the most-studied American environmental justice conflict in decades. However, academic environmental justice literature, as evaluated herein using the special issue of the journal *Environmental Justice* dedicated to Flint, has failed to adequately engage with the racial and neoliberal dimensions of the crisis, focusing instead on violations of state regulations. However, the state has both acknowledged these violations and produced documentation to exonerate itself from wrongdoing. A Gramscian analysis, utilizing the concepts of the integral state, hegemony, and passive revolution, reveals violent moments that occurred in Flint – and are reproduced – at the variegated intersections of race and neoliberalism. Proceeding from these intersections, I identify points of potential unity for political ecologists and scholars of environmental justice. Gramsci provides an intellectual conduit between these disciplines and a critical ethical framework which may guide academic pursuits.

Political Ecologies of the American South

Chair: Gretchen Sneegas

Hallemeier, Jonathan (University of Georgia)

Discursive Policy Analysis and Political Ecology in the Southern Appalachians

Winkel (2011) notes in a meta-analysis of Foucaultian approaches to forest policy and management that discursive analyses are most likely to be conducted in developing countries under the umbrella of political ecology. Winkel goes on to show that the minority of studies that bring a Foucaultian lens to forest management in developed countries largely draw on discursive policy analysis (DPA). This geographic division, along with DPA's explicit focus on policy, make it a potentially important resource in developing policy relevant, regional political ecologies in industrialized contexts. I outline and compare the intellectual histories, approaches, and methods of political ecology and DPA, examining how they might strengthen one another generally. I then apply these lessons to a case study of national forest planning in the southern Appalachians. The 1.2 million acre Nantahala-Pisgah National Forest is currently undergoing a forest plan revision that will guide management for the next fifteen years or more. The planning process provides a distinct space in which diverse interest groups and communities are engaged in contention and collaboration to define the ecological, social, and political future of the forest and the larger landscape. In this setting, I explore how DPA might play a role in developing a policy relevant analysis that highlights the particular histories, landscapes, institutions, and cultures that shape the southern Appalachians.

Rosko, Helen (Clark University)

Bottling Authenticity and Commodification: A Case of Moonshine in East Tennessee

The recent proliferation of moonshine in Tennessee (2009), greater Appalachia and states within the United States as a whole, raises questions of authenticity and legitimacy as an illicit commodity enters the legal marketplace. Focusing on three distilleries in East Tennessee, this paper analyzes the commodification of place and the role of authenticity in the selling of the region through a legalized moonshine commodity. Understanding the ways individual distilleries attach their own perceptions of place and region to their products demonstrates how distilleries assert authenticity and commodify place as they work to differentiate their products from local, regional and national competition. This paper first situates a historical place of moonshine and its contested relationship to its surrounding environment (natural, political and social) to then discuss its transformation to contemporary legality. Tracing this transformation elucidates the ways in which distilleries view their role in protecting and preserving the longstanding practice of making moonshine. In this way, I use broadly conceived qualitative methodologies to illustrate through a case study the ways in which distilleries attach place and region to bottle (embody) heritage, culture, tradition, experience and identity to produce and sell their legal moonshine for likely consumers. The rise of legalized moonshine is connected to broader economic changes and has significant impact on the cultural landscape of East Tennessee and Appalachia. Therefore, the goal of this research is to understand these impacts and directly contribute to literatures in Appalachian studies, tourism and place-making geographies.

Hilton, Theodore (Tulane University)

Biomass Energy Industry in Louisiana: A World-Ecology Perspective

Energy production has long played a major role in Louisiana's economy. The unequal social relations, political forms, and environmental impacts associated with the oil economy are well documented by political ecologists--Diane Austin notably writes of southern Louisiana as a peripheral zone for the United States, citing the "totality of anthropogenic environmental change" associated with timber, sugar, and energy production over the last three centuries. In recent years, Louisiana has become a site of extraction for biomass, a relatively new energy source that involves both timber and sugar in its production. Categorized as a "renewable" energy source by many political entities, biomass entails burning large quantities of pelletized plant matter.

This paper tracks the emergence of biomass energy extraction in Louisiana through a world-ecology lens, with attention to the geographic specificities and the social/political processes involved. Two notable contradictions emerge in this consideration. First, while cypress trees comprise a major source material for biomass energy, they are also a significant carbon sink and barrier to land loss in the wetlands from which they are harvested. Second, nearly all biomass extracted for energy in Louisiana and around the Southeast is exported to the European Union, where a significant amount of electricity is to come from "renewable" sources. This paper, then, offers an analysis of policy networks and trade relationships that view biomass as more sustainable than fossil fuels and enable Louisiana's shift to a peripheral role in energy production for the European Union.

Austin, Diane. 2006. "Coastal Exploitation, Land Loss, and Hurricanes: A Recipe for Disaster." *American Anthropologist* 108 (4):671-691

Holler, Joseph (Middlebury College)

Teaching common pool resources with heirs property in the U.S. South

Political ecology has a strong foundation in research based on case studies, challenging political research to generalize theory and synthesize global and regional systems/processes. Similarly, the case study approach is a challenge for teaching as students may focus on surficial details of case studies without gaining sufficiently deep understanding of theory. A surficial idiographic understanding of political ecology allows students to other the geographically distant social and environmental problems in case studies and reinforce the binary distinctions of urban/rural and first/third world. However, political ecology courses use assessment designed to require students to transfer theory learned in case studies to problems closer at home in the American South.

I present an exam and evaluation requiring students to identify and apply the most appropriate political ecology theory in order to understand the sustainability of heirs property for the Gullah/Geechee culture of coastal southern U.S. The exam requires students to abstract common property theory learned from case studies in India and the Philippines and apply it to the American South. In so doing, students learn application of political ecology theory in diverse social and environmental contexts, appreciate the deep structural similarities in distant human-environment problems, gain better understanding of the surficial problems of heirs property through application of political ecology theory, and break down the othering of distant global or third-world problems.

Family Property: Producing and Protecting Extralegal Spaces of Home

In response to the legal and bureaucratic inequities of Jim Crow, many southern African American communities have relied on extralegal property regimes to convey and manage their land. Today, these parcels are legally categorized as “heirs’ properties,” but the de jure property rights given to heirs leave them vulnerable to division and privatization. My research in the South Carolina lowcountry indicates that despite these pressures of dispossession, families continue to utilize a de facto form of kin-based common property called “family property,” which diverges from the de jure form of tenancy in common associated with heirs’ property.

The findings presented in this paper come from a combination of in-depth interviews, ethnographic, and archival research on Wadmalaw Island. In this predominantly African American community the extralegal practices associated with family property serve as a mechanism of resistance to privatization, yet occasionally derive power from their overlap with aspects of the de jure regime of heirs’ property. These findings bring together two strands of the political ecology literature on commons and apply them to the American South. First, this study illustrates how intertwined state-market practices facilitate enclosure and reinforce the dominance of private property. Second, it reveals how alternative property regimes can act as a counter-hegemonic challenge to the expected outcomes of enclosure and dispossession.

Towards a Feminist Political Ecology of Food Systems

Chair: Karen Stevens

Coplen, Amy (Portland State University)

The Labor Between Farm and Table: Toward a Feminist Political Ecology of Food Systems

U.S. fast food workers have been the face of a living wage movement that has drawn attention to a stark reality concerning life under late capitalism: many of those who work to put food on our plates cannot afford to feed themselves. Food is simultaneously a basic human need, a commodity with a volatile exchange value, and the object of over half of all human labor (Galt, 2013). It is also an ideal subject for exploring socioecological, as well as gendered and racialized, relations under capitalism. While existing food-focused scholarship in political ecology investigates the complex role that “nature” plays in agricultural production, more work is needed to understand how “nature” circulates across the food chain – in processing plants, slaughterhouses, refrigerated trucks, grocery stores, restaurants, and homes. A more holistic analysis of the myriad transformations, exchanges, and social relations operating between the field, the final point of consumption, and beyond, can help us understand why the struggles of food chain workers must take center stage in the movement for more just and sustainable food systems. Further, applying a feminist political economy lens can help us understand the role that gendered, racialized, and other undervalued food labor plays in both mediating socioecological relationships and reproducing bodies, ecologies, communities, and cities. In this paper I seek to outline a feminist political ecology of food systems that takes seriously the role of labor – both paid and unpaid – as the fulcrum of a dialectical relationship between humans and nature.

Gaddis, Jennifer (University of Wisconsin-Madison)

Unburdening Bodies: Environmental and Reproductive Justice in the US National School Lunch Program

This paper examines the burdens—chemical, biological, emotional, and economic—that the “heat-and-serve” economy places on food chain workers and the 31 million children they feed each through the National School Lunch Program (NSLP). The system of “cheap” industrial food that characterizes the modern-day school lunch—despite the recent implementation of the Healthy Hunger-Free Kids Act and the rapid growth of farm-to-school programs—illustrates how capitalism treats the environment as a free and exploitable resource and undervalues “women’s work” (Mellor, 2006). This economic fallacy has consequences for bodies across the food chain, human and non-human alike. Farmworkers’ health is impacted by exposure to agricultural chemicals (Holmes, 2013), as is the health of wildlife and the ecosystems they inhabit. The myriad plastic films, trays, portioning cups, and utensils used to package and serve school lunches also mobilize chemicals through the environment to wildlife (Teuten et al, 2009), whose non-human bodies and bodily products children later consume. When lunches arrive fully pre-cooked and frozen, “lunch ladies” are forced into short-hour jobs with limited autonomy and career mobility that rarely allow them to meet their own caring ideals. Attempting to navigate these chemical risks creates yet another time burden for women who are deciding what to feed their children (Mackendrick, 2014) or whether to let them eat school lunch. Unburdening these bodies, human and non-human, demands that the labor of lunch be reorganized according to ecological and feminist principles. To envision how such a paradigm might be forged, I engage with Giovanna Di Chiro’s (2008) work on coalition politics, social reproduction, and environmental justice to chart an intersectional framework for organizing parents, children, food chain workers and their allies in the shared project of remaking the labor of lunch and the bodies it (re)produces.

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Di Chiro, G. (2008). Living environmentalisms: coalition politics, social reproduction, and environmental justice. *Environmental Politics*, 17(2), 276-298.

Holmes, S. (2013). *Fresh fruit, broken bodies: Migrant farmworkers in the United States* (Vol. 27). University of California Press.

Mackendrick, N. (2014). More work for mother chemical body burdens as a maternal responsibility. *Gender & Society*, 28(5), 705-728.

Mellor, M. (2006). Ecofeminist political economy. *International Journal of Green Economics*, 1(1-2), 139-150.

Ortega Ortega, Tomás (Colegio de Postgraduados) and **Verónica Vázquez García**

Gender, maize and biodiversity conservation. The art of tortilla making in Oaxaca, Mexico

For thousands of years, maize has been the staple food of Mesoamerican peoples. Only in Mexico there are 59 breeds of this grain. The purpose of this paper is to analyze women's role in maize management and conservation. Research was conducted among the Mixteca women belonging to the Tortilla Makers' Union of Tlaxiaco, Oaxaca (Unión de Palmeadoras de Tlaxiaco). Data were obtained through interviews, participant observation, workshops, field diaries kept by the women themselves, and a survey including all members of the Union (89). Drawing on a feminist political ecology approach, the paper describes the tortilla elaboration and selling processes as well as the maize breeds that are used by women for various kinds of tortillas. Results show that women have a preference for native maize breeds due to their cooking quality. Their clientele also has a preference for these breeds because they produce of larger variety of tortillas. However, hand-made tortilla making and selling is a trade under threat due to the national decline in maize production and to the growing presence of mechanized tortilla stores. The paper concludes that women play an important role in preserving biodiversity due to their daily use of native maize breeds. However, their conservation and management practices must be acknowledged in order to protect such an important resource for Mexico, Mesoamerica and the entire world

Chennault, Carrie (Iowa State University)

Radical struggles in 'Growing Together': Feminist perspectives on community donation gardens and food pantries in Iowa

This paper examines community donation gardens and food pantries through feminist perspectives. Growing Together is a statewide donation gardening project coordinated by an interdisciplinary team within Iowa State University Extension & Outreach, in partnership with university farms, Master Gardeners, food pantries, and other grassroots partners. As a feminist praxis-based scholar, in my role I interact with, work alongside, and learn from the people working in these spaces and the people accessing the food. The boundaries within the communities—sometimes physical but often political and epistemic—call for new connections to reduce marginalization and voicelessness in the local food system. More-than-human feminism envisions new modes of interaction in which a radical relationality mutually intertwines human identity with biota, earth systems, tools, and technology to depart from relations of dominance. This analysis weaves radical relationality with ecofeminist enhancement of life-sustaining diversity and collaborative feminist boundary crossings. Feminist perspectives inform how community food participants can enact food system shifts while situating their labor within struggles against dominance and oppression. Growing Together entails the discursive struggle of what counts as productivity in the agrifood economy, the political struggle over the right to land and food, and the relational struggle of seeing one another as connected with food, soil, microbiota, pollinators, garden tools, community gardeners, food pantry workers, and food pantry clients. In conversation with these perspectives, I elucidate unpaid, underpaid, and undervalued foodwork, and offer strategies for action. Reconsidering who and what we are “becoming with” (Haraway, 2008) as part of our identity suggests radically different interactions than dominating the human and more-than-human world. By engaging in feminist praxis, this project furthers critical food scholarship addressing whether and how local food systems may achieve more transformative visions of food justice.

Historical Dimensions of Political Ecology II: Land Use Change & Conflict

Chair: Eric Nost

Discussant: Kelly Kay

Lonneman, Michael (University of Georgia)

Land Use and Environmental Change during the Transition from Slavery to Wage and Contract Farming in the South Carolina Piedmont

This paper explores how dynamic land tenure institutions and demographic changes across class and racial categories differentially shaped trajectories of agricultural land use and environmental change in the South Carolina Piedmont region, 1860 -1880. Understanding the relationship between environmental degradation and socio-economic marginalization has been a central goal of political ecology (Blaikie 1985; Robbins 2011). The transition from slavery to a wage- and contract-farming labor system in the context of a landscape associated with widespread soil erosion provides an ideal setting to explore relationships between land use and environmental change in a dynamic socio-economic environment. This analysis will use a spatially explicit agent-based modeling simulation to test if different hypotheses related to sharecropping and tenant-farming production shape the intensity and distribution of agricultural land use and environmental change. The model will be parameterized with household-level data from agricultural and demographic census schedules and land deed records in Union County, S.C. At the household and parcel level, the model will investigate how farmers respond to feedback loops associated with increasingly constrained production decisions due to crop-lien institutions and declining soil fertility. At the landscape level, the model will investigate if and how the spatio-temporal nature of land use and environmental change is driven by tenants and sharecroppers moving agricultural production within and between land parcels in the context of increasing socio-economic marginalization and environmental change. The paper has the potential to address simple and linear narratives of landscape degradation by investigating how the differential distribution of use rights and the quality and quantity of land resources available to producers drives land use and environmental change through time.

Wright, Robin (University of Minnesota)

This land is our land: Ranchers, Race, and Settler Politics in the West

In January of 2016, armed militants occupied the Malheur National Wildlife Refuge, a preserve of wetlands and sagebrush located in sparsely populated Southeastern Oregon. Ostensibly triggered by a federal judge's re-sentencing of ranchers Dwight and Steven Hammond to serve additional time in prison for arson on federal lands, the occupiers demanded the immediate surrender of all federally owned and managed lands to the state of Oregon. Anti-government sentiment and conflict between ranchers and federal land managers in the West is not new; changing leases on federal lands were a major provocation of the 'sagebrush rebellion' in the 1970s and 1980s, and ranchers continue to claim that federal land management practices infringe on long-standing grazing rights. This paper focuses on the occupation as an intensified mobilization of the logics of settler colonialism that works to reinscribe the racialized landscape of the West. While some political ecologists have focused on rural land conflicts in North America as battles over private/public property or marginalized livelihood practices, these movements are also about a particular historical imaginary of the West in which white settlers become 'native' and position themselves as the primary keepers of the land. Through settler nativism, ranchers evacuate the original presence of the Paiute and express a privileged right to the use and occupation of the land above and beyond others recognized by Malheur National Wildlife Refuge managers, including migratory birds, trout, recreational hunters and fishers, and current Paiute tribal members. The geographical imaginary put forth by ranchers and the occupiers asserts an agonistic sense of place that defines who owns and belongs on the land and who does not. The history and politics of settler nativism is thus a key lens both for understanding the evolving political ecology of the West and the rise of white nationalism more broadly.

