

PROGRAM
SOCIETY FOR ECONOMIC ANTHROPOLOGY ANNUAL MEETING

University of Georgia

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Co-organizers:

Bram Tucker, bramtuck@uga.edu

Don Neslon, dnelson@uga.edu

Special thanks:

Keynote cosponsors: University of Georgia President's Venture Fund, Franklin College of Arts and Sciences Dean, Department of Anthropology, Center for Integrative Conservation Research, African Studies Institute.

Organization assistance: Deborah Chasteen, Shelly Biesel, Ashley Block

Abstract selection: Nora Haenn, Shelly Biesel, Ashley Block

AAA support: Carla Fernandez, Vernon Horn

Thursday, 14 April

3:30-5:00 Graduate student event: National Science Foundation Cultural Anthropology Program Directors Deborah Winslow and Jeffrey Mantz discuss NSF funding opportunities for graduate students. Miller Learning Center room 214.

3:00-5:00 Registration and check-in, UGA Chapel

5:30 Keynote Address, Dr. Kathleen Galvin, UGA Chapel.

Global Environmental Change: Research and Engagement for Resilience

Addressing complex global change problems requires research to focus more directly on producing knowledge required to understand and diagnose the challenges that confront societies as a result of global change. Disciplines are good at providing essential knowledge, methods and tools. On the other hand, disciplinary approaches tend not to have the capability to handle complex challenges. A transdisciplinary approach to research-for-action is needed to support adaptation and transformation for resilience. Transdisciplinary frameworks agree that this type of research is problem-focused rather than discipline-focused, has an evolving methodology and collaboration and involves non-academic actors. This knowledge production process invests in team building, is human centered and fosters capabilities. There are opportunities to foster this type of research.

7:00- 8:00 Keynote reception, Memorial Hall Ballroom, Memorial Hall room 211.

8:00 Board Dinner, Baldwin Hall.

Friday, 15 April

7:00 Bagels and coffee; Registration and check-in, Tate Student Center

8:10-8:30 Bram Tucker and Don Nelson, Introductory remarks, Tate Hall, room 135.

Session 1: How individuals, households, and communities cope with risk, Tate Hall, room 135. Chair: Lisa Cliggett.

8:30-8:50 Greg Gullette, Sayamon Singto, and Paporn Thebpanya, *Thai livelihood strategies and economic migration in contexts of political decentralization and agrarian transitions*

Problem Statement and Theoretical Frame: Thailand's decentralization policies have sought to increase urbanization and development in provinces outside Bangkok, while increasing regional autonomy through the devolution of decision-making powers to localities. Provincial and district government offices increasingly issue regulations and formulate local development strategies, which draw on concepts in sustainability studies and build from governance structures that index livelihood rights and market opportunities. Yet, despite such policy changes, poorly regulated urban sprawl has created environmental degradation and natural resource competition among different stakeholders within transitional rural-urban spaces. Furthermore, decentralized governance has not ensured equitable civic participation, thereby limiting agrarian families' influence on development outcomes.

This paper examines how agrarian families in the northeastern (Isaan) region understand state development and urban encroachment and how these families reconfigure livelihood strategies and labor mobilities to mitigate changing socio-political and environmental conditions. By combining literatures in the emergent 'mobilities turn' paradigm and livelihood and civic engagement studies, this paper is able to more fully explore households' economic, environmental, and socio-political positions within urbanizing spaces and their differing and relative capacities to respond to new realities in securing stable livelihoods. A primary focus is to understand how changing ecological conditions and broader shifts in socio-political systems that valorize certain economies engender 'permanently temporary' and 'continually circular' migration among agrarian households in Southeast Asia.

Methodology: Ethnographic research was conducted in Thailand's Nakhon Ratchasima province. Ethnographic methods consisted of participant observation, semi-structured and unstructured interviews, and socioeconomic data collection at the district level in Sung Noen. Unstructured and semi-structured interviews were conducted among agricultural households (n=38). Semi-structured interviews were also conducted with government officials in the local agricultural administrative office (n=5). Chained-referral and purposive sampling were used to locate participants.

Results: Building from research in agrarian transitions and risk aversion studies, this study found that economic diversification and secondary/tertiary sector linkages increasingly characterized agrarian households located in Nakhon Ratchasima's urbanizing spaces. Livelihood changes and labor flexibilities were partially explained through traditional variables such as education, land ownership, market access, class, among others (for example, landed households with sizable plots were more likely to invest remittances in agricultural expansion). However, while state development may be viewed as coercive structural forces underpinning contemporary labor flexibilities due to alterations in land tenure, resource availabilities, and economic systems, complex individual and household agendas shaped people's participation in and understanding of labor migration. Ethnographic data demonstrated too the ways in which migration decisions and household provisioning strategies reflected people's engagement with culturally constructed labor hierarchies, aspirations for modernity, and ideas of 'being developed'.

Implications: This paper demonstrates that understanding the linkages between development and agrarian transitions benefit by using traditional research variables. Yet, by incorporating people's understandings of Thai labor hierarchies and development, this work highlights the ways in which political economies and cultural hierarchies interrelate with migration engagements and economic diversification. Such multidimensional variables necessarily complicate agrarian studies and underscore how 'continually circular' migration factors into why particular livelihood portfolios are sustained, adjusted, or abandoned over time.

8:50-9:10 Discussion

9:10-9:30 Megan Steffen, *How will we get through 2016?" Unpredictability, risk, and willfulness among socialites in Zhengzhou*

In Zhengzhou, the capital of Henan Province in the People's Republic of China (PRC), Olivia and her peer group of "people with influence" claim they've never experienced a year like 2015. Ever since the stock market crashed in June, everyone she knows has been in a bad mood. What were once thought to be temporary concerns about the environment at large or *da huanjing*—a euphemism for the political impact of President Xi Jinping's anti-corruption campaign—have morphed into more directly invoked fears about the market at large or *da hangqing*. Repeated interventions by the state to counter the market's invisible hand with the government's visible hand—as in the short-lived stock market circuit breaker—have failed, miserably, and left Olivia's friends scrambling to verify that others "can also feel the economy's influence." Conversations over meals in Zhengzhou's increasingly empty restaurants revolve around adding names to a list of acquaintances whose shops have closed, whose companies have dissolved, and whose "broken chains of investment" have left their own lives shattered. "The question is how will we get through 2016?" Olivia moans at these meals, to laughter.

And yet, each meal ends with an expressed willingness to cooperate more, invest more, and risk even more. One friend asks to be put in touch with an acquaintance who can rent him expensive retail space for the Cantonese dessert restaurant he's always dreamed of owning; another pitches investing in a new karaoke club for an undeveloped real estate complex; yet another reports that she's made a million RMB "frying" stocks over the past six months; and Olivia herself has recently resigned from the steady job she held for ten years to found a new company whose exact purpose she cannot quite articulate.

Based on over 22 months of participant observation conducted between March 2013 and January 2016, this paper examines why certain socialites born between 1975 and 1985 persist in making what appear to be risky economic decisions even in the face of what they admit is probably a severe economic downturn. My work brings classical anthropological insights on the nature of accidents, unpredictability, and etiology together with other recent studies of how conceptions of markets and futures interact (e.g. Guyer 2007; Hiyazaki 2006; Roitman 2013). In the wake of the unprecedented liberalizing policies that transformed the PRC from a planned economy to the second largest GDP in the world, people were often arbitrarily and unexpectedly rewarded; even success appeared to happen by accident. My research indicates that as a result of these unexpected personal outcomes, Olivia and her cohort of upper-middle and upper class friends learned to cultivate willfulness (*renxing*), sometimes to the point of willfully forgetting certain facts, willfully refusing to reflect on why certain ventures failed, and willfully rejecting certain questions ("why me?") in favor of others ("why *not* me?"). I argue that unpredictability—the conviction that anything could happen—more than risk informs their economic optimism. Finally, I demonstrate the analytic advantages of unpredictability for longitudinal examinations of events.

9:30-9:50 Discussion

9:50-10:10 Joseph Lanning, *Farming as gambling: A mixed-methods analysis of Malawian farmers' attitudes toward agricultural risk*

The annual purchase of agricultural inputs is often the single largest financial investment farmers make to secure their livelihood as they mitigate both probabilistic risk and informational uncertainty. In this study, I present the results of a quantitative analysis of a multi-round risk experiment and long-term qualitative ethnography from 85 households in rural Malawi to examine how farmers choose between a set of risky prospects and explain their choices. The limit of using choices from an economic experiment as a proxy for the complexity of agricultural decisions is obvious; participants are unlikely to calculate probabilities and expected values in their heads, in either the experiment or in farming. Experimental data reveals how farmers choose to spend money to increase the odds of winning, exploring the effect of outcome history (wins and losses) and problem framing (limiting costs or reducing objective risk) on choice. Many participants perceived the similarities between the experiment and real farming decisions, where people spend cash on fertilizer to reduce risk of crop failure. Post-experiment discussions reveal that farmers tend to ignore the amounts they spent to reduce risk in the game, so that they confuse net rewards with gross rewards (winning the game versus maximizing rewards). This suggests that farmers may base real-life agricultural investment decisions on successes and failures in previous years without fully accounting for the costs of inputs. The dominant strategy of paying to reduce perceived risk in the experiment suggests that the limited

adoption of improved inputs may reflect capital constraints rather than general risk aversion of small-scale farmers.

10:10-10:30 Discussion

10:30-10:45 Break

10:45-11:05 Kandace Hollenbach, and Stephen B. Carmody, *Juggling porcupines: The risky business of plant domestication in the Eastern Woodlands of North America*

Problem Statement and Theoretical Frame: Recent discussions of the process of domestication in the Eastern Woodlands of the U.S. has been characterized by competing positions. One discussion debates whether initial domestication occurred in river valleys or in uplands. Another focuses on the appropriate theoretical framework to apply, particularly cultural niche construction versus optimal foraging theory. In this paper, we apply optimal foraging theory – namely the diet breadth model and risk management – to the question of domestication of native seed crops in the Midsouth during the Late Archaic period.

Methodology: Our data include plant remains from upland and river valley sites in eastern Tennessee and northern Alabama with components spanning from the Late Archaic through Early Woodland periods. We also compare the size and spatial distribution of Late Archaic and Early Woodland features at the Townsend site in east Tennessee.

Results: Our data indicate an increase in diet breadth, namely the inclusion of native cultigens at both upland and river valley sites. As posited by other researchers employing human behavioral ecology approaches in the region, this widening of diet breadth apparently relates to needs to feed local populations that can no longer be supported by wild resources alone, due to a decrease in higher ranked resources, increases in population levels, or both. We argue that this is related to a risk-reduction strategy, where forager-horticulturalists sited cultivated plots requiring minimal tending in both upland and river valley settings, adjacent to other resources (such as nuts in uplands and shellfish in valleys). This dispersal of risk in multiple locales shifts risk management from interhousehold (sharing among foragers) to intrahousehold strategies (tending of multiple plots in distinct locales). The feature data from Townsend similarly suggest a shift in storage and labor strategies from the community to the household level.

Implications: Our study suggests that the discussion around the initial domestication of native seed plants in eastern North America should not contrast upland and river valley sites, but instead should consider the two locales to be complementary pieces of a larger risk-reduction strategy. Furthermore, our study demonstrates the value of applying optimal foraging theory and models derived from human behavioral ecology to discussions of the decisions made by foraging peoples that led to the process of plant domestication.

11:05-11:25 Discussion

11:25-11:45 Daniel Murphy, *Risk, resilience, and thresholds of property in Mongolian pastoralism*

This paper compares ethnographic and survey data on shifting ideas of property from 2008 to data gathered in 2014 in a district of eastern Mongolia. The data reveal that ideas about property, particularly natural resources such as pasture and land, have undergone considerable and seemingly contradictory change. In particular, attitudes concerning the allocation and recognition of more private recognition of claims to resources such as campsites and pasture have abruptly transformed from an unexpected embrace of privatization by many herders in 2008 to a near absence of such attitudes in 2014. These data, however, do not seem to reflect a trend away from private conceptions of rights to land but rather reflect a situational logic attuned to the specific context in which such data were collected. Positive attitudes toward private claims were witnessed in the immediate aftermath of a *dzud* event in 2008 while in 2014 the rejection of such private claims followed several ‘good’ years with decreased mobility.

These findings are somewhat ironic given that bad years are seen by scholars as justification for highly mobile resource use strategies and common property systems whereas more stable conditions should increase calls for recognition of private claims. I argue that these findings are understandable, however, if we consider them within what Little (2012) calls the “emotional ecologies of risk”. In the

context of Uguumur in 2008, institutional uncertainty in the face of hazards shortened temporal horizons for perceiving risks, planning for responses, and ultimately making and executing necessary decisions. Consequently, the uncertainty produced by histories of decentralization and the atomization of household risk management forcefully materialized in these disastrous moments and played on the anxieties and fears manifest in pastoral survival. As such, in 2008, herders were simply willing to consider other pathways, as drastic as privatization. By 2014, though, the experience of *dzud* had begun to fade from memory and more deeply entrenched logics eclipsed the ‘thinkability’ of such drastic measures.

This interpretation is important for a number of reasons. Most studies of pastoral mobility are synchronic in nature and rely on what anthropologists call the “ethnographic moment”. This is highly problematic for the study of pastoral social-ecological systems because the temporal logics of common property systems, much like their spatial logics, operate at the macro-scale but the actors and social relations that make up such systems are practiced at the micro-scale. As such, following critical institutional theory, property must be understood to reflect mutable situational logics as well as shifts in political constellations of institutions and actors. Moreover, understanding how the phenomenological experience of the ‘emotional ecologies of risk’ play a role in property politics has significant implications for the future resilience of pastoral socio-ecologies. In this sense, given the compounding post-disaster privatization rhetoric with the increasing marginalization of pastoral identities and lifeways in broader Mongolian society, *dzud* disasters have the potential to trigger transformations of property not seen since decollectivization in the early 1990s.

11:45-12:05 Discussion

12:05-1:30 **Business Lunch and Schneider Student paper prize**, Tate Hall, room 135.

Comments by Dolores Koenig, SEA President

Ty Matejowsky presenting the Schneider Student Paper Prize.

Christopher Taylor, *New Islamic charities in North India: Re-visiting Islam’s “moral economy”*

This paper argues that the practice of Islamic charity in India today reveals contradictions that invite us to reconsider our ideas of philanthropy and the relationship between the economy and Islam. Drawing on a year and a half of work on new Islamic charities, this research illustrates how Muslim reformers seek to re-orient India’s Muslims toward the perceived requirements of capitalist markets. Morality is often imagined to be at odds with capitalism, yet these “ethical entrepreneurs” promote development as simultaneously economic *and moral*.

Session 2A: How cities, nations, and financial institutions cope with risk, Tate Hall, room 135. Chair: Lynne Milgram.

1:30-1:50 Rebecca Zarger, Alexis Winter, Gina Larsen, and Justin Winn, *Seeing beyond sea level rise: Visual future scenarios and the complexities of translating and responding to risks from climate change in Tampa Bay, Florida*

New understandings of the realities of global climate change are emerging at local and global scales simultaneously. Anthropological attention to the uneven effects of climate change, particularly in coastal areas in the U.S., is growing. In this paper we consider how local, regional, and global politics collide around perceptions of risks of present and future climate change impacts in the Tampa Bay region of Florida. Based on a recently concluded three-year NSF-funded interdisciplinary study anthropologists, geographers, and hydroecologists consider how global and regional climate science might be translated for different audiences to emphasize local culturally meaningful landscapes and concerns. How can ethnographically-grounded scenarios of future climate change impacts inform various publics, as opposed to regional or global scenarios? Are futures scenarios helpful in visualizing climate impacts and starting dialogue? What roles might anthropologists play in these emerging efforts

at adaptation in coastal areas in order to better understand how political and ecological forces create landscapes of vulnerability that change over time?