Nirmal, Padini (Clark University)

Combating Disembodiment with Decolonial Resistance: A Decolonial Feminist Political Ecology of Adivasi Indigeneity

In an effort to understand the geometric rise of land conflicts and struggles in Adivasi (indigenous peoples) India in an intersectional, historical context, I undertake a decolonial feminist political ecology analysis of the nature of indigeneity and resistance in the Adivasi region of Attappady, Kerala. In doing so, I draw from my research into the Adivasis' land ontologies (including their geographies and histories), which contextualize their relations to land, in relation to those of rural settlers, land activists, government officials and other actors. In my analysis, I examine the socio-political-ecological history of Attappady using the theory of rooted networks, showing how Adivasi land ontologies reveal a) land loss to be a form of historical disembodiment causing various ailments to the individual and collective body of the Adivasi, and, b) land struggles to be decolonial resistances against such disembodiment. In doing so, complex counter narratives of settlement, occupation, encroachment, alienation and resistance emerge challenging current understandings of indigeneity as rooted in place alone, showing the existence of rooted networks through a grounded environmental history of Attappady centered on land. Further, such a decolonial feminist political ecology analysis also challenges the notion of 'dispossession', arguing for its replacement with 'disembodiment' as a non-occidental synonym capturing the socio-ecological complexity of land loss.

Pries, Sean (University of California, Davis)

"The Past is the Key to the Present" Landscape Conservation of the Upper North Fork American River

The human occupation of the North Fork American River headwaters basin began its post-indigenous period as the summer retreat of the Central Pacific Railroad's Mark Hopkins. Today, the headwaters basin ownership structure is a mixture of national forest, properties owned by land trusts, as well as sizeable areas in private ownership and largely managed for conservation purposes. While the North Fork American drainage is protected both by remoteness and challenging topography in many places, these factors cannot fully explain why so much of the upper river remains undeveloped. Though it was established as Wild & Scenic in 1978, that protection consists of a quarter mile buffer on both sides of the river. In a steep river canyon with a history of timber extraction and gold mining, actually protecting the river requires more than such a buffer. The upper 39 +/- miles of the river have benefited from repeated conservation efforts. Over the past decade thousands of acres have been purchased by land trusts for conservation as well as increased public access. But what has driven these efforts? Why has the North Fork long been perceived to be a place deserving of protection? One way to attempt understanding these questions is to examine the affective qualities of the way the place has been represented through time. From a 19th century oil painting through rhetoric utilized by land trusts to garner political and financial support for purchases in the 21st century the North Fork has been represented as a place where the human footprint should remain light. Additional analysis by way of GIS and cartography begins to show how the political process of conserving the North Fork has mobilized both visual and written syntax to both create and protect a landscape.

Environmental Science and Expertise in Transition: New Perspectives on the Politics of Knowledge in a Time of Populism & Resistance?

Chair & Discussant: Jennifer L. Rice

Liebman, Alexander (University of Minnesota) and **Henry Anton Peller** (Ohio State University)

¿Y si no en Habana? Development agronomy, land distribution, and peasant struggle in Colombia

On October 2nd, 2016, the Colombian electorate narrowly rejected the Havana Accords, suspending a peace deal to end a 50-year civil war between FARC and the Colombian government. The “No” vote also halted the return of agrarian reform to a country with the highest disparity of land inequality in Latin America. If not agrarian reform, what do international and Colombian institutions offer as a response to the deep contradictions of rural Colombia? To explore this, we analyzed a decade of policy documents from the Consultative Group on International Agricultural Research (CG) and its Latin American flagship in Colombia, the International Center for Tropical Agriculture (CIAT). Preliminary findings support our hypothesis: abject lack of research and directives on land distribution and conflict despite 1) history of peasant dispossession and agribusiness land consolidation and 2) contemporary prevalence of social movements demanding land reform throughout CG’s Latin America focus area. Rather, the CG ‘framework’ and CIAT’s key projects target efficient markets, genetic improvements, and ‘Climate Smart Agriculture’.

How can we explain this disjuncture between material reality and development policy? CG is not solely an ‘objective’ scientific institution, but also a development organization with projects throughout the global South. By sidestepping the question of land, CG policy maintains - rather than resolves - rural inequity. Furthermore, we argue that dominant mechanisms for improved small-farmer livelihoods that CG espouses – decreased barriers to markets, improved genetic resources, and linked “win-win” production-conservation practices– are all dependent on increased land access and tenure for small holders. Although the CG has recently undergone reforms to develop land restoration and gender equity initiatives, the CG remains shackled to its past: a scientific handmaiden to broader imperial strategies bent on suppressing rural movements in Colombia and throughout Latin America. But with the world’s largest germplasm libraries and high quality research personnel and facilities, we agricultural scientists face a dilemma: Do these institutions offer some use to the ‘left’? To conclude, we discuss preliminary attempts and concerns in leveraging this institutional space.

Reisman, Emily (University of California Santa Cruz)

The Audacity of the Almond: Environmental Expertise and Agriculture’s Latest Bad-boy

In 2014 journalists declared almonds “the devil’s nut” and accused them of “sucking California dry”² for using roughly one gallon of water per nut during the state’s record drought. These accusations were met by a series of retorts defending almond production and attempting to debunk environmental concerns as alarmist. These journalistic debates do not rely on the often-privileged forms of scientific expertise and yet have taken on significant weight as evidence in consumer decisions and popular dialogue. How are almonds framed as an environmental problem, through what forms of expertise is this contested, and to what effect? Through a discourse analysis of over 100 newspaper, magazine, and web-based journalistic articles spanning two and a half years, I analyze the knowledge claims invoked to attack or defend almonds’ environmental entanglements. In doing so I find expertise as characterized by (1) quantitative claims to an imagined equally distributed harm, and (2) validation of such claims through links to broad social concerns about economic growth, class-structured consumption, and globalization. This research examines journalism as source of environmental knowledge whose credibility paradoxically lies in both its privileging of reductionist calculations and its responsiveness to social concerns.

Webber, Sophie (University of Sydney), with **Glen MacDonald** and **Eric Sheppard**

The politics of science-policy orderings in California

In attempting to rework and redistribute the unrivalled authority of climate science as the creative source of climate knowledge, scholars and practitioners alike have argued for the greater integration of science and decision-making. These advocates suggest that focusing on the co-production of climate science, the building of translating boundary organizations, and the creation of climate information services will both democratize climate science and facilitate smart adaptation decisions. In the United States, this has manifest in a series of efforts to convene scientists and decision-makers (from individual farmers to policy elites) through institutional and financial levers. Building on a critical assessment of these efforts in California – and in contradistinction to the extant literature concerning the science-policy interface – this paper argues that co-production, boundary organizing, and climate services do deeply political work. Drawing from field research, including interviews with scientists and decision makers from state, regional, and national sites, we show first that such democratizing efforts have increased institutional and organizational burdens, and reinforced a privatized, contracted based model of procuring information and a neoliberalized understanding of the state provision of services. Second, we demonstrate that the emphasis on useful climate science is intimately tied to, and productive of, social orderings of national identity. In summary, efforts to undo exclusionary scientific expertise to better manage climate impacts in California have, perhaps perversely, contributed to entrenching neoliberalized and nationalist state imaginaries.

Colven, Emma (University of California Los Angeles)

“There Are Too Many Experts”: The Contested Landscapes of Flood Mitigation in Jakarta, Indonesia

In Jakarta, a city that frequently experiences disruptive, and often times devastating flooding, the dominant state-led response has tended to privilege hydrological engineering, hard infrastructure, and techno-managerial solutions. Such projects often increase the safety of Jakarta’s middle class, while reducing the ecological security of poorer residents. For example, the city has recently undertaken a series of normalisasi (normalization) projects, involving the dredging and concretization of rivers, which involved the evictions of thousands of residents from their settlements along riverbanks. Another major planned project is the Dutch-designed “Great Garuda Sea Wall”, an ambitious project to construct a new waterfront city behind a giant offshore sea wall. Critics contend that the project will displace Jakarta’s coastal communities and negatively impact the livelihoods of fisherfolk.

While Dutch consultants and the World Bank play a crucial role in legitimizing these projects, community organizations, activists, and NGOs have criticized their uneven impacts, and challenged the state’s seemingly unwavering faith in the capacity of engineering to deliver “technological salvation” from flooding. This paper examines Jakarta’s contested landscape of flood mitigation and recent debates over both the causes of flooding, and the appropriateness of different responses. Drawing on archival research, and interviews with activists and staff of NGOs, I examine the “environmental imaginaries” and forms of expertise that they mobilize in order to contest state-led flood mitigation efforts. I argue that while these debates have the potential to democratize conversations around flood mitigation, there is also a risk of reinforcing the authority of the “expert”, and thus continuing to marginalize those communities most affected by flooding.

Identity Politics "the War on Coal," & Backlash to Environmentalism in the Appalachian Coalfields (Panel)

Chair: Shannon Bell

Panelists:

Shannon Bell (University of Kentucky)

Nick Mullins (Independent Researcher)

In the coal-mining region of Central Appalachia, where drinking water in many communities is contaminated with toxic metals from coal waste and where mountaintop removal mining has destroyed more than one million acres of land and over 500 mountains, a grassroots struggle for environmental and social justice has risen up to hold the coal industry accountable for the pollution and destruction it has caused in the region. However, despite the fact that the movement was started by local residents, recruiting new local people to join the fight has been an ongoing challenge. In this session, environmental sociologist Shannon Bell and former coal miner Nick Mullins team up to examine the question of why so many people living in coal-affected communities are reluctant to take action in the face of serious threats to their health, safety, and treasured ways of life. Drawing on insights from Bell's recent book, "Fighting King Coal: The Challenges to Micromobilization in Central Appalachia" (MIT Press 2016), and the newly-released film "Blood on the Mountain", which features Mullins, this session will move beyond the tired "jobs vs. the environment" argument to reveal the nuanced identity politics, protest tactics, and industry campaigns that have negatively influenced many coalfield residents' willingness to align themselves with environmental groups fighting for coal-industry accountability in the region.

BLOCK 4
SATURDAY, 9:00-10:40

Community Engagement and Urban Political Ecology

Chair: Amber Bosse

Meyer, Dugan (University of Kentucky)

Cold and (Im)mobile Homes: Body Temperature, Territoriality, and the Dispossession of Life

That extreme cold poses a particularly acute danger to the homeless in the United States is likely not surprising; indeed, housing is linked so intuitively with shelter that the two terms are often colloquially interchangeable, and though there are a myriad of things from which housing provides shelter, few are as viscerally familiar to us all as the bitter cold. What is surprising, though, is how little attention is given in public policy and discourse to the social and spatial conditioning of this risk relationship and others like it. This paper pulls together concepts like political ecology, environmental health, landscape, and territoriality to explore the production and maintenance of vulnerability in relation to housing access. I begin by recalling the death of James Clifton in 2015, a homeless man who froze to death in an abandoned mobile home in Lexington, Kentucky. But rather than center on the event itself, the paper looks directly at the landscape in which this event took place in order to examine the relations of power that produce and maintain the conditions that make such events more likely for certain people in certain places. I point to specific spatial strategies designed to control people and property, and to separate people from property, that are common in mobile home parks in Kentucky like the one in which Clifton died, and argue that these territorial strategies function as violent but legal processes through which vulnerable populations are exposed to disproportionate risk to life.

Carmichael, Christine (Michigan State University)

The trouble with trees? Understanding resistance of residents to street tree-planting programs in Detroit, Michigan

Across the United States, cities including Detroit, Michigan have established ambitious goals to increase the urban tree canopy to achieve multiple ecological and social benefits. Scholars acknowledge the vital role of local residents in determining sustainability of urban forestry initiatives (Clark, Matheny, Cross, and Wake, 1997). Yet, scholars also note "...a lack of participation in forestry programs by people living in minority communities is highly problematic in relation to the goal of increasing canopy cover equity across the city" (Perkins, 2015, p. 30). Between 2011 and 2014, 24 percent of residents in Detroit, Michigan submitted a "no-tree request" (NTR) to a non-profit organization responsible for tree planting on city-owned property, when offered a street tree to have planted in front of their house. This example reflects a divergence between diverse participants regarding views on the problem(s) with, and solution(s) to, street tree-planting programs. This paper presents results from qualitative research conducted between July 2015 and May 2016 in Detroit, Michigan, which involved residents eligible for street trees and staff and board members within the non-profit organization that plants trees. This study utilized theoretical perspectives from urban political ecology and environmental justice to examine the reasons for resistance to greening programs among residents in Detroit, Michigan, including issues of power dynamics and procedural justice (i.e. decision-making power related to selection of trees to plant and maintenance responsibilities). The primary research questions are: (1) How do stakeholders frame the problem(s) with urban tree-planting programs? (2) What are stakeholders' perspectives on appropriate solutions to these problems? Data were collected from 44 residents across five sampled neighborhoods, via community meetings, audio-recorded interviews, phone conversations, door-to-door dialogue, and questionnaires. The lead researcher also engaged in tree planting and community outreach events, the non-profit organization's board meetings, and audio-recorded interviews with staff and board members.

Walsh, Joselyn (Washington University in St. Louis)

A Grassroots Revolution? Imagining Change in St. Louis Food Landscapes

This paper engages with the formation of a burgeoning alternative food movement in St. Louis, MO by examining the conditions under which it arises as a response to dissatisfaction with conventional food. Through situating ethnographic interviews with St. Louis residents into a broader context of the problematization of U.S. food and eating outlined by Julie Guthman in *Weighing In: Obesity, Food Justice, and the Limits of Capitalism* and Susan Greenhalgh in *Fat-Talk Nation* I discuss how people come to internalize dominant cultural narratives of food system problematization as their own. I draw on arguments from Guthman and Greenhalgh as well as from my own research with individuals and organizations in St. Louis to discuss points where the explanatory power of dominant cultural narratives of personal responsibility for health and nutrition and a focus on the consumer as a locus of intervention fall short. I provide evidence that the strength of these flawed narratives is pervasive enough to change the agendas of local organizations which would typically challenge the environmental and health effects of industrial agriculture to ones which seek to promote health and sustainability without challenging powerful economic interests. I argue that we need to be attentive of the power of reproducing these narratives, as a move to emphasize these types of initiatives may result in managing rather than addressing harm caused by powerful industries.

Re-financing fossil fuels: Neoliberal reforms and the continuation of carboniferous industry

Chair: Robby Hardesty

Gifford, Lauren (University of Colorado-Boulder)

Beyond 'business as usual': Market-based forest management, carbon offsets, and politicized accounting practices

North American forests are increasingly being incorporated into carbon offset schemes, in both voluntary and compliance carbon markets. Called “offsets” for their ability to administratively counteract fossil fuel use, forest and other conservation activities exist outside cap-and-trade systems, but are included to balance carbon budgets. As mechanisms that allow companies to pay to pollute, forest carbon projects are bureaucratically complex, with multiple layers of verification that make forest conservation legible on financial markets. This paper connects trends the financialization of environmental management with the rise of forest carbon offset projects in the United States. It explores how forests are tied to carbon markets using wonky interpretations of additionality, improved forest management, and carbon sequestration. Using the Farm Cove Community Forest carbon project in Maine as an empirical case, this paper suggests the rise of TIMOs (timber investment management organizations), and their related land use practices, have created spaces for forests to be incorporated into carbon markets. The paper questions how dominant knowledge claims are shaped and reproduced in the context of forest carbon monitoring, reporting and verification (MRV). Drawing on participant observation in two carbon accounting short courses through the Greenhouse Gas Management Institute, this paper challenges the notion that the tools and technologies used to account for forest carbon are technical and apolitical. Rather, it suggests that carbon accounting processes are embedded with uneven networks that influence how standing forests are translated into tradable carbon credits. The paper situates carbon MRV as highly political points of translation that connect forest conservation to global financial markets, and contribute to carbon’s market value. The paper concludes by questioning whether this type of intensive environmental management exists primarily to sustain itself, and questions the implications of systems that privilege the development of complex carbon offset schemes over structural changes to limit fossil fuel use.

Gellert, Paul (University of Tennessee)

Bankruptcy as a carboniferous finance mechanism: The case of coal in the US

Since the 2008 financial crisis the US coal sector has turned to Chapter 11 as a refinancing tool. Through the lens of political economy this paper examines the case of US coal mining corporations and insolvency over the last decade. Although proponents of the coal industry charge the so-called “war on coal” as the reason for the price decline and point to further deregulation and revitalization in the sector as a way forward, a historically-based political economy perspective on bankruptcy illuminates the ways in which financial restructuring and empowering of financial and corporate executives function as a bailout mechanism. Bankruptcy law has gone through three major shifts since the late 19th century, with important recent revisions in 1978, 1994 and 2005. Based on analysis from the LoPucki bankruptcy database and secondary data from news and trade sources, this paper recounts the recent financial restructuring of US-based coal companies. By analyzing cases including Patriot Coal and Peabody, the paper demonstrates the ways that corporate executives and suppliers of credit are favored by the latest revision of the law. As such what is mildly known as Chapter 11 is used to restructure and reestablish firm financial footing for the next cycle of accumulation. With the price of coal up in 2016 and dramatic political change in the US, these corporations are poised to benefit in a representative example of the dependent relationships between historical bankruptcy shifts, the state, corporations, and finance.

Gilbertson, Tamra (University of Tennessee)

Historical Cycles of Bankruptcy and the Case of the US Coal Sector

Bankruptcy is often overlooked in research that addresses the political economy of finance. Bankruptcy policy has shifted over US history to accommodate corporate pressures and financialization pressures. The paper outlines the political economy of accumulation cycles in the market and necessity of bailout structures in capitalism. In addition, the paper investigates shifts in US bankruptcy law from the 1800s to the neoliberal era. The paper examines a case study of coal mining corporations and Chapter 11 filing over the last decade. The increase in restructuring by the US coal sector provides an illustrative example of the dependent relationships between the state, corporations, and finance.

Integrating the Environmental Humanities and Political Ecology

Chair: Clay Graham

Political ecology takes on different contours in different disciplines. This session focuses on political ecology as it is understood and practiced in the humanities. Rather than proceed from a single understanding of the idea of political ecology, however, e.g., as a discipline that combines the concerns of ecology and a broadly defined political economy, the session participants offer a practical expression of the significance of political ecology through their individual work within the humanities. This approach, it is believed, both expands and deepens the concept and the praxis of political ecology as such.

Davis, Brittany (Allegheny College)

Humanizing Political Ecology: Teaching Fiction in an Environmental Justice Course

Political ecology texts and courses tend to emphasize case studies, using these to examine the entanglement of political, economic, environmental, and social factors. While case studies are valuable, they lend themselves to the real, rather than the abstract or creative. In this presentation, I explore the value of bringing the environmental humanities into a course taught using a political ecology framework, specifically creative work such as (graphic) novels, comics, short stories, and role plays. The presentation shares some of the creative work produced by students as well as the insights we collectively gained from reading Linda Hogan's *Solar Storms* at the end of a semester filled with case studies of environmental justice. Taken together, these highlight the importance of using the humanities to broaden students' thinking, deepen engagement with the course material, and foster new ways to share important issues with others.

Magrane, Eric (University of Arizona)

The Shame-faced crab and Shovelnose guitarfish: Bringing the Environmental Humanities to an Art-Science Investigation of Bycatch

The U.S. NOAA Fisheries defines bycatch as "discarded catch of any living marine resource, plus unobserved mortality due to a direct encounter with fishing gear." A study on shrimp trawlers in the Bahía de Kino region of Sonora, Mexico to be between 85 to 90 percent of the catch by weight (Meltzer et al 2012). This bycatch is the subject of an art-science project co-produced by myself and marine conservationist and illustrator Maria Johnson. As part of the Next Generation of Sonoran Desert Researchers (N-Gen) 6&6 art-science initiative, we have spent nights doing field research aboard shrimp trawlers. The resulting work blends aspects of political ecology, marine biology, poetics, illustration, and video. In this presentation I will share some of the work produced in this project, including a spring 2017 exhibit at the University of Arizona Museum of Art, and reflect on what the transdisciplinary approach to understanding the multiple aspects of bycatch might have to offer in making sense of the issue.

Sandmeyer, Bob (University of Kentucky)

"Aldo Leopold's Political Ecology"

Aldo Leopold, who is best known for his formulation of a land ethic in his last published work, *A Sand County Almanac*, is not usually associated with political ecology. This paper seeks redress that deficiency. While it may be that Leopold remained silent in the face of structural and economic inequities arising within a globalized market, his ideas as to how best to address that most ancient of problems, i.e., how to live on a piece of land without spoiling it, articulate a clear political ecology. Indeed, I will argue that his collaborative approach to conservation problems have clear and pertinent implications for the study of political ecology today. In my presentation, I will focus on the development of Leopold's conception of collaborative conservation, especially as this is formulated against the backdrop of the New Deal conservation policies in the thirties. I will show that his conservation philosophy is consistent with the dominant narratives in political ecology today.

Van Meter, Tim (Methodist Theological School in Ohio)

"Aldo Leopold and Place-based Ecological Religious Education"

Aldo Leopold's land ethic challenges an economic view of land use, introducing the idea that all life existing in a place has a right to thrive. Leopold's attention to the places he lived and worked offer insights for understanding the possibilities of place based education as a practice of political ecology. In this paper, I place Leopold in conversation with understandings of place from the Benedictine monastic vow of stability through Wendell Berry's commitment to a small hold farm in Kentucky to the current educational practice at a small school in Ohio. In this I intend to make the case that an understanding of ecological health for a place is foundational for religious and ecological imagination as an aspect of political ecology.

The Political Ecology of Coastal Conservation, Development, & Livelihoods I

Chair: Ryan Anderson

Discussant: Betsy Beymer-Farris

Rahman, Ashique (University of South Florida)

Political Ecology of Livelihood Adaptation to Sea level Rise and Salt Water Intrusion in Bangladesh

Bangladesh is a low-lying alluvial country with a population of some 160 million. Because of its long (700km) coastline on the Bay of Bengal, studies have shown that a large portion of coastal Bangladesh will be severely affected by climate change through projected sea level rise. One major consequence of such a rise in sea level is salt water intrusion into the coastal regions. This is already occurring, with the result that thousands of traditional Bangladeshi farmers are now struggling to adapt as increasing salinity impacts their drinking water, sanitation, and livelihoods. This paper focuses on; first, how do local people respond to the change regard to their livelihood, second, how unequal power relations shape adaptation to climate change, and finally, what could be an appropriate policy response to enhance their adaptive capacity. I argue against underlying political logic that favors shrimp farming, practiced as a form of livelihood adaptation.

Johnson, Jennifer Lee (Purdue University)

Nyanja is Not Lake Victoria: The Ontological Politics of Livability Along Uganda's Southern Littorals

The fascinating complexities of Lake Victoria's contemporary fisheries situation and assumed fisheries crisis have motivated a recent florescence of social science scholarship. These studies have identified a central paradox: despite living next to and making their living from Africa's largest freshwater fishery, residents of Lake Victoria's fishing communities are surprisingly food insecure and eat surprisingly few fish. This paper introduces four ontological problems that implicitly frame studies of and attempts to address Lake Victoria's contemporary fisheries crisis. These problems are: what constitutes a body of water, a complete meal, fish, and fisheries themselves. Attention to these problems reveals a paradox otherwise: it is still possible to eat and live well with fish in places where experts have already determined almost no one can.

DuBois, Bryce (Cornell University)

"Demand the Sand": Refiguring and Restoring Rockaway Beach Post-Hurricane Sandy

Once a shifting barrier beach, the Rockaway peninsula is now developed as a stable linear land mass. While the native Lenape people lived away from the peninsula on high ground, an estimated 130,000 people now live on the peninsula itself; land that has been produced through the use of hard structures (i.e. bulkheads and rock jetties) and the mounding up of sand. Furthermore, residents include middle-income homeowners as well as twenty-five percent of Queens public housing residents and other un/underemployed renters. Since Hurricane Sandy, as well as concern about sea-level rise and the increasing severity of coastal storms, public discourse has refigured the beach as potentially more intertwined in the lives and livelihoods of Rockaway residents than as a place for recreation and economic growth. In this paper I examine discursive conflicts around the production and governance of Rockaway Beach, a 6.2 mile long urban public beach managed by the NYC Department of Parks and Recreation. Through the analysis of interviews, field-notes from participant observation at community and stewardship events, and archival research during the two years (October 2012-October 2014) following Hurricane Sandy, the spatial justice of the restoration of the beach is examined. While formal and community-led restoration practices promoted a more "natural" form of the beach with a primary dune and American Beach grass, there remained discursive conflicts

around the restoration of the beach. Additionally, equity and power in the restoration practices remained, especially in distributive, interactional, and procedural justice along with the ability to care for the beach and rights to access the beach. Through this analysis I conclude by arguing for urban beach management that is attentive to spatial justice in this increasingly vulnerable environment.

Brondo, Keri (University of Memphis)

Entanglements in Conservation: Utila's Emerging Economy of Affect

This paper takes a political economy approach to unveil the entangled lives of humans and other beings confronting and immersed within an expanding global economy based on affect in Utila, Honduras. Since the mid-1990s, life on Utila, a popular discount scuba and backpacker destination located along the Mesoamerican Barrier Reef, has been deeply transformed by the growth of dive tourism, the ecological destruction it has produced, and now the conservation research volunteer industry emerging in its wake. Seventy percent of Utila is comprised of mangroves and associated wetlands, home to several endangered and endemic species. Local NGOs host paying volunteers to care for and study endangered iguanas, sea turtles, whale sharks, mangroves, and lionfish. This paper explores how the practices and affect of foreign research volunteers are entangled with and transforming local relationships to natural resources and conservation policy. For instance, foreign volunteer researchers work closely with local NGOs and governing bodies to write regulatory codes, including those for whale shark encounters and lionfish spearing. Further, the protected status of the *ctenosaura bakeri* means the capture and preparation of iguana stew has moved underground, replaced by researchers tracking, capturing, and then clipping toes or spines for genetic testing, probing genitals for sex identification, and tagging for future monitoring. This paper explores the emergence of this new affect economy, and the various ways in which affect is produced between locals and short-term volunteers, and between species as they persist to live in fractured ecological corridors.

Scholar-Activist Panel: Pipelines, Politics, & the Power of Local Activism

Moderator: Ann Kingsolver (University of Kentucky)

Panelists:

Shannon Bell (University of Kentucky)

Deb Pekny (Activist)

Bob Pekny (Activist)

In this session, Deb and Bob Pekny will share their experiences standing up against the proposed Bluegrass Pipeline, a pipeline project that would have pumped toxic natural gas liquids (NGLs) at high pressure through 13 counties in Kentucky. The Pecnys, whose neighborhood was directly adjacent to the proposed path of the pipeline, joined a diverse group of Kentucky residents to successfully stop the pipeline in 2014. In this session, the Pecnys will discuss the risks of the pipeline, how they helped organize neighbors and others in opposition to the project, and how they have stayed involved in the coalition, which is now fighting another pipeline project proposed for Kentucky – the repurposing of the Tennessee Gas Pipeline, a project of Kinder Morgan. Shannon Bell, an environmental sociologist at UK, has been documenting the organizing strategies of the Bluegrass Pipeline Resistance Movement and the dirty industry tactics that were used to try to convince Kentuckians of the desirability of the project. Based on the research she has collected, she and her students are creating a guide for communities faced with similar pipeline proposals. Shannon will share some of the components of this guide in her portion of the presentation and will discuss some general strategies for bridging activism and the academy.

Political Ecologies of Infrastructure I

Chair: Grant Gutierrez

Stanfield, Elizabeth (University of Tennessee, Knoxville)

"I'm from here": Immigration politics and urban livability in Copenhagen, Denmark

More than half of the world's population today lives in urban areas. As such, designs and development of urban built environments are crucial to understanding social issues. Urban livability is a popular design approach that aims to improve quality of life through urban planning. Yet positivist urban livability approaches may obscure complex processes of exclusion. This article examines how urban livability has been applied to two parks in Copenhagen, Denmark. These parks, Mimersparken and Superkilen, have been lauded as exemplary applications of urban livability principles in a neighborhood with a large immigrant population. Residents' lived experiences, however, are more complex. Through interviews with residents, designers, and local activists we find:

- urban livability cannot be applied universally to all contexts;
- livability is deeply affected by political and economic processes influencing who is included in the "public";
- despite exclusion and marginalization, residents shape and contest meanings of the parks and their neighborhood.

Lee, Goeun (University of Kentucky)

Flows of organic food: contingent infrastructure of a Chinese city

Flows of organic tomato, basil, water spinach, or potato circulate not only to feed humans but also to make and remake the urban space of modern China. The paper attempts to describe how a Chinese city, Shanghai, is made through the assemblage of organic food production and consumption. Multiple 'flows' such as mobile telecommunication technology, e-commerce, and express delivery link the urban and suburban parts of the city. This kind of infrastructure 'happens' by a contingent coming together of these forces and representations. The vast popularity of limited numbers of, and consequent uniformity in, the mobile telecommunication platform, small scale businesses and urban express delivery services have been marketing, selling, and transporting the organic produce from suburban farms to urban residential areas. By exploring how nature is differently experienced and imagined by actors' gender and class practices, the paper aims to suggest that the urban space is constantly being reshaped through the transnational discourse of organic food as well as the internal rural-urban migration of people.

Abdl-Haleem, Osama (University of Kentucky)

The World is a Mosque

Masjid Bilal is the oldest mosque in Lexington, Kentucky. It is also the city's most recently renovated mosque and at the moment it's largest. And while it would appear that many of Lexington's Muslims live in the wealthier south side of the city, Masjid Bilal is situated on the poor and predominantly African American north side, with a stated mission to honor its black roots and be a service to a underserved community. But the mosque is more than a building housing a place of prayer. It is involved in a network of intricate relationships at once human, organizational, and material. Bricks and building codes, sermons and city ordinances, trees, kids, cars, fences, and asphalt all come together to establish the mosque as a site of prayer and a moment in the many relationships of the city.

Foster, Alec (University of Michigan, SNRE) and **Joshua P. Newell** (University of Michigan, SNRE)

Detroit's Green Infrastructure of Desire: Informal Footpaths in the Motor City

This paper seeks to expand the range of methods and theories applied to infrastructure in political ecological scholarship and practice through examination of the presence and use of “desire lines”, or informally created footpaths in Detroit. Methodologically, a mixed methods approach that includes geospatial analysis, direct observations, qualitative interviews, and neighborhood walking tours was developed to investigate the social, ecological, and material influences of desire lines on Detroit’s infrastructural assemblage. Theoretically, emotion and affect are mobilized to understand the role of desire lines in the everyday life of Detroit’s residents.

Given the many plans put forth by different agencies and actors to redevelop Detroit, it is essential that these informal, yet productive uses of vacant land are taken into account when planning the city’s future. Indeed, these informal pathways reveal the failures of planning processes that are not participatory and engaged with local communities, forcing residents to take matters into their own hands (or feet) and assert their own performative or insurgent citizenship, claiming their rights to infrastructure, metabolism, mobility, and the city.

Baker, Rachael (Wayne State University)

When Community Becomes Soft Infrastructure: Responses to Rightsizing and Foreclosure in Detroit

Surplus property in Detroit is a developmental paradox approached by city planners through “rightsizing”; balancing resources with infrastructural capacities in the 139² mile city that has lost 1 million residents in half a century. The latest rightsizing initiative proposed to the city could displace 130,000 residents, adding to the 94,000 properties for whom the city has become the landlord of last resort. The removal of, or disinvestment in necessary and longstanding infrastructure through individual household punitive removal as well as neighborhood-wide removal of maintenance is effectively pushing residents from specific neighbourhoods. In 2003 the State of Michigan passed act #258, the Land Bank Fast Track Act that would act as the basic governance structure for fast track land bank authorities that would acquire, hold, and sell property for which the city, state, or region had become the landlord of last resort. In Detroit, surplus property governance is facilitated by the Detroit Land Bank Authority (est. 2008), an agency responsible for the sale of publicly held property. Property value in the city has increased 65% since 2012, and grassroots organizations has formed to combat looming and further displacement, and reframe the narrative of Detroit’s foreclosure crisis the growing community capacity. Activists’ approach to rightsizing through “governance from below”, acquiring property to build community capacity, challenges developmental outcomes of displacement through neighbourhood-scale efforts that reveal how communities can become and uphold bottom-up “soft infrastructure” that can challenge and potentially undo the disenfranchising potential of shrinking.