We explore these questions based on findings from our project that integrates global and regional climate science, demographic projections, and input from regional policy makers, planners, and scientists to develop visual climate change scenarios about potential impacts on linked social and ecological systems in Tampa Bay, with a particular emphasis on water resources.

Methodology: We present key findings and insights from our effort to understand how key stakeholders and local residents view climate change risk and vulnerability in the Tampa Bay region. Data collection included 20 interviews and 3 focus groups with climate scientists, urban planners, law and policy makers, environmentalists, neighborhood leaders, and area students. Two phases of interviews and development of spatial maps assisted us in creating a visual representation of climate changes on a relatable, localized scale in video form. Our research team and USF anthropology graduate students jointly designed community engagement programs with Sea Grant county extension agents called, "Climate: Change the Conversation," which were attended by 130 participants at four workshops between 2013 and 2015. Pre- and post-program surveys were administered to participants.

Results: Analysis of survey and interview data indicate that climate scientists, urban planners and other decision makers want to learn more about residents' perceptions of risk and vulnerability, but lack the tools to assess them or the political spaces to integrate them into long term planning. Residents who participated are concerned about future risks and understand many of the complexities of impacts on their ways of life. Among both groups there is a growing recognition that climate change is a fundamentally social problem and that social scientists are needed to communicate with local communities.

Implications: Results and a revised scenarios video are being disseminated through a weblog. Future research will consider the best ways to assess variability and vulnerability of risks in urban neighborhoods already experiencing environmental injustices. Findings contribute to anthropology of climate change and risk through a case study in an urban social-ecological system at high risk for vulnerability in the next 50-100 years.

1:50-2:10

Discussion

2:10-2:30

Arthur Murphy, Eric Jones, and Diana Luque, *When the river boils: Buenavista del Cobre Mine and the Rio Sonora*

In August of 2014, the Buenavista copper mine discharged 40,000 cubic meters of copper sulfate acid into the head waters of the Bacanuchi River a tributary of the Rio Sonora. The event was characterized by Mexico's minister of the environment as the worst mining disaster in Mexico's long history of mining. Mining in Northern Sonora has a long history of environmental and labor disputes a particularly violent dispute in Cananea was memorialized in the *corrido* style ballad, "*La Carvel de Cananea*." This paper examines how the history of the mine from a private enterprise owned by and American mining magnate, to a public corporation back to a private enterprises as part of Mexico's privatization program in the latter quarter of the 20th century, its importance to the world, labor strikes, and pollution (including previous copper sulfate discharges in 1982 and 1985), helps to explain the nature of the response to the spill by: the owner (Grupo Mexico/Southern Copper Co.), the 25,000 citizens along the river, and governments at all levels. The case is approached from various theoretical points of view. First, we see it as an example of the "Cultural Constructions of Calamity" (Oliver-Smith 2002, p. 37), as it intersects with the political economy of neo-liberalism of the late 20th and 21st centuries, and a recovery model of "disaster capitalism," (Kline 2007) puts private property and profits over the needs of individuals. We demonstrate how indifference on the part of, Group Mexico as well as state and national governments has lead to an on-going crisis of confidence which is impeding the process of recovery and a return to some level of normalcy. We further explore how this crisis of confidence influenced the way in which individuals and households were impacted by the event and its aftermath and how they are attempting to deal with the new reality. The conclusions are based on a series of closed and qualitative interviews that occurred at 2 months, 6 months, and 14 months after the event.

2:30-2:50

Discussion

2:50-3:10

Caela O'Connell, Deanna Osmond, Dana Hoag, and Marzieh Motallebi, *Big banking and Public Good: Moral logics and economic reasoning of North Carolina farmers on state mandated trading markets*

Problem Statement: Water Quality Trading is a popular policy mechanism for improving the quality of waterways across the United States by reducing water pollution. However, in the regions with established markets, few trades are being realized. Consequently, realized environmental gains from Water Quality trading are limited in scope, but policy makers continue to adopt market-based approach to achieving clean water. A key factor in successful Water Quality Trading is stakeholders willing to buy and sell in the market, yet no research has focused on this aspect of these markets.

Theoretical frame: The stakeholders involved in Water Quality Trading are most often farmers and rural landowners (as sellers) trading with developers and urban municipalities (as buyers). Existing literature suggests many technical reasons for low trading rates, but provides little insight about people's reasons for low participation beyond suspected issues of "trust". Working within frameworks of farmer decision-making, trust, and economic risk, we dispute the assumption in the literature that trading is a rational economic outcome, and the barrier for stakeholders is a lack of knowledge or trust in the trading process.

Methodology: Based on research collaboration with a team of soil scientists, extension researchers, agricultural economists, and engineers between 2012 and 2015, this research followed the implementation and operation of North Carolina policy mandating the establishment of a Water Quality Trading Market in the Jordan Lake Watershed. Through ethnographic, economic, and modeling research we documented the policy implementation and preliminary outcomes in rural communities across 7 counties. The data in this paper is based primarily on semi-structured interviews with 90 farmers across the watershed and informal interviews with two brokers charged with arranging sales between farmers and developers in the watershed.

Results: The study goals were to determine whether or not the trading market for selling water quality improvements was effective policy for improving water quality in the watershed, and to understand stakeholders, in this scenario farmers, perceptions and choices regarding the trading program. Our research showed that fewer than 25% of farmers were willing to engage in trading, and of those who were only 13% were eligible. Rather than issues of trust or understanding, the majority of farmers rejected the Water Quality Trading program based on their assessments of potential economic risk versus possible economic and/or environmental gains. Secondly, farmers rejected the program based on program feasibility, concerns about assuming the responsibility for environmental pollution from other sources, and governance beliefs.

Implications: These findings suggest that the environmental impacts of Water Quality Trading programs may seriously limited if stakeholder concerns about program parameters and economic risk are not taken into consideration during policy design. The findings further our understanding of why so few trading programs have achieved actual trades and can inform future policy design as well as the ongoing management of trading programs by including stakeholder concerns. Finally, they exemplify the synergistic results of combining economic and anthropologic approaches in interdisciplinary research.

3:10-3:30

Discussion

3:30-3:45

Break

3:45-4:05

Aneil Tripathy, *Translating to Risk: The legibility of climate change and environmental impact in the green bond market*

Research Question: How does risk act as a bridge between different forms of expertise within climate finance?

Problem Statement/Theoretical Frame: The growth of climate finance, a field of investment focused on funding climate change adaptation and mitigation projects, both legitimizes and transforms financial flows. Green bonds, a financial product within climate finance, are an attempt to transfer financial flows from institutional investors into low-carbon infrastructure through the global \$100 trillion bond market. These projects include clean energy, water infrastructure, public transportation,

and sustainable forest management. Climate finance pushes the traditional scope of finance further through the commoditization of the environment, as nature enters into financial markets as the added value of green bonds. In interpreting the value of forests, greener building methods, and agricultural practices, climate finance practitioners translate environmental, climate, engineering, and biological expertise into the language of finance. The expertise of these numerous forms of scientific knowledge is translated by green bond market analysts into language legible to finance professionals, such as risk. The work of environmental economists, including Nicholas Stern and William Nordhaus, translates climate change and environmental uncertainty, for example water damage and pollution, into calculable financial scenarios of risk, a process noted by Arjun Appadurai (2012) as the ethos of contemporary capitalism. Climate finance practitioners utilize these scenarios of risk to justify investment strategies with which to address climate change, such as scaling up the green bond market with long-term financing from institutional investors. This use of the term risk complicates its meaning in finance, and thus requires further examination beyond the research already done in anthropology of finance on the performativity and productivity of risk.

Methodology: My anthropological study draws from participant-observation as a market researcher at an NGO in London working to create environmental standards for the green bond market, as well as from reviewing published research in environmental economics, climate science, and climate policy.

Results: Thus far, analysis of my fieldwork data details the use of the term risk by green bond market analysts to make environmental expertise legible to finance practitioners. Through analyzing published climate change policy reports as well as research papers in environmental economics I also find numerous examples of similar translation work, transforming climate uncertainty into quantitative scenarios of financial risk. My research shows that risk functions as a polysemic term in climate finance to make types of expertise foreign to finance legible to financial analysis.

Implications: My research adds to the literature on risk in the anthropology of finance by highlighting the use of the term in the particular context of climate finance. Not only can risk be productive as detailed by Caitlin Zaloom (2004), but it can also extend the boundaries of financial logic, through encompassing forms of knowledge not analyzed by finance before. Those on the edge of finance, in emergent markets such as that of green bonds, utilize terms such as risk for their linguistic ability to express a multiplicity of meaning to finance practitioners.

4:05-4:25

Discussion

4:25-4:45

Heather O'Leary, *Developing systemic resilience: Risk perception as barrier to inclusive urban waterscapes*

Problem Statement: By 2050, 70 per cent of the world's population is predicted to live in cities, with most of the absolute growth in Asia, where the urban population is already facing difficulties with inadequate infrastructures (OECD 2014). To ensure the security of these burgeoning nodes of global politics and trade, there is increased focus on developing systems of evaluation to interpret adequate markers towards "resilient development," particularly in critical urban services like water and sanitation. But epistemologies of water risk and resilience are as variable as waterscapes—both between communities and within them. Yet, the governance mechanisms and infrastructures that regulate water security are often implemented without consideration of this variation.

Theoretical Frame: The primary indicators of risk are rooted in epistemologies of urban development which are driven by external, globally-informed models (e.g. United Nations Sustainable Development Goals, Millennium Development Goals) that universalize development, and with it, the conception of resilience. Interdisciplinary water scholars have approached risk and resilience as a site of varied vulnerability. Within cultural anthropology and geography, scholars such as Sultana, Kooy, and Harris have all explored the role of intersectional identities in shaping risk. Within water governance, meanwhile, scholars such as Grey, Sadoff, and Hall have focused on the specific geographic and economic landscapes which have fueled disparity. This paper bridges these disciplines to situate multi-vocal water resilience in a nested pathway approach.

Methodology: This paper draws from 18 months of engaged ethnographic and quantitative fieldwork on water in Delhi, India and from participation on an OECD/GlobalWaterPartnership comparative study on urban water pathways. Participant-observation was conducted with the urban water poor in formal and informal residences with both legal and illegal water sources. This complemented

quantitative tracking of water flows and a participatory water allocation diary project. Global, comparative timelines for urban water development were developed and analyzed. Additionally, interviews were undertaken with community experts, public water governance authorities, and financial development sectors, among others.

Results: In a multi-year analysis of overlapping flows from multiple scales (from daily domestic life to urban politics and the transnational global-economy), this paper argues that systemic resilience is critically dependent on inclusive, local interpretations of risk and its mitigation. The resulting narratives of risk mitigation in the case study of Delhi and historic pathways of comparative urban water security which emerged demonstrate the interdigitating role of investment responses to hazards and opportunities and unintended multi-systemic effects which impact other urban development systems.

Implications: Different perceptions of water risk and its mitigation exist on multi-scalar levels, impacting household, community and national resilience unevenly. This paper concludes that sites of uneven development, such as disparate urban areas including the slum examined in this research, can be the key to building a more inclusive concept of resilience commensurate with local values. It demonstrates the relevance of urban cases in emerging Asia as a site for re-interpreting water services and risk in other development sectors globally. Developing multi-vocal resilience is necessary to overcoming systemic injustice, without which long-term, comprehensive risk-mitigation cannot be achieved.

4:45-5:05 Discussion

Session 2B: Cultural understandings of risk and misfortune, Tate Hall, room 137. Chair: Alyson Young.

1:30-1:50 John Millhauser, *Debt as risk, debt as resilience: A historical view from Nahua Mexico*

Debt is one of the oldest and most widespread ways by which humans redistribute risk. As David Graeber has exhaustively shown (2011), it has also been one of the most pernicious—especially when quantified and monetized. His comparative and historical study emphasizes the ancient civilizations of the Old World, leaving open the question of whether similar practices and attitudes emerged independently in the markets, cities, and states of the Americas. This paper expands on Graeber's work by reconstructing the practices, institutions, and morality of debt in Nahua society at the time of the Aztec Empire. When Europeans arrived in central Mexico in 1519 CE, markets, taxation, media of exchange, and property were all established parts of the Nahua economy. In this non-Western and pre-capitalist context, we can ask: How did the Nahua use debt to redistribute risk? How quantified and impersonal were these practices? And what, if any, were the moral implications of lending, borrowing, and living in debt?

To answer these questions, I critically investigate sixteenth-century documentary sources, such as Nahuatl-Spanish dictionaries, chronicles of the conquest and its aftermath, compendia of Nahua history and culture and other literary and archival materials. Although many sources limit us to a normative view, records of individual obligations tell us about how debt worked in practice. Across these independent sources, I find that debt, credit, and loans were all parts of the Nahua economy and that many of these ideas and practices were likely to have existed prior to the conquest. The Nahua accepted debt as a part of life and a way to defray risk. Causes of debt ranged from the environment (e.g. drought) to social obligations (e.g. marriage). Solutions ranged from informal kin-based loans to a form of slavery which involved temporary servitude that one could assume to pay debts to individuals or institutions.

Nahua attitudes toward debt—and toward related social practices and institutions—are presented in pragmatic terms more often than moralistic ones. This may reflect Nahua cosmological beliefs and religious practices that emphasized the fulfillment of cyclically renewed debts and obligations to celestial powers through sacrifice. In other words, debts were woven into the fabric of the universe. That being said, the Nahua recognized the worldly danger that debts could become overwhelming and linked some kinds of debt to individual failings (e.g. gambling losses) and antisocial behavior (e.g. unscrupulous merchants). Moral judgment appears to have been reserved for people, such as beggars

and thieves, who had fallen out of the reciprocal relationships by which the institutions of debt were reproduced. In a sense, then, to live in debt was to maintain a resilient presence in social networks and a legitimate place in economic processes—moral sanction was reserved for those who bucked the system. The Nahua case thus reinforces the cross-cultural and historical roots of debt as a solution to the problem of risk and a paradoxical mechanism of resilience in the way that it defers rather than resolves risk.

1:50-2:10 Discussion

2:10-2:30 Bonnie Kaiser, *Explaining misfortune via the natural and supernatural world in Haiti*

A current question in economic anthropology regards how cultural groups draw upon natural and supernatural causal models to make sense of the world. Included in this research agenda is the question of how forces within the natural and supernatural realms are thought to interact (or not) in shaping risk and misfortune. This paper explores the ways that people in rural Haiti draw upon natural and supernatural causal models in tandem in order to make sense of misfortune, as well as exploring potential implications of drawing on these different causal models. From January – December 2013, I conducted a mixed-methods study in Haiti's Central Plateau exploring mental health and resilience. Included in this research was ethnographic investigation of how the natural and supernatural world are thought to shape experiences of fortune and misfortune. In this paper, I examine narratives that I collected regarding fortune and misfortune, in order to elucidate the types of causal models that participants used to make sense of the world. I focus in particular on a subtype of narrative that uses "sent spirits" as a means of explaining misfortune. These narratives describe how individuals believe they or someone close to them have been the victim of someone who used the spirit world to inflict harm: by sending illness, business failure, or even death. These narratives contrast with narratives that remain rooted in the natural world, explaining misfortune as due to direct harm from other people (as opposed to via the spirit world), natural forces like wind, or personal mistakes.