Food Systems and Agriculture

Chair: Li- Chih Hsu

Qiu, Cheng (Greenpeace East Asia)

The Political Ecology of China's Agrifood System Transition

In only a few decades, China has evolved from an agroecological farming society to a chemical intensive, commercially-oriented and industrialized agrifood system. In response to serious environmental, social and health issues resulted from this transition, bottom-up sustainable food movements, such as alternative food networks, re-emergence of ecological agriculture, peri-urban and urban agriculture, and veganism, have burgeoned in China in the recent decade, especially in affluent urban areas. The central government also increasingly emphasizes sustainability in agriculture policies, while still promoting modern agriculture which often associates with land consolidation and monoculture. The paper studies the political ecology of the transition in city-associated agrifood systems in China, tracing both the industrial and alternative agrifood networks of a few major cities from the 1970s until the present time. Using historical, ethnographic, and sociological methods, the paper studies how different drivers influence China's agrifood system transition, including actors of farmers, consumer groups, the central government, local governments, food-centric enterprises (including e-commerce), and NGOs. The paper also explores the sociocultural drivers behind the political ecology of agrifood system transition, mainly how the interests in capitalist growth and the proliferation of capitalist social relations interact with Taoist traditions in directing people toward industrial/agroecological transition.

Keegan, Caroline (University of Georgia)

Life-Death Couplings: Agricultural Vitality and Farmworker Disposability in the California Landscape

As news articles, environmental campaigns, and politicians regularly remind us, California is experiencing a historic drought. Snowpack levels are the lowest in recorded history, the ground has sunk over 5 feet, and wells across the Central Valley have run dry. These statistics contrast with the record-high sales of California's agricultural commodities for the year 2014, made possible due to higher prices and increased pumping of groundwater reserves to keep up with productivity. For farmworkers, however, the drought has already had significant adverse effects. The juxtaposition of agricultural profitability and farmworker struggle highlights how drought, however natural it may seem, is not simply an ecological phenomenon. I argue that the current crisis of drought in California can be understood within a longstanding logic of California agricultural landscape production. This logic, I argue, centers around the vitality of California's agricultural productivity and the disposability of the labor force. Farmworkers, while reproducing California's agricultural landscape, struggle against poverty, unemployment, deportation, exposure to toxicity, physically debilitating labor, and contradictory political and legal frameworks. This labor process is not natural or incidental, but rather a carefully designed system to maximize agricultural profits by extracting life from farmworkers who are then discarded. These life-making and death-making processes are reproductive of one another and reinforced by cultural, political, and legal structures. Bridging political ecology and political economy, I examine the intersections of ecological crisis, landscape production, and labor relations that inform the current configuration of large-scale agriculture in California. I argue that these life-death couplings have been built into the California agricultural landscape over time, and become more entrenched during periods of "crisis" in which the "life" of agricultural prosperity must be saved through human sacrifice.

Abel, Matthew (Washington University St. Louis)

Unpacking our publics: on the institutional grounds of (a)political ecologies

This paper focuses on the construction of urban agriculture as a solution to public issues by considering a concrete scenario derived from my own ethnographic work: a legislative hearing on DC's Urban Farming and Food Security Act of 2014. By drawing attention to this hearing, as well as my own research at Washington DC's "City Leaf Farm" I hope to demonstrate how critical political ecologists have focused a great deal of attention towards politicizing ostensibly apolitical discourse surrounding urban natures. Simultaneously, they have failed to fully investigate institutional environments in which (a)political discourses are formulated. An analysis of the literature surrounding the urban agriculture movement indicates a troubling asymmetry on the part of politicized scholars: on the one hand, an extreme attentiveness to the "problematic" nature of discursive tactics, and, on the other, a failure to clarify the social relations under which "problematic" discourses become tactical. Recognizing and investigating these social relations necessarily involves conceptualizing the urban environment as more than just "natural" spaces or built forms; rather social relations are constructed through institutional ecologies that structure the forms of public discourse available to social actors. The grant-funding cycle is posited as one such structuring relation; by demanding the construction of a project as an investment in public good, the grant-funding cycle provides institutions with money while never having to guarantee them their means of social reproduction.

D'Onofrio, Sarah (University of Tennessee, Knoxville)

Milking the System: Failures of Neoliberal Law in Wisconsin

Since the growth of neoliberalism in the 1980s, governments in conjunction with corporations have developed the neoliberal project. This neoliberal project, aimed at producing economic growth, involved using the power of the state to create and implement policy which encouraged property rights, individual liberty, and limited government intervention in markets. However, there are very important deficiencies in this approach to lawmaking. In the 1990s, Wisconsin --a state with a history of progressivism in environmental politics throughout most of the 20th century-- aggressively deregulated policy on the environment, blocked enforcement of regulations, encouraged corporate expansion, and redistributed policy in favor of corporations. By 2016, rural communities such as Kewaunee County, Wisconsin-- a hub of industrial dairy farming-- live with chronic drinking water pollution and environmental degradation. In a county where 95 percent of residents drink from wells, a third of wells contain water that is unfit for human consumption due to unregulated agricultural pollution. This project will use Wisconsin to highlight and critique neoliberal influence on environmental policy over time. Specifically, I will analyze historical narratives used by politicians, activists, citizens, and corporations when key pieces of legislation were passed. By using the narratives around these laws, I can understand their underlying logic as well as which groups advocated for and against them, revealing changes in key dynamics of power in Wisconsin over time.

BLOCK 5
SATURDAY, 12:30-2:10

Rethinking the plantation as an analytic for envisioning anti-racist futures

Chair: Alex A. Moulton

Discussant: Janae Davis

Williams, Brian (Brian Williams)

Plantation ecologies and environmental racism

In the 1960s, as the Black freedom struggles targeted repressive plantation politics and economics in Mississippi, the Mississippi Delta was one of the most pesticide-intensive regions in the United States (Daniel 2005, Woods 1998). This paper draws upon oral history interviews and archival research to situate environmental racism through pesticides within the broader conditions and practices of plantation agriculture, while interrogating it through Black stories of agricultural practice and change. I emphasize the material and semiotic entanglements of cotton—fashioned as a crop besieged by synthetic fabrics and pests—with the defense of the plantation as a site of an anti-Black politics which could never contain its target. Chemicals were sold and justified as means of both protecting profits and defending the life of cotton, and the emergent agro-environmental state in the South was shaped by ways of regulating pesticides which countenanced and complemented—instead of countering—the plantation. Anti-Black racism in the Delta, I suggest, had toxic consequences which have proven both persistent and mobile, but strong traditions of Black resistance and survival provide both a model and a hope.

Bost, Travis (University of Toronto)

The Nature of Plantation Logic: The 1927 Mississippi River flood and the mobilization of nature in 'saving' New Orleans

What role does nature play in the operation of plantation logic?

Nature looms everywhere in Beckford's and McKittrick's discussions of plantation logic and plantation futures. From the very land on which it sits to the 'natural' laws of biological racism it relies on, nature undergirds the power structure of the plantation. But beyond the plantation itself, McKittrick emphasizes, plantation logic is defined by the fact that, "the idea of the plantation is migratory." In this mobile capacity especially, how is nature positioned in the translation of plantation logic across "colonial and postcolonial spaces—the prison, the city, the resort"? Materially and ideologically, how does plantation logic come to be 'nature-ized' or 'naturalized'? What are the contours, cracks, and limits nature introduces? And, ultimately, what other natures are possible? This paper asks these questions in the context of "natural" disaster and environmental "sacrifice" in South Louisiana during a period of intensive urbanization.

During the 1927 Mississippi River Flood, as waters rolled southward and delta plantation lands were daily inundated, an unelected gathering of local representatives of capital drew up plans to "save" the city of New Orleans. The ensuing campaign of engineering works, willful demolition, mass migration, and propaganda constituted a multifaceted regime of nature transformation that worked to guarantee embodied values in racial capitalism's great stores, the city's commodity markets, while reconfiguring the region's racialized urban geography. Examining archival press documentation, court cases, firsthand accounts, and boosterist propaganda, this paper examines a key moment of migration in plantation logic, from the plantation and maroon lands to the city. Across this regime, it traces new visions of "plantation nature" that are imagined and seeks out moments where unruly natures become allies in exposing, undermining, or imagining alternative plantation futures.

Heynen, Nik (University of Georgia)

Understanding the Racialization of Enclosure and the Abolitionist Commons

Thinkers like Marx, Polanyi and Thompson have dominated the intellectual foundations of understanding acts of enclosure and the commons. However, emergent efforts at decentering these Eurocentric logics and opening up innovative new theoretical possibilities have been underway for some time. This paper builds upon several specific insights from Clyde Woods to think through the racialization of enclosure and the abolitionist commons, especially through some unpublished thoughts he shared at the 2009 AAG Conference and his forthcoming posthumous book *Development Drowned and Reborn: The Blues and Bourbon Restorations in Post-Katrina New Orleans*. Reframing efforts aimed at understanding racialization of enclosure and the abolitionist commons through Woods helps further illustrate historical-geographical materialist ways through which racial capitalism has long led to the proliferation of uneven racial development. Woods' move toward more urban work in his final book offers important opportunities for thinking through urban commons as a central tenant of abolition ecology. I will use this discussion to analyze the upheaval in property relations in Atlanta.

Examining the “How”: Experiences with creative research methodologies

Chair: Amanda Hilton

Sheehan, Megan (Lehigh University) and **Angela Storey** (University of Louisville)

Research in Motion: Crafting an Ethnographic Praxis of Walking

This paper considers the incorporation of walking as a rigorous and systematic method for ethnographic data collection within the social sciences, particularly in the context of examining questions of urban space and place. In this endeavor, we draw together scholarship from urban anthropology, political ecology, and qualitative methodology to examine the creative potential of walking as research praxis. Within urban space, Baudelaire and Benjamin’s figure of the flâneur is often used to inspire the accumulation of spatialized knowledge through meandering exploration. Scholarship across a range of political ecologies evokes the importance of linking place and movement to align complex webs of situated meanings, politics, and affects. Evocative uses of walking within ethnographic research have begun to suggest the powerful possibilities of mobility for data collection. In this paper we draw upon these three literatures to examine primary research conducted in Chile and South Africa. Drawing from urban case studies in Santiago, Chile and Cape Town, South Africa, we reflect upon experiences of using walking within data collection in order to examine the possibilities, challenges, and methodological outlines of an ethnographic praxis of walking.

Hilton, Amanda (University of Arizona)

Taking the ecological seriously: the ethnobotany of Sicilian olive oil production

Political ecology is frequently considered to provide both the “hatchet” of critique and the “seed” for a more just social and environmental future (Robbins 2012). As an interdisciplinary field, political ecologists come from a variety of disciplinary backgrounds, perhaps favoring distinct theoretical frameworks and questions. As a result, do we talk past each other, and those who are not familiar with political ecology? The research methods we use privilege certain epistemological and ontological frameworks while simultaneously critiquing, downplaying, or ignoring others. Without claiming the ability to pay equal credence to every possible research approach, how might we put in conversation convergent methods that could help us to answer our research questions?

This paper takes the case of olive oil production in Sicily, Italy, where the European Union recently approved a Protected Designation of Origin food certification scheme for Sicilian extra-virgin olive oil. My research explores the effects of the process of legally defining and then selling cultural heritage, as embodied by extra virgin olive oil “Sicilia,” on the people and places it is meant to protect or preserve. As an environmental anthropologist and political ecologist, I strive to integrate research methodologies to take both the political and the ecological seriously—a tall order indeed (see Walker 2005). This paper considers how, methodologically, I might best respond to the call to integrate politics and ecology, while remaining grounded in the particularities of Sicilian olive oil production. I focus on ethnobotanical methods as one possible avenue for taking the ecological seriously, and for engaging in interdisciplinary conversation.

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Kelly, Kimberly (University of Wisconsin-Madison)

Putting the Multi Back Into Multi-Species Ethnography: Methods to Ensure The Other Stays in Focus

In his most recent book, “Are We Smart Enough to Know How Smart Animals Are?” Franz de Waal (2016) describes how humans have, for centuries, tried to understand the Umwelt of other animals. Although we are equipped to see the world through our own self-centered, subjective views and ways of knowing, we have in myriad ways tried to imagine how other organisms and species experience it. Interest in the lives and experiences of animals and has grown in the last several decades from Nagel’s classic 1974 essay “What its Like to be a Bat,” and experiments like that of Charles Foster’s life as a badger in rural England (2016), to Thomas Thwaites’ vacation from being human by becoming a self-professed “goat-man” (2016). With the “animal turn,” the social sciences too have begun to cast their gaze upon the lives of the non-human “others” in a serious interrogation of the ways in which these lives intersect with human ones, asking how this shapes the social worlds in which we circulate. However, multi-species ethnographers are plagued by the fundamental issues that de Waal, Foster, Thwait, and Nagel have also faced despite the use of unconventional and uniquely situated methods through which to experience these worlds. Using these types of innovative methods as a starting point, in this panel I seek to discuss how we can develop novel and yet rigorous, validated, and reliable methods to understand the lives of non-human others and to ensure that multispecies ethnography does not become another tool that reifies anthropocentricity. How do we modify tools for use across species lines? What can we learn from natural and biological scientists who have been conducting cross-species work?

Westhues, Anita Kay (Western Kentucky University)

Photography and fieldwork: Creativity and reciprocity in visual documentation

Coming to the field of folklore from a background as a photographer, I plan to discuss the influence my photography practice has had on my research, as well as how fieldwork has changed my approach to image making.

Presenting photographs from my research on the practice of gathering water from community springs in Kentucky and Indiana, I will explore the relationship of visual media to ethnography, discuss reciprocity in the documentary process, as well as compare the nature of the exchange inherent in the act of photography and fieldwork.

Stinnett, Ashley (Western Kentucky University)

Visualizing methodologies: sensory and applied ethnography in fieldwork

In an ever-increasing multimedia landscape access to, knowledge about and representation of individuals, communities and their lived environment is increasingly paramount. This presentation addresses ethnographically grounded audio-visual research methodology from two different food systems related initiatives: 1) a completed applied visual ethnography focused on a local community farm and 2) an ongoing sensory ethnography focused on traditional food fermentation practices. Applied visual ethnography integrates theoretical and methodological approaches from both community-based participatory research and visual anthropology to engage in collaborative oriented research. Sensory ethnography approaches research from a reflexive and experiential perspective that incorporates collaboration with research participants, particularly focusing on the senses. Both methodological approaches represent recent innovations in ethnography and thus the potential for new understandings about human-environment interaction.

Political Ecologists take on Resilience: Conflicts, Confluences, and Coming Trends

Chair: Kevin Hillmer-Pegram

Beymer-Farris, Betsy (University of Kentucky)

Misreading Resilience: Exploring the Inter-linkages between the Roots of Resilience and Political Ecology

Resilience is the new “buzzword” in policy and academic arenas (Gunderson, 2015). The roots of resilience lie in C.S. “Buzz” Holling’s groundbreaking work in ecology that challenged stable equilibrium assumptions and critiqued conventional balance of nature understandings of ecological change. As resilience ecologists became more aware of the interconnections between ecological and social dynamics, they expanded their analyses to include social dimension referred to as ‘social-ecological resilience’. In response, the ‘social’ in social-ecological resilience is under heavy scrutiny by political ecologists. However, these political ‘ecological’ critiques fail to capture the ecological roots of resilience thinking that align closely with new ecology and non-equilibrium ecology debates in political ecology. Adding another twist to the story is the fact that the ecological theoretical foundations of resilience thinking have been adopted and co-opted in the policy arena and even by resilience thinkers themselves. By exploring these ‘fruitful frictions’ between political ecology and resilience thinking, this paper seeks to provide a more productive path forward in quest towards a better interdisciplinary understanding of social-ecological change (Zimmerer, 2015).