The way that individuals differentially draw on these cultural models for making sense of misfortune might reflect experiences in one's social world, and in some ways actively shape it. "Sent spirit" narratives are rife with jealousy, inequality, and forms of social control, born in the material world, yet enacted via the spirit world. Drawing on such patterns, I argue that "sent spirit" narratives are fundamentally social narratives, reflecting links among structural forces, socioeconomic status, and restricted social mobility. In drawing on the spirit world as a means of explaining misfortune, "sent spirit" narratives potentially function to displace blame from impoverished, disempowered individuals. In contrast, narratives that are told in the natural world more often blame individuals for their own suffering or place blame on broader structural inequalities. Noting how "sent spirit" narratives place blame on other individuals – rather than the social inequalities and forms of structural violence that are at the root of much misfortune – I ask whether such cultural models might be harmful for social relations. Ultimately, however, I conceptualize "sent spirit" narratives as protective of solidarity and social cohesion. In particular, I argue that the perceived very real threat of "sent spirits" can serve as a means of preventing people from "moving up" too much in society, a behavior that is itself seen as particularly threatening to solidarity.

2:30-2:50 Discussion

2:50-3:10 S. Hun Seog, *Financial ritual*

Finance theories are criticized for failing to capture the reality in terms of their outcomes and foundation. Nevertheless, we witness the phenomenon that financial theories are being taught and admired in business schools and actively utilized in the finance circle including financial industries, regulators and academia. The resolution of this irony requires consideration of the theories' deeper foundation. Finance theories are built on the premise that what is good for the financial side is good for society. Propositions and findings are stated from the perspectives of investors, prices, and capital markets, not from those of the society. Finance theories consider the financial side only, while virtually ignoring the real side. For example, financial theories may support that managers sack employees to increase the firm value. This presumption leads to the failure of finance theories at the level of their foundation. While this approach, in some sense, is inevitable when studying financial markets, it contributes to the disparity between theories and reality. Despite the fact that finance theories fail to capture the reality in outcome and foundation, they are used and applied in practice,

affecting many people. This practicality eventually amplifies the discontent. Why then do people utilize and worship finance theories despite their failure? Finance theories are being taught and admired in business schools and are actively utilized in the finance circle, including financial industries, regulators, and academia. Let us call such a phenomenon the “finance phenomenon” throughout this paper. This paper attempts to provide a ritual interpretation to understand the finance phenomenon. Ritual theories have been developed in anthropology in diverse contexts. We apply the diverse perspectives of ritual theories to the finance phenomenon. Among ritual theories, we borrow from the perspectives of functionalism, structuralism, and practice theory. We argue that as a ritual does, finance theories disseminate ideology and beliefs and have an effect on society (especially the finance circle). The effect is determined collectively and is not necessarily as intended by individual financial researchers and practitioners. Finance academia is viewed as an agent to officiate the rite of passage, which helps to reaffirm and recreate the unity of society and finance circle. Finance academia and the finance industry are viewed as a hierarchical structure. Finance theories can survive, as a ritual does, even if they lose their connection with reality.

3:10-3:30 Discussion

3:30-3:45 Break

3:45-4:05 Peter Wogan, *A dream economy: Latino strategies to foretell business outcomes*

Extending Arjun Appadurai’s focus on uncertainty and magic in modern financial capitalism, this paper directly addresses a question posed in the program description: “How do different cultures learn to forecast future economic...outcomes?” Based on nearly 10 years of participant-observation, I focus on a Latino owner of a corner grocery store who in 2007 had to decide whether taking a \$200,000 loan to buy bakery equipment would pay off with future profits, or lead to crushing debt, maybe even bankruptcy and the loss of his life savings. Given the many unknown factors in the economy, the owner’s careful, Weberian-style bookkeeping could not tell him for certain whether the bakery would succeed or fail, so he turned to dream prognostication, carefully analyzing his dreams every morning in search of clues to his future, both that day’s events and his long-term financial and personal condition. He based his analysis on the dream-interpretation principles he had learned as a child growing up in a rural Mexican village, the same principles uncovered by George Foster in his classic study of Tzintzuntzan, located less than 50 miles away. Yet the owner was skeptical and conflicted about this dream system, having dismissed it during his middle age as a “superstition” at odds with the modern principles of science and business he had enthusiastically embraced during his previous two decades in the U.S. Consequently, he only used selected aspects of the traditional dream-prediction system that he confirmed worked in practice; otherwise, he created his own original theories, based on his careful study of correlations between his nightly dreams and waking world. Though making progress, he often found confusing, contradictory messages in his dreams right up until his final decision about whether or not to buy the bakery equipment. To take one striking example, over several months he struggled with multiple interpretations of a dream in which he was riding in a garbage truck on the Mexico-U.S. border. He couldn’t decide whether this dream was a positive omen of future success, according to the traditional dream principle of opposites, or whether it meant he would end up homeless, or whether it had something to do with recycling and rebirth, two of his favorite images for the surprising vicissitudes of economic value in the U.S.

This case study extends Appadurai’s model of calculation, uncertainty, and magic in modern “high finance” (e.g. derivatives traders) by showing how it plays out not only in the context of a small business, but also the cultural and personal realm of dreams. In doing so, this study provides insight into the “dream economies” highlighted by David Graeber: the bursts of enormous creativity that occur during major cultural transformations, especially incorporation into a global market economy.

4:05-4:25 Discussion

4:25-4:45 Robert Johnson, *Live like no one else: Seeking an extra-ordinary financial future through faith-based financial planning*

In the United States, there are over 280 million outstanding, long-term loans. Despite this, less than 35% of households have organized any budget or financial planning strategy in the last 15 years. This is striking, particularly due to the social and physiological anxiety caused by the late 2000’s housing

and global financial crises. As a response to these conditions, the financial planning industry expanded into what some analysts call a “golden age” of financial planning. In order to explain all of this, conventional economists provide general stochastic information on financial markets and spending trends. However, the monitoring of quantitative data alone cannot explain the continued rise in household debt in the midst of financial planning’s golden age. Little is known, for example, of the direct impact of personal social networks in household financial decision-making. Further, little is known of the direct impact that localized, moral economies have among highly indebted consumers. This study asks what ideological orientations guide highly indebted households and how those orientations are influenced by localized social networks. More precisely, this study seeks to understand the impact of localized religious ideology on household consumer spending. This study was conducted during a 9-week session of Financial Peace University among members of a rural, Midwestern church. The principal researcher participated in class activities and conducted both structured and follow-up interviews among six participants. Data was analyzed using a combination of Zelizer’s concept of social earmarking; Douglas’ concept of agonistic consumption; and Froese and Bader’s typologies of beliefs in God. The study reveals two key findings. First, participants found success in household debt reduction through a strategy of agonistic consumption. Second, spending ideologies – along with spending habits – tend to change or adjust with particular life cycle patterns. Central to these changes are one’s perceptions of the personal stake they have in household family responsibility. The results of this study suggest that the moral imagination of the household and the life course are significant indications of success or failure of debt reduction schemes. Further, the study suggests that spending or consumption ideologies are as important as rationalized spending priorities in coping with financial distress.

4:45-5:05 Discussion

5:30-7:30 **Poster session and reception**, Memorial Hall Ballroom, room 211 Memorial Hall.