Jiang, Wenjing (Clark University)

Politics in Social Restructuring: A Case Study of Post-Disaster Recovery Planning from the Wenchuan Earthquake in China

Disasters, either natural hazards or human-induced social crises, by destroying material basis for human lives and the possibility of self-sufficient survival, often pose political challenges at multiple scales, from individual questions of citizenship and rights claims to the questions of state legitimacy and international diplomacy. Under different scenarios, disasters can either accelerate changes in the pre-disaster situations or trigger an irreversible change in the direction of a political regime. Post-disaster recovery thus becomes a social restructuring process, with time compression as a key feature that differentiates it from normal development procedures. While the resilience literature constantly attempts to look for best practices in reaction to disasters as disturbance to socio-ecological systems, the question of resilience for whom has been overlooked, indicating its inherently top-down perspective when evaluating recovery procedures and outcomes. The recovery following the Wenchuan Earthquake occurred on May 12, 2008, provides a unique case for critically examining the politics around resilient recovery, given its rapid reconstruction under a state-led top-down process, particularly its national counterpart assistance program (NCA). This paper provides a case study of Shuimo, which won the “Best Global Implementation of Post-Disaster Reconstruction” award from the Sixth Global Forum on Human Settlements of the United Nations. While the post-Wenchuan Earthquake response and recovery actions by the Chinese state have been seen as an reinforcement of the status quo, a detailed examination at local level shows how social restructuring and transformation could happen, triggered by the earthquake and the intergovernmental disaster management that followed. By tracing the plan making and implementation processes, this paper reveals the political dynamics behind the so-called best practices, by showing how tensions and achievements co-existed, and demonstrates how multiple streams of literature (e.g., resilience and political ecology) can contribute to the understanding of environmental governance, disaster management in particular.

Leap, Braden (Mississippi State University)

The Messiness of Power and Inequalities: Intersectionality and Socio-Ecological Resilience

Recent discussions of socio-ecological resilience stress the need to more fully consider how power and inequalities inform whether and how communities are sustained amidst socioenvironmental disruptions (Cote and Nightingale 2012; Cretney 2014; Biermann et al. 2015; Ingalls and Stedman 2016). This corresponds to works emphasizing inequalities inform and are refashioned through adaptations to climate change (Manuel-Navarette et al. 2011; Alston and Whittenbury 2012; Artur and Hilhorst 2012; Perez et al. 2015). However, neither works on resilience nor adaptations have fully incorporated the significance of intersectionality. Consequently, scholars have often implicitly or explicitly argued rearranging communities in response to climate change and other socioenvironmental transformations will result in distinct groups of winners or losers (e.g. Snorek et al. 2014; Ingalls and Stedman 2016). Drawing on 20 months of fieldwork in a rural Missouri community being rearranged in response to the localized effects of climate change, the author suggests power and inequalities do not work in such neat, dichotomous ways because gender, class, race, and sexuality intersect and transform each other in reciprocal, emergent, and at times contradictory manners. Due to the messiness of power and intersecting inequalities particular men and women in this community were simultaneously (dis)advantaged because of how they were reconstructing their relationships with each other and the surrounding landscape. These findings suggest scholars incorporating power and inequalities into considerations of socio-ecological resilience need to embrace the messiness of both to avoid thinking of either power or inequalities as zero-sum games. Beyond just a concern for analytic accuracy, the author argues researchers and policy makers concerned with resilience need to incorporate greater attention to intersectionality because resilience can be enabled by the messy contradictions of intersecting inequalities and the potentials for transformation they enable.

Owen, Gigi (University of Arizona)

Climate Change Adaptation: What work does it do?

Researchers and practitioners have spent a considerable amount of time deliberating how to develop climate change adaptation plans, enhance the resilience of cities and systems, improve people's capacity to adapt, and understand the potential impacts of climate change. Increasing evidence demonstrates that climate change adaptation, resilience, and sustainable development strategies do not work. They are often under-developed, produce unintended consequences, or are planned but rarely implemented. Most strategies opt towards low-risk capacity building and information sharing or propose incremental changes to activities that are already happening. But these adaptation plans, actions, and strategies do perform other kinds of work. In other words, they have an impact – positive, negative, and often a mix of both.

Drawing from political ecology, hazards research, and vulnerability studies, this paper represents the findings of a systematic literature review of climate change adaptation actions (including actions couched in sustainable development and resilience) that have been implemented and evaluated, either formally or informally. This analysis uncovers the underlying mechanisms and social contexts that lead to successful, partially successful, and failed attempts of adaptation.

The research questions guiding my evaluation and data analysis are focused on two main themes. The first theme explores the metrics that demonstrate adaptation is occurring as well as the components involved in both successful and failed climate change adaptation efforts. The second theme evaluates the potential of climate change adaptation for catalyzing social change by examining the role that social vulnerability plays in defining adaptation success and failure and in defining who benefits from adaptation and who does not. My analysis also investigates if and how climate change adaptation initiatives provide opportunities to make transformative change by addressing the root causes of larger issues such as structural inequality and poverty.

Approaching a critical turn? A content analysis of the politics of resilience in key bodies of resilience literature

Resilience thinking is increasingly used as both a theoretical framework and as a tool for managing and governing social and social–ecological systems. However, resilience may lead to undesirable outcomes if it fails to critically engage with issues of power, justice and equity, or what we call the politics of resilience. This potential pitfall can be addressed by incorporating critical theory, which aims to critique and transform historically inequitable social realities: a goal being actively pursued by scholars who publish in, inter alia, *Resilience: International Policies, Practices and Discourses*. In this article, we review the key critical claims about the politics of resilience established in this journal and then use a content analysis to test whether the journal *Ecology & Society* has made similar advances in integrating resilience thinking with critical perspectives on the politics of resilience. Our results suggest that *Ecology & Society*'s incorporation of critical theory has been minimal, but not completely absent. We identify possible explanations for this finding and discuss important benefits, challenges and strategies (both theoretical and pragmatic) associated with the ongoing interdisciplinary effort to bring together critical theory and resilience thinking.

The Political Ecology of Coastal Conservation, Development, & Livelihoods II

Chair: Priyanka Ghosh

Discussant: Ryan Anderson

Vitous, Ann (University of South Florida)

Impacts of Tourism Development on Livelihoods in Placencia Village, Belize

Placencia Village is one of Belize's leading "eco-destinations," due to its sandy-white beaches, coral reefs, and marine sanctuaries. While the use of green-washing has proven to be effective in attracting consumers who are thought to be environmentally and socially conscious, exponential real estate development, coupled with the lack of enforcement of environmental policies, represent significant threats to the residents of the Placencia Peninsula in Belize. This paper examines the political-ecologic dimensions of rapid tourism expansion by investigating how the health of the biophysical environment is perceived, what processes are responsible for environmental change, and how these changes are impacting the livelihoods and wellbeing of local people.

Sakai, Risako (University of Memphis)

Conflicts in Marine Biodiversity: A Case Study of Mo'orea, French Polynesia

Marine Protected Areas (MPAs) and No-Take Zones (NTZs) have been introduced in many places of the world for the marine conservation and resource management purposes. Yet, MPAs/NTZs are still prone to fail to take into account local sociocultural dimensions. The island of Mo'orea, French marine conservation and resource management plan "Le Plan de Gestion de l'Espace Maritime (PGEMs)" is a mixture of MPAs and NTZs. PGEMs are primarily top-down, and their introduction in Mo'orea has caused resentment of the local people, as scientific knowledge was prioritized over local people's knowledge (Walker 2001). Currently, the municipal government is working to revise the PGEMs, and attempting to involve more local fishers. However, local people are skeptical towards the government and international organizations that engage in the PGEMs planning. In addition, local people claim for their authority over marine resources based on their local knowledge and identity. This paper presents how MPAs/NTZs politically affect society and how local knowledge and identity formulate local people's political claims.

Hardy, Dean (SESYNC, University of Maryland) and **Nik Heynen** (University of Georgia)

Double Dispossession: The Transformation of Everyday Coastal Life, Culture, and Identity through Gentrification & Environmental Injustice

The ongoing urbanization of U.S. coastal spaces continues to produce intense uneven racial development across the socio-natural landscape. Permeating these processes of urbanization is the double dispossession of gentrifying land grabs and the externalized environmental injustice of carbon profits. Coastal gentrification practices have historically both crept and leapt since as early as the 1920s in the US via land sales and delinquent property tax auctions that were often configured to disenfranchise people of color. More than changing coastal ownership and demographics of large coastal regions, however, these practices have transformed coastal territories of culture, identity, and livelihood. After the Civil War, Freed People of West African descent (often referring to themselves as Gullah Geechee) settled much of the U.S.'s southern Atlantic coast. Plantation owners brought the Gullah Geechee's ancestors to the region for their expertise in rice farming in tidal environments. Despite the large exodus during the Great Migration and twentieth century practices of gentrification, nearly 20% of today's U.S. southern coastal population is African-

American. For these coastal communities, but especially the few remaining intact island communities of Gullah Geechee people, the looming environmental injustice of dispossession through sea-level rise is a significant threat. In this paper, we explore the everyday life of uneven racial development in coastal Georgia, with a specific focus on Sapelo Island. We argue that adaptation planning for sea-level rise must account for not only the looming specter of land loss from sea level inundation, but the sociopolitical conditions of the imminent dispossession of land via gentrification.

Ghosh, Aditya (University of Heidelberg) and **Priyanka Ghosh** (University of Kentucky)

Political ecology of tiger conservation, sustainable development, and climate change adaptation: A Case Study of the Indian Sundarbans

This paper unpacks challenges of conserving critically important biodiversity amidst rapidly changing climate and dwindling human security in the Global South. Situated in the Indian Sundarbans, it traces the origins of various trade-offs, uncovers conflicts between different approaches of protection of endangered Royal Bengal Tigers and analyses how recent environmental shifts are interacting with or exacerbating drivers of unsustainability of the socio-ecological system. By revealing the complex predicament faced by the managers, policy actors, and scholars, it locates the foci of the discord in the disparate discourses of biodiversity conservation and development of the region that run parallel instead of informing each other. This discursive conflict seems to jeopardize both ecosystem robustness and development of the region. With climate change impacts causing further ecosystem deterioration and compromising human security, findings of this study underscore that there is an urgent need to tackle both simultaneously because disparate and isolated attempts will be critically detrimental to both humans and non-humans in this largest mangrove ecosystem in the world.

The Environmental City: Troubling the Subjects and Objects of Urban Environmental Governance

Chair: Michael Finewood

Finewood, Michael (Pace University) and **Marissa Matsler** (Portland State University)

Governing through barriers: The implications of categorizing barriers to green infrastructure in a post-industrial city

In the past decade, green infrastructure has gained popularity as a stormwater management technology that complements traditional grey stormwater infrastructure. Many cities are implementing green infrastructure to capture or slow stormwater before it enters municipal sewage systems, ideally preventing excessive capacity, discharges of sewage overflows into local waterways, and violations of water quality regulations. Pittsburgh, like many cities, is under consent decree to prevent sewage overflows and associated water quality issues, and municipal leaders are looking to green infrastructure as a possible, partial, and low cost solution. However, given the technology's relative nascence as well as its disjuncture with traditional, grey-engineered approaches, green infrastructure has met significant resistance. This presentation explores this resistance via perceived barriers to the use of green infrastructure in Pittsburgh. Specifically, we draw on semi-structured interviews with regional stakeholders to better understand and critique perceived barriers to green infrastructure. These interviews reveal, among other things, how stakeholders categorize and separate barriers to green infrastructure implementation as "social" and "physical." Here we utilize an urban political ecology and science and technology studies framework to trouble these categorizations and the ways they reinforce a nature/culture divide. We conclude by positing the implications for such categorizations and the benefit of combining political ecology and STS in this particular context.

Campbell, Lindsay (USDA Forest Service, Northern Research Station), **Anne Toomey** (Pace University), **Heather McMillen**, and **Erika Svendesen**

Cultures of care: Understanding and supporting biocultural conservation and urban stewardship

Increasing scholarship in the conservation literatures focuses on natural resources management approaches that explicitly start with and build on local values, knowledges, and needs, and recognize the feedbacks between human well-being and ecological health. Indigenous rights movements have raised awareness of the value of traditional ecological knowledge, and the role that culture has to play in establishing more equitable governance structures and upholding the ecological integrity of a given system. At the same time, urban areas have also become fertile sites of engagement in community-driven, place-based environmental stewardship practices – occurring on diverse sites including community gardens, parks, woodlands, and waterfronts. Many coastal urban areas are also dealing with multiple and interconnected threats of global warming, sea level rise, and economic shifts, which are challenging people's abilities to build and sustain resilient landscapes and lives. As such, academics, practitioners, and community-based organizations are beginning to envision and enact new socio-ecological cultures emerging from the urban sphere – cultures in which new values, knowledges and needs with regard to local ecological systems are in the process of developing. In contrast to traditional or indigenous biocultural approaches, where cultural beliefs and values are often shared across a community, urban-based efforts take place among a diversity of ethnicities, lifestyles and religions, giving new meaning to what a cultural connection to nature might look like in urban settings. The main questions we will explore in this paper are: What new socioecological cultures are being created in cities? How does this relate to the ways that local communities have been taking care of their environment in the city? What are pathways for different relationships to urban nature that can be learned from indigenous and rural communities? What lessons about management approaches or governance relationships can urban environmental stewards share with indigenous colleagues and rural communities? More specifically, this talk will discuss a budding stewardship training initiative being developed in partnership between US Forest Service colleagues in Hawai'i and New York City.

Matsler, Marissa (Portland State University)

Making 'Green' Fit in a Grey City: Knowledge Systems' Challenges of Green Asset Management

Green infrastructure (GI) development is desirable in many municipalities because of its touted ability to address pressing environmental and social issues. However, despite technical optimism regarding the potential benefits provided by GI, institutional challenges create significant barriers to socially equitable and ecologically resilient GI implementation. I argue that these institutional challenges stem from the wide spectrum of disparate scales, knowledge utilization, and facility types that make up GI, which span from large-scale natural areas to small engineered bioswales. Across these disparate facilities there are different data collected to measure function and success; facilities are governed by different political and bureaucratic jurisdictions; and, while all called 'green infrastructure', facilities fall differentially into either the "nature" or the "infrastructure" category depending on the municipal department. We can, therefore, see a broad swath of epistemological and ontological variegation across the spectrum of GI that must be negotiated within and across municipal institutions. This has led to knowledge challenges and subsequent development of new knowledge practices that shape facility design, implementation, maintenance, and – ultimately – performance on-the-ground. In particular, the explicit inclusion of biological entities (i.e. plants, soils, microbes) in GI facilities to provide services presents the primary institutional challenge to GI implementation: namely ecological knowledge is brought into traditionally engineering-dominated decision-making spaces where it does not easily fit traditional procedures for defining, measuring, or valuing nature. This paper describes these emerging knowledge challenges, and the institutional power dynamics they embody, within an ongoing Green Asset Inventory process in the City of Portland using semi-structured interviews and participant observation.

Gabriel, Nathaniel (Mississippi State University)

Environmentalizing the City: Governance and the Urban Commons

In the past decade, sustainability has become a dominant concern driving our visions of the future city. The assertion of environmental sustainability as a central concern for urban policy, and for the conduct of everyday life in the city, marks a potential break from other discourses that presume the inevitability of capitalism as the underlying force that drives urban development. While the environmentalization of the city is certainly not immune from the tendency of capitalist discourses to co-opt and reframe these concerns in terms of individual or corporate responsibility, and above all private concerns, environmental urbanism also entails the assertion of collectivity - of environmental challenges as problems faced collectively by human beings and their non-human allies. The environmentalization of the city, therefore, is at least as much about the commoning of urban space as it is about the atomization of responsibility.

This paper examines this convergence of urban environmental governance with commoning practices through the lens of greenspace management. As cities are increasingly recast in environmental terms, the emergence of greenspace as a matter of concern has wide-ranging potential for producing new environmentally-oriented constituencies and new spaces of environmental governance and discipline. By tracing the specific practices through which urban greenspace has been produced, this paper will interrogate the relationship between state governance and "everyday" forms of environmental management and self-discipline, and the potential for such projects to foster more diverse and more communal configurations of the interface between urban nature and urban people.