Susannah Barr, *Es que no hay: the cultural and environmental determinants of fruit and vegetable consumption in a rural Dominican community*

As food supply chains lengthen and smaller food outlets are displaced by large supermarkets, household access to food is influenced by a combination of factors, including proximity to market and cost. Large food outlets congregate in urban centers, which are growing steadily in Latin America. In the Dominican Republic, rural populations depend on a mixture of traditional small food outlets and mobile resources that provide intermittent access to fruits and vegetables. Studies of the effects of limited access to healthy foods on nutrition demonstrate mixed results, especially in rural areas around the world. Recent policy changes and public health measures in the Dominican Republic have drawn attention to the increasing incidence of nutrition-related illness among children and adults, including obesity, diabetes, and malnutrition. A community assessment designed to capture cultural and economic influences on food and nutrition was used to inform a local nutrition-education initiative for children in a rural area of the Dominican Republic. A survey was administered in the form of structured interviews with thirty female household representatives living within the service area of the initiative. Frequency distributions of open-ended question responses about the components of main meal of the day revealed two major groups, one that included vegetables in the meal and one that did not. All household representatives responded positively regarding fruit and vegetable consumption and most wanted to increase their household consumption. Perceptions of the typical main meal of the day reveal a community that is responding to outside influences such as national television advertisements, public health campaigns, and the regular presence of non-Dominican visitors, which distribute nutrition information and encourage fruit and vegetable consumption. Most participants agreed that access is a significant barrier to consumption of fruits and vegetables. Estimated household wealth and income demonstrate little to no association with weekly fruit and vegetable consumption, and few participants mentioned cost as a barrier. Geographic distribution of households revealed an association between the reported weekly servings of fruits and vegetables and the proximity of the household to a mobile grocery route. On average, those living along the grocery route consumed 2 more servings of fruits and vegetables per week. Access is the strongest environmental determinant of fruit and vegetable consumption in this particular area and those like it. The growing presence of supermarkets throughout the Dominican Republic threatens the nutrition of rural residents by displacing traditional small food providers, like mobile produce vendors.

Kristina Baines and Sebastien Buttet, *Being Maya: Identity as resilience to development risks in southern Belize*

In southern Belize, “traditional” Maya livelihoods based on shifting maize cultivation are at risk from multiple sources including: wage labor supplementing and replacing reciprocal labor systems, increased participation in high school education, environmental degradation due to increased population and climate shifts, and political tensions surrounding community land and resource management. Both in response to, and perpetuating, this risk, some farmers, supported by cooperatives, companies and NGOs, participate in cacao agroforestry, selling cacao for export. While these development entities understand participation in cacao production as the economically and environmentally sustainable livelihood choice for farmers in this region, many farmers still choose corn as their primary crop. This paper offers a way of understanding farmer decision making and explaining the persistence of growing corn through the incorporation of a measure of the value of “Maya identity” into an explanatory economic model.

We outline variables relevant to a theoretic model of agricultural practices and land ownership to understand key aspects of Maya farming choices, including the persistence of growing corn and the use of cash payment in corn planting to replace reciprocal labor practices. We show that agriculture practices, and the pressures to change these agricultural practices, are strongly linked to cultural identity and changes to them come about through the consideration of multiple forces. The proposed model also considers changes to land tenure in relationship to cultural identity and economic livelihoods. Using the phenomenological frame of embodied ecological heritage, which connects Maya heritage practices and Maya identity to health and happiness (Baines 2016), this study how detailed ethnographic data may be used in a collaborative economic modelling process in hopes of adding to the utility of the anthropological data for development organizations seeking to understand decisions in communities. As the risks to developing communities continue, understanding how cultural identity plays a role in the resilience of heritage practices, and how this influences decisions, could have broad implications for economic development in southern Belize and beyond.

Brianna Dines, *Conflict and Construction: A cooperative community's story of coping with crisis*

The work of building resilient communities is hard enough in somewhat stable circumstances, but during a period of crisis the social fabric may fray or rip. However, responding to risk may actually help to constitute new communities or maintain long-standing ones. The process of rebuilding and mending itself is a valuable experience in learning how to deal with risk and remain resilient. Using Ernst Bloch's notion of the “work of utopia” and J.K. Gibson-Graham's notion of community economies to frame my recent fieldwork as a member of a cooperative housing network in Wisconsin, I have found that periods of crisis in relatively resilient communities can serve to reinforce ties of social capital through challenging the limits of cooperation and reciprocity. Helm's Deep house experienced a fire that devastated the co-op building and then had to engage in a 2 year long battle to “save the house” against the city and local developers' plans for lakefront condos as well as other co-op members opposition to rebuilding. This collective experience of the “work of utopia” in this particular instance, despite long-term hardship and uncertainty, intensified members' larger commitment to fundamentally opposing systemic factors of risk inherent in free market and pro-growth economic milieus. This indicates that perhaps conflict and tension itself is somewhat necessary to constitute resilience in the face of chronic, and acute risk.

Anthon Eff, *Climate uncertainty and cultural adaptation*

Problem statement and theoretical frame: This paper examines the effect of climate uncertainty on cultural traits. There is a significant literature on human adaptation to extrinsic risk, primarily from the evolutionary ecology perspective, and this paper will add to that literature by decomposing climate variability into seasonal and non-seasonal components. The former is predictable and hence readily addressed with cultural adaptation; the latter is not predictable, and clearly in the domain of extrinsic risk.

Methodology: This is a cross-cultural research study, using data from the four most commonly used ethnological datasets (representing 1446 societies and over 3000 variables), as well as the climate change data from the Climate Research Unit at East Anglia University. The statistical methods correct for Galton's Problem.

Results: Preliminary results suggest that high levels of uncertainty favor more flexible adaptations: higher geographical mobility, more permissive rules of marriage and residence, and less specialization. High seasonal variation, on the other hand, seems to encourage complex adaptations, such as higher specialization of labor.

Implications: This may contribute to our understanding of why mid-latitude societies tend to be more complex.

Drew Gerkey and Colin T. West, *Interdependence, risk-pooling, and environmental change: Ethnographic and experimental evidence from arctic subsistence economies*

Most research on cooperation focuses on strategic risks—the potential costs and benefits of choosing a strategy in a social context where outcomes are affected by the actions of other individuals. This approach has been useful for identifying factors that diminish risks of cooperation and amplify risks of defection, including rewards, reputations, punishments, cultural norms, and institutions. However, this approach often assumes individuals are independent, inhabiting an environment where cooperation is unnecessary for long-term survival. Environmental risks—spatial and temporal fluctuations in biotic and abiotic components of the environment that affect access to resources, health, and other measures of wellbeing—can affect the viability of independent strategies, altering an individual's strategic calculus in favor of cooperation. Although environmental risks are underrepresented in many theories of cooperation, research on risk-pooling integrates strategic and environmental risks. We draw on this research and present results from a new economic game, conducted with common-pool resource users in rural villages in Siberia. Our design builds on a multi-round public goods game, systematically varying strategic and environmental risks to understand how interactions between these two kinds of risk affect cooperation and risk-pooling. Our results are consistent with previous research, suggesting strategic risks tied to rewards, punishments, and reputations are important. However, we find the effects of strategic risks are altered by the presence of environmental risk, which increases interdependence among individuals. Our research contributes to a growing body of scholarship that examines how environmental uncertainty and change affect social relations.

Werner Hertzog, *Emergent order and resilience of a matching system: Allocating burdens, rights, and prestige in Chenalhó, Chiapas*

Social life among the Tzotzil-Maya of Chiapas has been structured around the "cargo system," a rotational distribution of communal burdens in which male-headed households are assigned to unpaid offices (*cargos*) in exchange of rights and prestige. In Chenalhó, as in other Tzotzil municipalities of Chiapas, this system has shown remarkable resilience to change, defying predictions of some 1970s studies that ongoing changes would render Mesoamerican cargo systems obsolete. Rapid population growth – these studies argued – would lead to these systems' congestion, as there would not be enough offices for all households to serve, while the increasing monetization of exchange would undermine the importance of prestige and reciprocity in peasant economies. Instead, today most of Chenalhó's households still participate in the cargo system, which has retained its central role in legitimizing access to resources and power. Given the absence of a central designer defining the quantity, rules of allocation, and function of offices, what explains the stability and resilience of the system? The present research uses ethnographic, historical, and experimental data to address this question. It conceptualizes the cargo system as an emergent two-sided matching market in which allocations of offices are the product of bargaining between individuals (candidates) and communities (agents). The work shows that the system's congestion was prevented by a process of political fragmentation and decentralization of decision-making units: as the municipality's population grew, communities broke down in smaller political units, gaining increasing autonomy to create local hierarchies of offices. Although secular in appearance, these new offices are articulated to religious ones and often emulate traditional their traditional ritual and political functions (for instance, some cargo holders are now responsible for haggling with government officials and contractors for resources to pay for *fiestas*). Results of an experimental cargo allocation game show that rural and urban communities have different criteria for allocating offices. While prestige associated with serving offices is decline in larger urban settings, the system persists as a form of progressive taxation in which more expensive offices are allocated to wealthier individuals based on their ability to pay. Hence the cargo system has remained resilient by co-opting a modern logic of distribution of 'wealth' in which prestige and character give way to socioeconomic status as the primary index by which individuals are evaluated.