Constructing Nature in New York City: Assessing Green Gentrification in Chelsea through the Pier 55 Project

Cities across the United States are implementing green infrastructure as a multi-pronged strategy to clean up urban environments and bring benefits to local communities. Green infrastructure—such as parks and other green spaces—is often correlated with improving ecosystem services, reducing crime, enhancing neighborhood aesthetics, and raising property values. However, more recent critiques of green infrastructure suggest that it can create or exacerbate gentrification, a process whereby change in a neighborhood drives out long time residents through increasing property values. This is often characterized as green gentrification (Gould and Lewis 2017), suggesting that the collective benefits associated with green infrastructure are not felt equally by all community members. This presentation explores a potential case of green gentrification in the development of Pier 55 in NYC. Pier 55 is a redevelopment project on the Hudson River that will change a once industrial landscape to a public/private waterfront park. Using an urban political ecology framework, we argue that, although parks are generally posited as “good” for local communities, these discourses often hide or normalize gentrifying processes that drive out low income communities. Thus, public goods such as parks become landscapes for the wealthy few who can afford to live, work, and play in the surrounding community.

Historical Dimensions of Political Ecology III: Crisis

Chair: Kelly Kay

Discussant: Gregory Simon

Knudson, Chris (University of Arizona)

The deep roots of financializing nature

My paper examines the lengthy, but largely unstudied, history of the financialization of nature in the United States. The use of financial products, such as credit, insurance and derivatives, has fundamentally shaped the way that humanity has engaged with the environment. However, geographers typically treat the financialization of nature – that is, the use of financial commodities to manage the environment – as a recent, arcane, and peripheral aspect of our lives. The commodification of agriculture, for example, is only one part of the history. Without credit, the farmer may sell her land to a developer; without insurance, the farmer may not risk growing her crop. Thus, financialization needs to be analyzed alongside commodification as one of the two principal ways in which the capitalist mode of production has altered our relationship with the natural world. This work will build on the research of environmental historian William Cronon, and geographer George Henderson, to show how finance has been used to overcome barriers to transforming nature that remain even after its commodification.

Nost, Eric (University of Wisconsin-Madison)

Measuring history: the remaking of Oregon's ecosystem services markets

Neoliberal natures merit a historical lens, one that adequately contextualizes the sociotechnical regimes of measurement at the heart of commodification. The US state of Oregon is innovating environmental assessment software and policies that account for ecosystem services in ways that aim to improve ecological outcomes from wetland and stream restoration projects but which may or may not advance the financialization of restoration. Critically evaluating Oregon's metrological regime requires two related turns to historical context: 1) situating the state's promotion of assessment software within the previous thirty years of contentious environmental politics in the region. The state hopes "objective" assessment tools can help separate "facts" from "values" and lend legitimacy to environmental management decisions; 2) seeing new metrics as responses to previous "waves" of nature's neoliberalization over a similar timeframe. New ways of measuring the benefits of marketized restoration address the ecological and economic shortcomings of previous methods, while generating controversy and market instability. Neither of these approaches will seem new to political ecologists, but they take on new significance as political ecologists study nature's financialization and conceptualize nonhuman actors.

McGlynn, Evangeline (University of California Berkeley)

Agency and Urgency: Late Soviet disaster politics and the rise of the Ministry of Emergency Situations

In a bureaucracy as thorough as that of the USSR, the absence of any devoted disaster response institution until the nation's final year of existence is surprising. In this paper I will detail the history of emergency management in post-Soviet space from its beginnings in the late Soviet Union through to its reincarnation in the successor states. The paper will argue that the key driver of institutional change toward formalized emergency management was a shift in the perceived risks to the Soviet public from military to environmental threats. This shift occurred in response to a series of large-scale disasters in the Soviet Union, remarkable for not only their impact but also unprecedented public access to details of the disasters and subsequent response due to increased government transparency brought on by Gorbachev era political liberalization. After the collapse of the Soviet Union, the successor states did not inherit the nascent Soviet bureaucratic emergency management infrastructure, but rather reproduced it in the early years of independence, confirming a shift in attitudes toward risk and space. In the present day, a new conceptual shift is underway in some of the successor states, where it is apparent that the increasingly visible effects of global climate change are not contained by sovereign boundaries. As we enter a new era, following the history of political response to public environmental awareness might lend new insights into the path forward in vulnerable post-Soviet countries. By telling the story of the end of the Cold War through a frame of environmental governance, I hope to highlight the role of environmental risk in shaping political identity in the former Soviet Union.

Andrews, Eleanor (Cornell University)

Honey bee health in history: the origins of beekeeping extension

Honey bees are dying from a mysterious disease, stressed by new management practices and the exigencies of commercial beekeeping. Beekeepers, their livelihoods on the line, are calling for information and government intervention to protect the industry. Sound familiar? In this talk, I describe the origins of beekeeping extension in New York State over a century ago. These efforts- apiculture courses, bulletins, lectures, and more- were a key part of the modernization of beekeeping, which went from being a cottage industry to a commercial one in just a few decades. This shift relied in great part on improving apicultural science and inventions, but it was foremost about establishing and knitting together private and public actors into a complex of institutions and associated norms that continue to support beekeeping today, including federal and state agricultural departments and agencies, land grant university research and extension personnel, professional associations, private retailers including agribusiness, and beekeepers themselves. Modernization was synonymous in many ways with professionalization, as beekeepers marshaled resources across a vast network, improved their operations' efficiency and profit, established protocols for producing sound scientific information, and streamlined educational programs. But this process also entailed a drawing of lines around whose knowledges counted as legitimate and useful, and how those knowledges were produced and shared. Specialized new experts were credentialed and access for non-professionals was restricted. Accordingly, some beekeepers opposed extension work and for decades remained uncooperative or indifferent to organized efforts for education and outreach. This peek into the roots of conventional, modern beekeeping can help us better understand today's concerns and politics over honey bee health and sustainable beekeeping.

Political Ecologies of Infrastructure II

Chair: Joshua Cousins

Ghosh, Ritwick (Cornell University)

Struggling to Standardize Carbon Accounting: A Turn to Practice

Carbon accounting lies at the center of recent policy responses to climate change. Through production of a set of formal rules, carbon accounting collapses multidimensional heterogeneity and makes it possible to trade carbon emissions. Success of carbon governance thus rests on the technical reliability of the carbon accounting infrastructure. In this paper, we present a case study of a carbon accounting protocol development project organized by the Climate Action Reserve (CAR). The CAR Nitrogen Management Protocol Project (NMPP) links reductions in agricultural emissions to California's voluntary carbon market. Our focus on accounting practices integrates contributions in Science and Technology Studies on standards, metrology, and valuation practices to political ecological questions of carbon governance. In contrast to political ecological critiques of reductionism, our case study finds problems in balancing between simplification and complication. To build a protocol that is widely applicable, economical to use, and scientifically rigorous meant coordinating across multiple stakeholders, practical economic considerations, variability in confidence across scientific models, and conflicting professional judgments. Instead of a negotiation among select scientists or technocrats, CAR's approach was inclusive, inviting input from a wide range of experts. However, lack of pre-existing guidelines to arbitrate contestations left the protocol vulnerable to new disqualifications. With no conventional techniques available to settle disputes, CAR relied on negotiations, deliberations, and improvisations. If political ecology is to develop a sharper response to market based strategies, these practical struggles over standardization and their implications are key sites for critical inquiry.

Grabowski, Zbigniew (Portland State University)

Dam removal PFESTS: co-production of politics, finance, environment, society and technology by restoration infrastructure

The river restoration community widely acknowledges the need for restoration practice to include changes in human relationships with nature and interventions in infrastructure. The science of dam removal thus primarily concerns itself with the practice and impacts--socially, politically, and environmentally--of dam removals as large restoration projects. Restoration science itself has just started to grapple with questions of how larger social, economic and political trajectories influence hydroscape change irrespective of restoration goals. To advance such strategic thinking, this paper examines dam removals as infrastructure interventions, allowing for the utilization of additional empirical and theoretical tools to understand the drivers of dam removals, and how they interact with multi-scalar processes affecting watershed condition. Synthesizing the additional discursive and analytical frameworks of Science and Technology Studies, Techno-Nature, Political Ecology, Political Economy, and Post-Colonial studies with existing approaches in dam removal and restoration science, we advocate for a strategic and systemic approach towards understanding and enacting restoration infrastructure intervention through a new productive imaginary of hydroscares as interdependent political, financial, environmental, social, and technological systems (PFESTs). A PFESTs framing facilitates interdisciplinary dialogue and highlights opportunities for collaborative restoration research and practice. We illustrate the value of the PFESTS approach using case studies from our investigations of dam removals and large-scale hydrologic restoration projects in the Pacific Northwest region of the United States. We leave off with suggestions for an improved restoration through infrastructure intervention research praxis.

Birkenholtz, Trevor (University of Illinois at Urbana-Champaign)

Backpressure: Infrastructural friction and human resistance in Indian water supply

How, why and in what ways is water-supply infrastructure simultaneously an agent of resource dispossession that reflect specific relations of political economic power, while at the same time a barrier to the same, producing friction to this process? This paper examines the development of an urban water infrastructure development project in Rajasthan, India that aims to provide water to the state's capital city of Jaipur. It does so through the appropriation of an existing rural dam-reservoir complex originally built for irrigation and redirects it to serve largely urban commercial, industrial, and residential needs. Drawing on an examination of policy documents and interviews with farmers and state planners, the paper makes three interrelated arguments: 1) the construction of new water supply infrastructure allows finance capital to further penetrate into the countryside, opening up new resource frontiers; 2) that this is leading to new forms of extraction and dispossession of irrigating farmers' water; and 3) that the infrastructure through which water is being captured actually redistributes agency, offering numerous sites for resisting these efforts. The paper concludes that transferring water from predominantly rural to urban spaces results in new forms of disparities in access to water and that future research ought to examine this in the context of agrarian change generally by focusing on the materiality of water and its infrastructure.

Geores, Martha (University of Maryland)

Wayfinding: can I get there from here?

Wayfinding is a term used under the ADA as a requirement to affirmatively mark accessible pathways. As more people with mobility challenges enter the pedestrian stream, accommodation requires signage, giving visual directions to accessible pathways to their destinations. Wayfinding is not an isolated issue, only meant to provide directions for people with mobility disabilities. It is to create proper signage for that group, but it also is a public statement that people with disabilities are in their midst and need to be recognized, not be marginalized, excluded from using public ways. This is a participatory action research project. Under this methodology a group of people with interest in wayfinding will come together to reach an understanding of the problem and plan remedial steps to address the problem. Some participants will self-identify, some will volunteer, and some will be asked to participate. People with and without mobility disabilities will be in the group. The key to participation is interest and the goal is to raise awareness of the problem and develop a remediation scheme. The group will work in a collaborative manner.

(Re)Imagining Future Worlds: Political Ecologies of Science Fiction

Chair: Thomas Grubbs

Shoot, Erin (University of Kentucky)

Holding Hands in the Wheel of Time

In Robert Jordan's *Wheel of Time* series, all events are cyclical. Each turning of the Wheel is an opportunity to make better choices and escape the cycle ever-resulting in a new Breaking. Men seeking power (The Source) caused the most recent Breaking. A battle between Light and Dark ensued and Lews Therin sealed The Dark One in a pit. During the Sealing, men's connection to The Source (Saidin), was tainted, leaving any man with an ability to access it doomed to madness.

In Jordan's universe, nations exist, but Aes Sedai, women who wield the female connection to The Source (Saidar), hold the most power. Aes Sedai play a key role in molding Rand Al Thor, as they suspect he is the prophesized Dragon Reborn (Lews Therin).

Jordan's world provides extensive fodder to discuss political systems (patriarchies, matriarchies, tribes, egalitarian communities, etc.) as well as configurations in which these may result in ideal governing bodies.

Only when the Taint is cleansed by The Dragon Reborn does it become possible for The Dark One to be released and then destroyed, thus illustrating Jordan's view that only when men and women wield power equally is the world saved.

Harper, Tyler (New York University)

Evolution, Environment, and the Naturalization of Technology in Samuel Butler's Erewhon

Samuel Butler's 1872 novel *Erewhon* imagines a fictional country meant to function as a satirical critique of Victorian England. While much of the novel is concerned with caricaturing Victorian society and culture, a three chapter section of the novel—titled "The Book of the Machines"—sees Butler meditating on Darwin's then-new theory of evolution, and surmising that one day machines might evolve, develop consciousness, and come to supplant the human species. Butler depicts the citizens of *Erewhon* as being mindful of this possibility, and banning all but the most rudimentary forms of mechanical technology as a preventative measure. However, "The Book of the Machines" is not only remarkable for raising the question of machine consciousness for the first time (and even anticipating the "singularity" debates currently raging in AI research), but for the particular way in which the author situates the relationship between human beings, machines, and nature. Rather than seeing machines as unnatural contrivances, and theorizing machine consciousness as a break with or transcendence of nature, Butler depicts technology as a product in and of nature—as bound by natural laws rather than purely tasked with the manipulation or domination of nature. In my presentation, I hope to briefly describe the view of nature and technology presented in *Erewhon*, drawing on Butler's naturalization of technology (while ultimately rejecting his Luddism) in order to imagine a future society in which an achieved harmony between human beings, technology, and the environment might be conceivable.

Marschall, Wythe (Harvard University, Department of the History of Science)

Speculative metabolisms: Science, fiction, and the human–environment interface we call “food”

Works of science fiction frequently evoke vast empires peopled by untold throngs of humans, aliens, and engineered pets. Rarely, however, do these same works address the infrastructural challenges of feeding a teeming universe. If, with Brillat de Savarin, we are what we eat, then imagining the future of humanity means imagining the future of the human food supply. Scanning the future of agriculture, I seek to understand the ways in which high-technological progress just might not mean doom for the metabolically productive order of things on earth and beyond. This doesn't mean avoiding dark visions of consumption, but scrupulously reading them for radical, potentially liberatory alterations to the biosphere, the human diet, and even the human form. From the cannibal sociology of H. G. Wells's *The Time Machine* (1895)—not to mention the nutri-perfection of *The Food of the Gods* (1904)—to the prosthetic organs and bioengineered guts of critical designers Anthony Dunne and Fiona Raby's *Designs for an Overpopulated Planet: Foragers* (2009), we have no shortage of models.

Can we address the health and environmental problems of technoscientific modernity through new means of producing food? Drawing on my background in science fiction studies and my dissertation fieldwork in agricultural technology, I propose to trace the major categories of imagined answers to this question from the era of Wells—circa the birth of processed packaged foods—to today. I will productively use political ecology and the history of agriculture and nutrition to interrogate major ag-futurist works of speculative fiction. Within them, a century-long pattern of variously playful and serious calls to intervene in human metabolism emerges at different sites: the interior of human body (matrix of consumption), the exterior of the human body (via prosthetics, “pre-digested” and “scientific” foods), the farm (matrix of production), and the entire human milieu (household and city, both envisioned as potential loci of food production).

Harris, Dylan (Clark University)

Dithering, Deranged, and Precarious: Post-Truth, Climate Change, and Sci-fi

"Post-truth: adjective

Relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief."

Named as Oxford Dictionary's 2016 word of the year, post-truth typically garners a negative connotation through its usage in popular media. However, post-truth does not necessarily imply that there is no truth. Rather, it confirms what folks like Donna Haraway (1988) and Mario Blaser (2009) have been saying for years, which is that there was never a universal truth. Further, and more interestingly, there are multiple truths. This word shares the same lineage of words like 'populism' and 'hegemony,' both words that are often discussed negatively, but words that are ultimately revolutionary in their meaning. To suggest that something is hegemonic is to also suggest that it can be toppled through counter-hegemonic praxis. Similarly, in a world with many truths, it becomes an act of resistance to define truth, and this seems especially possible given post-truth's mainstream appearance. What a better place to find post-truth than speculative fiction?