Nicole Katin, *An ethnographic case study of conservation induced displacement in Southeastern Brazil* (Halperin Award Winner).

The people of Núcleo Itariru are internally displaced. Since 2006, with the enactment of a new park management plan for this protected area of Serra do Mar State Park, regulations concerning land use and resource extraction have come to increasingly threaten the lifeways of the approximately 2,750 individuals who live within the conservation unit. My paper presents the results of eighteen months of ethnographic research with residents of the Núcleo, a project undertaken with the assistance of the SEA through the Halperin Award Program. In the face of intensifying risks, as associated with restrictions upon agricultural practices and the breakdown of infrastructure, among other factors, the local population, comprised mainly of small family farmers, has exhibited resilience in efforts to adapt to the changes and persist upon the landscape. As the threat of relocation looms overhead however, the future of settlement here is an uncertain one. As such, the presentation will address the socio-economic,

historical and environmental dimensions of displacement in the locale, calling attention to the “unintended” consequences of strict biodiversity conservation measures.

Hilary King, *The social economy of handmade tortillas: The geography of value and relationships in Chiapas, Mexico*

In Southern Mexico, small-scale farmers face challenges related to the market fluctuations exacerbated by neoliberal globalization. At the same time, Mexican citizens face increasingly poor health outcomes tied to shifts in dietary patterns. In Mexico, as in other parts of the world, people seek to address what they see as these inter-related problems of economic and social change by strengthening or rebuilding regional food systems. What kinds of relations are engendered through experiments in fostering regional food systems, and what do such relations mean for sustainable economic development?

Participants in localized food supply chains in Chiapas manage risks and build resilience across multiple vectors by engaging in existing markets and building new markets for maize-based products. In doing so, food makers and consumers generate a complex, social economy of handmade tortillas, enacted in such locations as agroecological markets, specialty stores, municipal markets, schools and ambulant sales. The research for this paper is based on 13 months of ethnographic fieldwork with corn producers, food makers, consumers and development activists in Southern Mexico.

Within this social economy, participants utilize various narratives and practices to re-shape the social, economic and political forces that affect their lives. Food makers present themselves and their products in different ways depending on the location of sale. Consumers perceive products in different ways across these varied locations, behaving differently and altering their purchasing habits according to the setting. Both producers and consumers tap into and alter “traditional” narratives of food, health, and community in different parts of this social economy. Participants in these food system experiments alter and deepen the social economy of handmade tortillas—mapping sometimes contradictory sets of values and relationships onto culturally and historically-influenced practices of food provisioning. From earning one’s daily wage to combating international corporate influence, consideration of long-term health consequences to the promotion of food sovereignty, the participants in this study make use of narratives, both old and new, to justify and make sense of the diverse economy that they enact. The interaction of these values and relationships across geographic and ideological scales reveals how people alter existing social relations and narratives to build resilience in the face of increasingly insecure lifeways.

Dolores Koenig, *Strategies to formalize land ownership in the Bamako Metropolitan region*

Much of the land in the metropolitan area of Bamako, Mali remains in so-called “informal” ownership. The vast majority of this land is held in customary ownership, where a village or a family claims proprietorship; other land includes unbuildable public land in places like vulnerable watersheds. This poster will focus on the processes by which landowners attempt to change the status of parcels from “informal” customary ownership to “formal” title deeds in the region of Bamako, particularly on the periphery. It is based on long-term knowledge of Bamako’s land market plus short-term focused fieldwork on the subject.

Multiple steps need to be undertaken to transfer ownership. First, a recognized customary owner must be approached for willingness to sell. Since the customary owner is usually not an individual, but a “village,” the question arises of who has the right to speak for the village. This is usually a recognized chief; there is little disagreement that the chief has a right to negotiate, but there can be much disagreement within villages over the choice of parcels to sell and the distribution of the earnings gain. Second, once a parcel and price have been identified, the parcel is demarcated. Often this parcel is shaped to conform to the standard size of urban parcels, and a topographer hired to mark out the parcel officially. Some form of paperwork is often produced, although there is no accepted official paperwork for this kind of transaction. The third step is thus to get some kind of official “immatriculation” from the local government. This usually requires a relatively large parcel or a number of smaller parcels. This is generally quite time consuming, but many “buy” informally identified parcels in the hope that, once many are sold, the government will step in to regularize the entire neighborhood. Fourth, the resident must build something on the parcel to instantiate his/her claim. Otherwise, the parcel may be sold again to someone else, illegal; this is illegal but not uncommon. The final stage is to get a formal title deed for the property, but this is not always achieved; when it is, it is usually only after a great delay.

The process is driven by the desire of people to have a place of their own in this rapidly growing urban area. The complexity of the transformation from informal to formal land ownership opens up the possibilities for significant corruption, both private and public. Thus, purchasing building lots is a fraught process for most who undertake it.

Stephen Kowalewski, *Two good questions, two fair answers*

In 2008 we gave a public lecture on the results of our first archaeological field season in Coixtlahuaca, in the Mixteca Alta of Oaxaca. Local citizens asked, “You say there many more people living here 500 years ago than there are today, but how could they have made a living, when with many fewer folks today we can scarcely make ends meet?” They asked a second question, “How were all those people organized?” These questions became the core of our successful grant proposal.

We have come up with answers and discussed them with people in Coixtlahuaca. The answers are limited and tentative because deep and representative knowledge of a large-scale society is not easily won with just a few studies.

Large populations and urbanization were supported by labor intensive agriculture and landesque capital. Smallholders managed production. Households were the firms and the consumers in a regional market system. Smallholders were organized in local corporate communities that regulated land tenure. The region shows a persistent pattern of relative equality in wealth. The area’s royal lineages were famous, but they were not much involved in the agricultural system.

A local citizen said that Coixtlahuaca would have resembled Bali. Of course there are some important differences between Bali and Mesoamerica’s Mixteca Alta, but the comparison is indeed instructive.

Patricia Kunrath Silva, *Taking risks: Venture philanthropy and effective altruism in the U.S. and Brazil*

In a world populated by angel investors, startups, innovations and venture capital, a new field develops: the field of venture capital and effective altruism (emic terms). Situated in the intersections of the private sector, the third sector and governments, this new approach to philanthropic endeavors challenges these long lasting categories. How can we make sense of these emergent discourses and practices? How does the market, as in the philanthropic industry, generates new modes of governance? Who are the actors shaping this industry and its transnational expansion? What is the role of anthropology in researching the (with?) elites? These are the questions addressed in this paper. Through a two years period of fieldwork in Brazil and a year in the United States, as a part of an ongoing doctoral research, it was possible to map, meet, interact with and analyze a network of philanthropists, social investors and experts working transnationally to develop philanthrocapitalism. This study draws on the work of anthropologists such as Bill Maurer on alternative finance, state and philanthropy; George Marcus on elites; Marc Abélès on the new riches in the Silicon Valley and the classic work of Marcel Mauss on *The Gift*, among others; and the recent work of sociologist Linsey McGroey on the Gates Foundation. Intellectuals try to categorize this new trend as modes of governance such as modern forms of feudalism, plutocracy and enlightened despotism. Having North-American philanthropic scene as its benchmark, Brazilian agents integrate this network to shape philanthropic possibilities in the national context. It is imperative to resort to historical and political formation analysis on both countries to elaborate on the relations of the States with the elites engaged in philanthropy. Through this study, it was possible to map an important part of this network and build knowledge on this emergent industry, as means of engaging dissident voices in an ongoing elite’s dialogue. The current analyses resulted in the notions of Philanthrocapitalism in the U.S. and Philanthrostatism in Brazil.