Using Paolo Bacigalupi's *The Wind-up Girl* as a speculative compass for exploring a hopefully-not-immediate future, this paper will explore our current climate predicament through the lens of what Donna Haraway (2016) calls dithering, Amitav Ghosh (2016) argues is derangement, and what Judith Butler (2016) considers precarity. Taking these theories into consideration, this presentation is explicitly concerned with the 'truth' of climate change. The fact that uncertainties exist in the 'climate science' allows for skeptic strongholds. However, if truth is up for grabs, then the issue becomes which truth matters most. Bacigalupi's *The Wind-up Girl* takes place in a highly politicized, post-truth world in which the looming threat of climate catastrophe is large yet silent. How can the dystopic future outlined in this book help guide us towards what not to do in an age of dithering and derangement?

Kay, Sam (Ohio State University)

Unpacking China's dystopian urban present

China's cities are filled with satisfied people who go to work every day in glistening towers and shop in sparkling malls. The nation is enjoying stability and prosperity, a new Golden Age. Nobody is particularly interested in (or capable of) remembering or discussing when or how this reality came to be. It is a near-future 2013, as depicted in Chan Koonchung's 2009 novel, *The Fat Years*.

This presentation plumbs Chan's inquiry for its significance to political ecology research that also seeks to understand the socio-ecological conditions of our present and possibilities for the future.

Sutton, A. Lee

BLOCK 6
SATURDAY, 2:30-4:10

Strategies for Action and Solidarity on Our Campuses Amid Contexts of State-Sanctioned Violence, Repression, & Hatred: A Conversation

Chair: Carrie Mott (Rutgers, The State University of New Jersey)

Discussant: Araby Smyth (University of Kentucky)

Participants:

Ayanna Ogaldez (Virginia Commonwealth University)

Maxwell Hoffman (Virginia Commonwealth University)

Veronica Miranda (University of Kentucky)

Takami Delisle (University of Kentucky)

Blanka Angyal (University of Kentucky)

Ingrid Nelson (University of Vermont)

In the short time that has passed since the November 8, 2016 presidential election, we have seen a terrifying combination of increases in reports of hate crimes, and the steady development of a presidential administration that emphasizes white supremacy, an anti-immigrant agenda, and general disregard for the lives of all people who are Othered by the white supremacist capitalist patriarchy (hooks, 1984). A report issued by the Southern Poverty Law Center states that in the ten days immediately following the election, 867 hate incidents were reported, from almost every state in the US. The majority of these attacks targeted people of color and Muslims, or people perceived by the harasser to be Muslim. A significant number of these incidents have occurred on university campuses (splcenter.org, 2016: 6). This panel is an opportunity for collective strategizing about how people working on university and college campuses in the US might be able to support students and peers who are the potential targets of such hatred and abuse. Incidences of harassment and violence are on the rise already, before the president-elect has even taken office. As such, those of us in relatively privileged positions, whether because of the opportunities granted through secure tenured employment, through a supportive campus climate, or through one's embodied positionality within hegemonic social institutions, are in positions to challenge the violence and hatred that can be expected to continue throughout the coming presidential administration. Events on our campuses since the election confirm first, that many of our students and colleagues are very concerned and second, that they have reason to be. Campus protests began immediately following the election, as thousands of students nationwide held campus walk-outs, protests, and marches, and over 165 schools have called for their campuses to be spaces of sanctuary for immigrants. Ultimately, this panel will be a space to share ideas, brainstorm, and strategize collectively around the importance of support and solidarity for those who are most targeted by a presidential administration that is unapologetically white supremacist. We ask that panelists offer initial thoughts of no more than five minutes each, and then we will hear contributions from others in the room.

Film Screening: Blood On the Mountain

Chair: Nick Mullins (Independent Researcher)

Discussant: Shannon Bell (University of Kentucky)

From the producers of *The Appalachians* and *Coal Country* comes *Blood on the Mountain*, a searing investigation into the economic and environmental injustices that have resulted from industrial control in West Virginia. This new feature documentary details the struggles of a hard-working, misunderstood people who have historically faced limited choices and have never benefited fairly from the rich, natural resources of their land.



Expanding the Boundaries of Urban Political Ecology: New Theoretical and Empirical Engagements

Chair: Jennifer Rice

Goldfischer, Eric (University of Minnesota) and **Jennifer Rice** (University of Georgia)

Expanding the Boundaries of Urban Political Ecologies

Urban political ecology (UPE) has provided, for over 15 years, a rich set of theoretical tools to situate relationships of nature and the city within larger geographic traditions of nature-society theory, as well as uneven development and urbanization. It should be noted that, within this robust field of research, most UPE case studies tend to take as their “problem event” an environmental system or occurrence (e.g. water, trees, carbon), meaning that the role of power in producing and reifying social difference, while never absent, often gets read through the social dimensions of ecological problems. While we do not subscribe to the idea that there are distinct “social” and “environmental” realms, the fact remains that both the scholarly gaze of UPE, and the actual imaginaries of policy work done by real world actors, do often focus on one side of the socio-ecological system more than others. In this paper we ask: What would it look like to expand the field of socio-ecological problems we study to include a broader array of issues often attributed to the “social” domain of policy (e.g. homelessness, criminal justice, etc.)? To do this, we argue two points: 1) UPE can (and should) offer more support to urban social movements by highlighting previously unconsidered ecological dimensions of social problems, and also call out inconsistencies between urban policy goals and their actual socio-ecological outcomes. 2) UPE scholars need to work harder to produce engaged research that meets everyday people working on urban environmental issues where they are, especially when these people may see distinctions between social and environmental goals that UPE can help deconstruct.

Vaz-Jones, Laura (University of Toronto)

Situating the Urban Land Question in UPE

Emerging directions in urban political ecology (UPE) have centred feminist, antiracist, and indigenous perspectives in the literature, thereby developing more situated and relational understandings of how urban space is unevenly produced, negotiated, and contested. This paper attempts to expand the boundaries of UPE by centering the urban land question within these emerging perspective of UPE to explore its significance within processes of city-making and contestations of neoliberal urban governance. In this paper, I examine how taken together, UPE and the urban land question can develop more historically and socio-spatially situated understandings of how land rights/ access are negotiated amidst intensifying conflicts over natural resources, housing, and food acquisition in urban spaces. I build on Roy’s recent work on the urban land question (2015), which argues that the urban question is indeed the land question and implores the examination of contemporary urban politics in relation to agrarian histories and ongoing rural-urban linkages. I do this in an attempt to contribute to a more embodied UPE that moves beyond examining urban struggles over infrastructure, water, food, housing, land, and sanitation in isolation from one another. Drawing on my research with a group of land occupants on the peripheries of Cape Town, South Africa, I explore the co-constitution of land struggles with shelter and food politics through everyday forms of city-making - and the uneven nature of these urban processes and subject formations along lines of race and class.

Mostafanezhad, Mary (University of Hawaii at Manoa)

Enflamed Livelihoods: An Urban Political Ecology of Tourism and the Haze Crisis in Northern Thailand

In May of 2016 the Haze Free Thailand Campaign was launched in a collaborative and ongoing effort to ameliorate the haze crisis in northern Thailand. In this presentation, I examine how urban tourism practitioners interpret the impact of the haze on their livelihoods, as well as their perceptions of its causes, implications, and solutions. Additionally, I consider how urban tourism practitioners reimagine the interdependency of their livelihoods with rural agriculturalists who are widely blamed as culprits of haze production in the region. Thus, I examine the relationship between, on the one hand, the role of tourism in environmental discourse and governance, and on the other, the political ecology of urban-rural relations in order to explore how the “geo” is “graphed” through tourism and a range of place- and space-making processes and ideas (Sparke 2007). Drawing on discourse analysis of popular media reports on the haze as well as qualitative interviews with urban tourism practitioners in Chiang Mai, I argue that geopolitical imaginaries of urban-rural relations are remapped through growing attention to the impact of the haze on the tourism industry. This paper contributes to emerging research on urban political ecology and the environmental geopolitics of tourism in northern Thailand.

Black, Sara Thomas (University of Georgia)

Using food and farmland to resist mass incarceration: Disrupting the urban/rural divide in New York’s Hudson Valley

Scholars and activists alike have demonstrated that global, regional and local food and farmland systems are intractably linked to the conditions and maintenance of racialized poverty, state violence, and the slow violence of food apartheid. In the United States, control over land and food access has long been a tool of maintaining structural racism, but there is also rich a legacy of land-based movements for abolition, Civil Rights, and self-determination. This paper draws from the author’s experience as an organizer working with the Victory Bus Project, an effort led by farmers of color in the rural Hudson Valley, who mobilize food and farmland as organizing tools at the intersection of prison abolition and food justice work. Most of New York’s incarcerated individuals are dislocated from cities and warehoused in rural small towns. The Victory Bus Project, which centers the economic security and emotional needs of incarcerated people and their families, physically traverses urban and rural socio-political “boundaries” while providing affordable prison visit transportation to its membership. Activists navigate political and social dislocations across the urban/rural divide in order to build resilient, resistant power responding to the extractive crisis of mass incarceration. I argue that forms of solidarity, intersection, and movement building like the Victory Bus Project open avenues for addressing interlocking structures of social vulnerability at many sites within and beyond the city, expanding the boundaries of typically urban social movements via solidarity networks grounded in rural space.

Abdl-Haleem, Osama (University of Kentucky)

The World is a Mosque

Masjid Bilal is the oldest mosque in Lexington, Kentucky. It is also the city’s most recently renovated mosque and at the moment it’s largest. And while it would appear that many of Lexington’s Muslims live in the wealthier south side of the city, Masjid Bilal is situated on the poor and predominantly African American north side, with a stated mission to honor its black roots and be a service to a underserved community. But the mosque is more than a building housing a place of prayer. It is involved in a network of intricate relationships at once human, organizational, and material. Bricks and building codes, sermons and city ordinances, trees, kids, cars, fences, and asphalt all come together to establish the mosque as a site of prayer and a moment in the many relationships of the city.

The Political Ecology of Coastal Conservation, Development, & Livelihoods III

Chair: Ryan Anderson

King, Catherine (The Graduate Center, City University of New York)

Constructing Ecosystem-Based Fisheries Management in New England

New England's groundfish management plan is failing to meet standards of the Magnuson-Stevens Fishery Conservation and Management Act to conserve cod populations and "minimize adverse economic impacts" on fishing communities. A diverse range of scholars and stakeholders have argued that inadequate assumptions about ecological, social, and economic processes and relationships used in bioeconomic modeling and quota-based management schemes contribute to this failure. Beyond more nuanced understanding of these processes and relationships, new ways of conceptualizing and analyzing the fishery and establishment of new relationships may be needed to improve outcomes. Many stakeholders share aspirations for a comprehensive ecosystem-based fishery management plan to reverse the current trends by accounting for ecosystem complexity and socio-ecological relational dynamics. A provisional example Fisheries Ecosystem Plan (eFEP) is emerging in the New England Fisheries Management Council. The Northeast Fisheries Science Center is developing quantitative models of the marine ecosystems to determine fishery reference points - floors and ceilings - for critical fishery attributes. To address socio-economic aspects, economists propose coupling the ecosystem models with an economic model to identify optimized species mixes with portfolio analysis, based on theory used for managing financial investment accounts. Using this approach, economic risks and returns are calculated across varying mixes and tradeoffs are assessed to generate catch limit advice for multiple stocks. This study examines the space of knowledge production where complementary and contradictory epistemologies interact to create the eFEP. It investigates how ecosystem conceptualizations emerge from the work, skills, and habits of scientists, social scientists, and managers interacting within and beyond their own groups and organizations, and analyzes how conflict is resolved and consensus is built. This analysis also assesses how the contributions of fishers and other community members, historically marginalized from governance processes despite their central roles and relationships, are included in the development of the eFEP.

Joose, Sofie (Swedish University of Agricultural Sciences)

Follow the fish and traverse the divide: Case-studies of fisheries, fish trade and consumption on the Northeast coast of the USA

Let's consider the coast as a divisive line for fish. On the sea side we imagine the fish as an animal hunted by fishers, part of nature and subject to marine regulations. On the land side we imagine the fish as food and a commodity, traded by fish mongers, processed in factories, a lynchpin of often global value chains and subject to food regulations. Thus, in the process of becoming food the fish becomes part of seemingly separate worlds. This separation is reproduced in science as these domains are studied by different people. Biologists, sustainability scientists and marine policy scientists focus on fish in the sea and management of the resource, while economists, consumer scientists and nutritionists focus on fish on land.

This view is problematic for sustainability efforts in fisheries. It enforces that sustainability is sought only in management of the resource and the fisheries itself, while the trade of fish is perceived as a remote cause. However, recent studies show that overfishing is also a result of global trade, e.g. when global trade masks information about the state of the resource or jeopardises the food security of local communities. Therefore, to work for sustainability our studies need to cross the divide.

This presentation recounts ongoing research in which I follow fish from catch to consumption, using the fish to methodologically traverse the gap between the worlds of fish and food. I zoom in on the coast as the physical place of landing caught fish and investigate the different networks of actors implicated in this location. Community Supported

Fisheries (CSF) form a specific point of interest, and I discuss the efforts of different CSF's that aim to bridge the different domains fish is part of to improve the sustainability and social justice of fisheries and fish value chains.

Chung, Youjin (Cornell University)

The Grass Beneath Two Jostling Elephants: Conservation, Development, and the Implications for Rural Livelihoods in Coastal Tanzania

This paper examines the struggles over meaning in one rural village in Bagamoyo District in the Coast Region of Tanzania, where the local people are, and have been for several decades, experiencing continued enclosures of their lands by a national park and an industrial sugarcane project. The paper complicates the existing literature on contemporary large-scale land deals by providing an example of how rural lands and livelihoods can be simultaneously subjected to multiple types of commercial pressures over a prolonged period of time. The paper is structured around the following two arguments. First, land enclosures for both agro-industrial development, and conservation and tourism (via the establishment of a national park) are made possible by the systematic devaluation of local people's customary claims to the land vis-à-vis the statutory or rational-legal claims of the state. As a result, the local people risk not only being dispossessed from their means of production, but also being divorced from their historical, cultural, and ecological relationships with the land, and importantly, water. Second, I argue that the state plays a central role in facilitating and authorizing large-scale land acquisitions; yet, at the same time, it produces a panoply of intractable confusions, arising from the involvement of numerous state actors and institutions, and their often contradictory relationships and practices. While the role of foreign actors in large-scale land deals, such as foreign investors, consultants, and donor agencies, are not insignificant, their interactions are necessarily mediated by the state.

Duffy-Tumas, Amelia (Rutgers University)

Theorizing resource access to coastal economic spaces in Senegal

Drawing on feminist theories of access, this presentation engages long-standing and pressing debates about people's abilities to benefit from natural resources by re-visiting the core concept of multi-dimensionality. Not only are location and function key components for ascertaining who is invested in how a given thing moves from a site of extraction to consumption—so too is the related, but often overlooked, question of how much of that given thing is needed for it to attain a certain livelihood function. Synthesizing data collected over eighteen months of fieldwork in Senegal, such an analysis invites reflection on the capacities of fisherpeople to occupy coastal economic spaces, despite underlying political ecological changes that have contributed to many having to get big or get out of previously owner-operated businesses. I argue that an incorporation of scalar market dynamics is crucial to re-theorizing resource access as gender is co-produced with age and class in articulation with evolving economic practices in the studied setting.

Kraus-Polk, Alejo (University of California Davis)

Human Use of Restored and Naturalized Delta Landscapes

The large-scale ecosystem restoration initiatives in the Sacramento-San Joaquin Delta are opportunities to create more emancipatory landscapes. The Sacramento-San Joaquin Delta (Delta) is the beating heart of California's complex water management system. This evolving social ecological system, upon which a vast community of humans and more-than-human species depend, is the site of intensive scientific study and policy deliberation. Increasing attention to the social and cultural values of evolving place(s) in the Delta has begun to shift thinking around how best to meet the coequal goals of water supply reliability and ecosystem health. My research on the human use of restored and naturalized Delta landscapes provides critical recommendations for how environment-making state actors can support public access, nourish cultural values, and foster civic ecology. My understanding of the "end of cheap water" in California further supports impractical changes in the allocation of waters and a movement towards multifunctional landscapes which support synergistic land uses and redistribute land access to communities with land-based knowledge. As part of my talk I will prefigure transformed landscapes, infrastructures and human communities of California living through strategic economic degrowth, more equitable land access and a resurgent water ethic.

Aesthetics in Political Ecology

Chair: Lillian Brown

Discussant: Paul Robbins

Murray, Andy (University of California, Santa Cruz)

Fermenting (In)Distinction: Milk Science and Craft Beer

Recently, a start-up called Perfect Day set out to produce a “reduced hoofprint” milk substitute using genetically modified (GM) yeast. These yeast cells ferment proteins normally found in cows’ milk (casein and whey), and then engineers add fats, sugars, and other nutrients from different sources to make a product that they identify as being the same as conventional “dairy milk.” Cementing its ontological equivalence involves convincing consumers that their product is “dairy milk,” and much of this approach depends on creating a product that is indistinguishable from conventional milk in terms of taste. This reach for ontological equivalence interacts curiously with Perfect Day’s description of their work as “dairy meets craft brewing” (2016). Craft beer consumers often consume a range of products and develop a vocabulary for rating and assessing them, patterns reflected by websites and apps like BeerAdvocate, RateBeer, and Untappd (which rewards diversified consumption). These assessments include recognizing specific flavors in beer and becoming familiar with the biological and chemical processes behind them. This engages beer consumers with beer producers and the production process in ways that Perfect Day’s declaration and pursuit of equivalence does not. So, in an interesting twist, the “craft” of beer brewing encourages more engagement with forms of scientific knowledge on the part of consumers than Perfect Day’s more “high tech” fermentation. The latter’s reliance on both the maintenance of equivalence and on a controversial production practice—genetic modification—may spur an impulse to avoid close scrutiny. However, both the diversification of flavors and the cultivated connections between process and taste may be crucial to what is appealing about “craft brewing” and makes Perfect Day’s association with it desirable. Paying closer attention to taste as a “way in” to greater understandings of production practices may help foster more careful assessment of these practices, more inclusive approaches to the development of food technologies, a better understanding of the ways in which projects of “craft” and “science” operate together, and deeper interrogations of each’s hopeful projects, particularly those geared toward sustainability.

McCrea, Gwendolin (University of Minnesota)

More-Than-Human Aesthetics: A Resistant Reading of Environmental Engineering and Animal Ethology

Aesthetics has emerged in political ecology and related fields as an approach that offers profound insights into the cultural and social assumptions and implications of the worlds we create. It has been especially effective for contesting the nature/society dichotomy at the root of many debates about conservation, environmental protection, and wilderness. However, although such scholarship is situated within a more-than-human milieu, the aesthetic point of view is a decidedly human one. Even scholars working in the nonhuman turn in the social sciences and humanities have been hesitant to wade into issues of the subjective judgments of nonhuman beings. One of the strengths of political ecology is its sustained engagement with nonhuman agency in the creation of shared spaces, but we stop short of understanding nonhuman agency as something more than its capacity to affect. This caution, I argue, is based on the same dichotomies that we often challenge. At its most fundamental, aesthetics is a two-fold process of perception and judgment. That definition does not necessarily preclude forms of perception and judgment that are alien to our human ways of being. Using my research on more-than-human governance of an urban “natural resource” park as a starting point, I explore the idea of resistant readings of science and technology research as a methodology for more-than-human scholarship. If sheep really do have opinions, as Vinciane Despret suggests, how do we get on with the work of political ecology? This paper begins to answer the question of what a sincere engagement with nonhuman aesthetics might look like.

Corwin, Charlie (University of Illinois at Chicago)

Contextualizing Local Knowledge in Various Agricultural Settings

This paper explores knowledge systems in the industrial agricultural system in Winnebago County, Illinois. In particular, this study is interested in contextualizing local ecological knowledge among different landscapes as part of a larger study that investigates the relationship between knowledge production and farming practices. Little to date is mentioned in knowledge systems and environmental management literature in the United States about human interaction and local knowledge in agricultural settings. Local knowledge is often derived from day-to-day sensual experience but is generated alongside other knowledges, including external, universal scientific knowledge, making it difficult to identify and situate. This study begins the process of distinguishing knowledge types via farmer and ancillary agricultural personnel interviews in a heavily conventional and aesthetically homogenous farming landscape marred in places by soil degradation and decreased water quality. Conversely, certain sustainable practices, such as cover cropping and conservation tillage, are found to yield improved environmental outcomes and are often a part of a more diverse, aesthetically rich farmland ecology. This study, then, compares different landscapes based on conventional and sustainable practices and their respective aesthetics, and pulls out knowledge produced through farmers' sensual experiences within varying environments. Doing so may help to better analyze the interplay of knowledges and farming practices and encourage a transition to a more sustainable agricultural system.

Barrineau, Brittany (University of Kentucky)

Producing Taste and Quality: Extra Virgin Olive Oil in Jordan

Extra virgin olive oil (EVOO) is a classification of olive oil based on both chemical and sensory analyses. Creating olive oil that qualifies as extra virgin takes place within a network of trees, farms, mills, and experts. This paper explores how EVOO is produced, both as an idea and as a physical item, within these networks in Jordan. I argue that aesthetic politics provides a lens through which we can bring together the materiality of the olive fruit, the milling process, and the cultural, political and economic context of Jordan in order to discuss how quality is constructed and how it is, rather than solely a class issue, indicative of a particular way in which capitalism, commodification, and globalization have entered into diverse local conversations about agriculture and olive oil. In other words, EVOO is not simply a label for a higher quality olive oil, but it is a distinctly different material result of a particular constellation of networks, different than other forms of olive oil in Jordan. Analyzing the aesthetics of olive oil production in Jordan draws attention to not only the process of olive oil production and the production of knowledge, but also to how the subjective qualities of olive oil are debated and defined. It is within these debates that the ability to claim that oil is officially good/bad allows some producers to claim legitimacy over the variety of other oil practices.

Lightning Session: Methods in Political Ecology

Organizers: Lucy Miller & Sophie Sapp Moore

Discussant: Rebecca Lave

In this session, we follow Paul Robbins (2012) in exploring Political Ecology's unique capacity to work between empirical and theoretical realms, shaping what practitioners inhabit as a 'field' and how others – human and nonhuman – are called into it. In this "lightning session," short presentations from six participants will highlight the dynamism of political ecology in action, exploring theoretical and methodological questions around collaboration, participation, privilege, access, and technology in the more-than-human practice of socio-ecological field research.

Participants will give focused 5-10 minute presentations, accompanied by no more than 3 slides as a visual aid, and followed by open discussion. Some of the key questions guiding this session are practical: Which material technologies are most useful in the study of political ecology, and to what ends? How do mobility and modes of transport affect research process and outcomes? Some are more theoretical: What stakes do researchers and community members hold in political ecology research? What is an ethical engagement with politically vulnerable populations? How do nonhumans participate in research, and how might they do so ethically? Both trajectories of inquiry open up important questions about the ethical practice of political ecology in the field, and examine first steps in thinking through our obligations to research methods and outcomes as political ecologists. We hope to initiate a discussion that supports a turn to deeper methodological reflection in political ecology more broadly.

Miller, Lucy

Kirk, Gabi (University of California Davis)

"Where am I going, and who am I going with?" Methods of Navigation in Israel-Palestine

Israel's military occupation of the West Bank creates an overlapping web of spatial and social realities, which researchers must physically, culturally, and emotionally navigate in daily practice. International visitors have access to a variety of spaces and routes not available to the residents of the West Bank, and therefore traverse the "environmental imaginaries" (Burke and Davis 2011) created by these contested legal and cultural boundaries in a variety of ways. Therefore, before even arriving at a field site, formulating a research question, or deciding on methods in Israel-Palestine, one must ask, "Where am I going, and who am I going there with?" In this presentation, I will tell short stories of triumph and challenge during my pre-dissertation visits to Israel-Palestine in 2013 and 2016. I will detail my methods of transport to field sites throughout the occupied West Bank, as well as within Israel proper, and accompanying observations and relationships. I take inspiration from Derickson and Routledge's (2015) call for scholar-activists to engage with communities not only during research but from the outset of a project. These navigational decisions connect to deep relationship building with communities long before deciding on concrete methodologies, and can shape a more meaningful praxis. My narratives will make visible the intersection between methodology, theory, and action towards justice. Together, these contribute to making political ecology not simply an intellectual field, but a "community of practice" (Robbins 2012).

Graddy-Lovelace, Garrett (American University School of International Service)

Community-Led Action-Research on the US Farm Bill. As Political Ecology

Agricultural policy needs political-ecology research and analysis: what does, and what could, this look like, methodologically speaking? An important realm of the political ecology framework is engaged, 'participatory' action-research, which includes community-based, community-partnered, and community-led studies and analysis. My own political ecology analysis of the US Farm Bill and related policies emerges from teaching, research, and service collaborations with grassroots agrarian organizations (Rural Coalition, National Family Farm Coalition). These groups are themselves deeply involved in informing, reforming, and transforming US agricultural policy. One particular aspect of this research, requested by community partners, is historically contextualizing certain policies and the complexity of their political negotiations. Another is helping evaluate and highlight underfunded, successful, yet precarious USDA programs, by merging secondary USDA data analysis with original qualitative research with growers. Another is bridging grassroots social theories with scholarly social theory. Amidst intellectual and political opportunities, methodological challenges arise: one being the community desire to have open-access, broad-public audience deliverables alongside tenure-track requirements for (invariably paywalled) articles. This quick presentation will rapidly assess these issues.

Tanner, Sean (Rutgers University)

Reassembling the Ethical

This short presentation will focus on the practical and logistical steps that I followed as a researcher in order to combine the methods prescribed for an Actor-Network Theory (ANT) analysis with the methods of the Asset-Based Community Development (ABCD) workshop as each are relevant to an examination of Political Ecology's concerns of ecological and social change. Examining an international development NGO's field office in Guatemala using these poststructuralist and posthumanist lenses, I will discuss in detail the procedures used from those theoretical trends paying close attention to the insights gained from choosing those procedures over others. While many have questioned the compatibility of these methodological prescriptions with the ethical commitments of Political Ecology (see Lave 2015; Samers 2005), through a discussion of the practical "how-to" steps of doing this particular research the ethics of many choices presented in the field will also be highlighted and discussed. Understanding that the format of this session is not appropriate for a theoretical defense of these methods, my hope is that a brief illustration of insights and ethical choices will provoke some discussion about the possibilities within Political Ecology's toolkit.

Margulies, Jared

Employing collaborative photography in the study multispecies encounters: possibilities and pitfalls

This presentation will discuss the possibilities and pitfalls of employing collaborative photography as a research method in multispecies political ecology studies. I will reflect on and discuss the process of designing, implementing, and completing a research and advocacy project entitled, "*Living with Wildlife in Mangala*." Through this project six participants documented their lives along the fringes of Bandipur Tiger Reserve in Karnataka, India. Through their photographs they ask us to question and debate prescriptive, top-down approaches to wildlife conservation and best management practices for endangered species that largely ignore the socioeconomic realities of the rural poor. I will discuss challenges, mistakes, and future directions in developing participatory photography as a tool in political ecology and in multispecies studies more broadly. I will rely on the results of the *Mangala* project and in-depth interviews with the participants to raise practical and theoretical considerations for scholars seeking out alternative research methods attuned to questions of environmental justice grounded in emancipatory research practices.

Finding a Space/Place for Archaeology (Workshop/Discussion)

Organizers:

Karen A. Stevens (University of Kentucky)

Justin Carlson (University of Kentucky)

Megan Parker (University of Kentucky)

Katharine Alexander (University of Kentucky)

Alexander Metz (University of Kentucky)

Archaeologists are in a unique position to offer insight into how people in (pre)history interacted with their surrounding ecosystems, and how they have coped with and even promoted environmental change within those systems. In response to regional climates and environmental changes, people of the past have displayed both resiliency and sociopolitical flexibility. As actors, humans have altered landscapes to varying degrees, leading to both degradation and enhancement. This workshop aims to explore how archaeology has been and can continue to be used to bolster political ecology research and to offer a perspective using the *longue durée*. This workshop will also look at how political ecology can be used as an analytical tool for archaeologists.

Potential topics for discussion include domestication of plants and animals, land use/modification, property management, climate change and cultural/political change, appropriation of nature for political and economic purposes, navigation of social & ecological changes using plants/animals, historical ecology, traditional environmental knowledge (TEK) production, power relations, ideological manipulation of nature, population pressures on agricultural systems, dynamics between politics and sustainability, landscape capital, niche construction, and political ecology theory building in archaeology.

Appraisals of Aldo Leopold's Environmental Philosophy

Chair: UK-PEWG

Graham, Clay (University of Kentucky)

Leopold's Ecological Conscience & Inter-Being in Zen Buddhism: Toward the Necessity of Community in Environmental Philosophy

In this essay I claim that the land ethic and Zen Buddhist philosophy are mutually reinforcing theories and practices. Specifically, I explore Leopold's theory regarding the ecological conscience. As I understand it, ecological conscience is an intellectual and affective awareness of the vast interconnected web of biotic life. It realizes that the intricacies of this biotic web are too complex to be fully articulated and disclosed. This idea, which orients so much of his work, appears numerous times in numerous forms throughout his later writings, including *The Sand County Almanac* and various short essays. For Leopold, the genesis of a truly ecological conscience is a necessary prerequisite to the realization of the land ethic. In the second section of the essay I summarize the relevant, key tenants of Zen Buddhist philosophy, especially as it is advanced by two of its great modern scholars and activists: D.T. Suzuki and Thich Nhat Hanh. I do this with the hope of conveying its similarities (and pertinent differences) with the Leopoldian ecological conscience.

Each is a call to action via a revolution in thought. While Leopold's theory may have evolved out of a scientific and Western cultural heritage, and Zen philosophy out of the Buddhist tradition in the "Far" East, both articulate a similar view of the world and its vast network of interconnected life. I defend the attempt to create a much-needed dialogue between these theories for the sake of environmental philosophy.

Reed, Carrie (University of Kentucky)

Leopold's Land Ethic Weakly Defended

Aldo Leopold's land ethic has received criticisms on many fronts from such groups as animal liberationists, feminists, and even ecologists. One such criticism, coming specifically from the animal liberationists, is in regards to holism. Leopold's holistic ethic is claimed to deny the moral interests of individuals, specifically animals, within the whole. Tom Regan, an animal rights theorist, was the original proponent of this critique of Leopold. He claimed that Leopold's land ethic committed "environmental fascism" because it subsumed the interests of the individual under the interest of the whole community. Defenses have been given in support of Leopold's ethic against this criticism. These defenses include J. Baird Callicott and Michael P. Nelson. Kristin Shrader-Frechette even advances an amendment to Leopold's holistic ethic calling for hierarchical holism and second-order ethical principles to adjudicate this conflict between the individual and the whole. However, this paper argues that none of these defenses or amendments adequately salvage Leopold's land ethic from the criticism of environmental fascism as it is advanced by Tom Regan.

Common Features of Leopold's Land Ethic and Shrader-Frechette's Hierarchical Holism

Shrader-Frechette distinguishes her “hierarchical holism” from the ethical holism of Callicott and Leopold in three primary ways. First, she argues that holism requires a metaphysical notion of “community” or the whole, since this notion cannot be grounded via scientific understanding. Second, she argues that holism cannot simply be biocentric, but must also be anthropocentric, since the ecological and biological state of affairs cannot ground the inherent value of a biotic community or land without human input. Third, she argues that holism must be hierarchical via second-order principles that avoid an endorsement of environmental fascism while still preserving a strong ethical relationship to the land. These characteristics by which Shrader-Frechette distinguishes hierarchical holism, however, are not contrary to Aldo Leopold’s land ethic, except perhaps as Callicott has represented the same. For the purposes of this paper, we will disregard Callicott’s representation of Leopold and instead compare Shrader-Frechette’s hierarchical holism to the holism of Leopold’s land ethic as Leopold himself has presented it. Though the two holistic ethics differ in their motivations and resolutions, the characteristics that Shrader-Frechette uses to distinguish her holism from Leopold’s actually identify a couple of key characteristics of Leopold’s ethic and point to at least one way in which Leopold’s ethic could be improved that is not inconsistent with the ethic as Leopold presents it. We will find that Leopold’s ethical holism agrees with Shrader-Frechette’s claims that a holistic ethic must be grounded on philosophical as well as scientific understanding and that it must be anthropocentric as well as biocentric. Also, we find that the land ethic is beneficially updated by, and not necessarily incompatible with, hierarchical holism’s second-order principles.

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