Courtney Kurlanska, *A lean nation’s take on Governmentality: Social control and risk reduction in Nicaragua*

This paper examines how a resource-poor country is able to practice a form of governmentality over its citizens when, due to various economic and environmental factors, prudentialism is not an option. Through an examination of the intersection and overlap of state, community, and household level risk-reduction strategies a comprehensive model for state level risk mitigation through social control and the normalization of poverty is presented. Rooted in a governmentality approach to risk, this paper approaches the application of governmentality to the developing world from a critical perspective acknowledging that, in this context, it is only one of many strategies employed by the state to influence populations and must be recognized as such. As a result, discussions of disciplinary power and development theory also contribute to the theoretical orientation of this paper. Based on eleven months of fieldwork and twelve years of community involvement, this is part of a larger research project examining livelihood strategies of community members in a rural village in Nicaragua. Data collection involved participant observation, semi-structured interviews, informal interviews, house visits, a survey and self-monitoring of daily household expenses. Based on this data, a model for ‘Nicaraguan Governmentality’ employing the ‘normalization of poverty’ was developed. This model identifies three primary strategies used by the government to reduce the potential for social unrest among its citizens: social programs, NGOs and private projects, and institutionalized social control disguised as ‘direct democracy’. Through the manipulation of economic resources and the governing bodies of local communities, the Nicaraguan government has created an effective method of governance from a distance with the

use of minimal resources effectively employing a 'Lean Nation's' version of governmentality. The end result of this strategy is an effective form of social control over the citizenry at the expense of democracy.

Aaron Lenihan, *The effects of law on marijuana use in Uruguay*

In 2013 Uruguay became the first country ever to legalize the production and sale of recreational marijuana. Using Uruguay as a case study, I propose to research the relation between law and behavior. Specifically I will explore how marijuana legalization affects local social norms of marijuana acquisition and use among young adult users (age 18-30) in Montevideo. Previous research indicates that drug prohibition has not reduced drug use and that decriminalization may not increase use rates, despite reducing costs to the user. This implies that social factors, aside from price signals are influencing consumption behavior. One possibility is that marijuana has social value to the user, which legalization undermines. The proposed research explores this hypothesis by addressing two research questions: Q1) Does legalizing marijuana lead to more individualistic and less social acquisition and use norms?, and Q2) To what degree is marijuana acquisition and use behavior motivated by social factors? To answer these questions, I will gain access to communities of marijuana users in Montevideo and document social norms of marijuana acquisition and use (Q1). I predict that legalization will promote more individualistic norms, which some users will resist. I will use these findings to create a survey to assess variation in normative beliefs among users. Next, I will test for statistical association between these normative beliefs and user motives and social network factors (Q2.1). I predict that individuals who derive greater benefits from the sociality of marijuana use will favor communal social norms. I will also identify the demographic factors that predict which norms an individual conforms to in order to understand how the law affects different subpopulations differently. Next, I will test for an association between these norms and social factors (Q1,Q2.1), and the subjective use effects individuals report from marijuana (Q2.2). I predict that individuals with more to gain socially from marijuana use will experience more positive use effects, thus offering a proximate mechanism to explain how consumption behavior may be directed towards functional social goals. This research will contribute to the field of economic anthropology by exploring how economic institutions shape individual consumer values and motivations.

Carolyn Lesorogol, Lora Iannotti, and Randall Boone, *Strengthening pastoralist resilience in Kenya using improved dairy goats*

Pastoralism as a livelihood typified by extensive livestock production is characterized as having a "boom" and "bust" nature. Periodic droughts caused by highly variable rainfall patterns (often exacerbated by human-designed policies and practices) lead to large losses of livestock and hardships among people—the busts. Recovery from droughts, the "boom", generally involves the effort to rebuild herds in order to resume pastoral production and prepare for the next drought cycle. Recent strategies for development in pastoralist areas have focused on interventions such as animal health, drought response and recovery, and provision of basic infrastructure (health, schools). Some efforts are directed toward alternative livelihoods such as eco-tourism, wildlife conservation, bee keeping, crafts, etc. Less attention is given to improving livestock production in ways that build upon traditional pastoralism but adapt it to current conditions and constraints. This poster describes an intervention among Samburu pastoralists in northern Kenya designed to improve livelihoods sustainably through introduction of highly productive dairy goats. Based on a decade of longitudinal research, the intervention addresses key constraints related to human nutrition and household economic viability through a culturally appropriate and community-based design. Results indicate high potential for success in terms of acceptability and feasibility of raising improved dairy goats, increased milk production and potential for development of milk marketing. In addition, modeling results suggest that incorporating improved goats in household herds leads to dramatic improvements in milk production and other indicators of household well-being. Expansion of the intervention is recommended in order to more systematically measure its effects and determine its potential to improve resilience of Samburu households to drought and other disasters.

Walter Little, *Working under the arco de Santa Catalina: Using assemblage theories to understand economic practices at an urban heritage site*

On any given day, watercolor painters, fruit sellers, musicians, handicraft vendors, and other street workers can be found hawking their goods under the Arco de Santa Catalina, Antigua Guatemala's most well-know heritage site and iconic symbol for the city itself. In this highly regulated section of the city, economic and political practices are complicated and entangled with each other. In places like Antigua, the consideration of its street economic practices in relation to its heritage aesthetics (representations, regulations, and preservation) contributes to a better understanding of the place and the material outcomes, including alternative economic and political outcomes that may not make sense within or contradict dominant discourses, representations, and regulations.

In order to think beyond the surface economic exchanges that take place under and near the arch, I draw on Deleuze's concept, *agencement*, commonly glossed as assemblage, arrangement, and organization, to think through the political economy of Antigua as a complex configuration of dynamic relationships that include human and non-human elements. Using the concept of *agencement*, I address not only the sales interactions between street workers and clients but, also, the assemblage of architecture, regulations, police, government officials, and representation to better comprehend the actions of the street workers, be those actions economic or political. Latour's version of assemblage theory (Actor-Network-Theory) gets at heterogeneous ways in which the materiality of the city contributes to street workers social, economic, and political practices. It provides a framework that allows me to approach the discourses, practices, and materiality of the Arch of Santa Catalina to analyze the political economy of a heritage site. I illustrate how urban heritage sites are an assemblage that articulates with everyday social and material practices that lead to unexpected economic outcomes.

Michael Lonneman, *Agent-based modeling of land use decision-making and soil erosion*

This research examines feedbacks between human and natural systems by examining how social inequality, agricultural decision-making, and processes of soil erosion interact in an agent-based modelling environment. It simulates how different groups of farmers' (sharecroppers, small landowners, and centrally managed plantations) varying decision-making related to agricultural production and the biophysical attributes of the landscape influence different trajectories of soil erosion. The model then subsequently explores how soil erosion feedbacks influence future livelihood security. This research is based on cotton, corn, and pig production in the South Carolina Piedmont region from the late 19th to early 20th century. Environmental degradation is often caused by political economic constraints and a lack of control over resources by the land manager, rather than simply mismanagement or ignorance (Blaikie and Brookfield 1987), while farmers must balance short- and long-term risks associated with agriculture in the context of variable opportunities and constraints (Ellis 1988). Small changes in environmental conditions and human land use can trigger threshold changes to alternative states (Suding and Hobbs 2009), and changes in natural systems can create feedback dynamics that alter social systems (Bliege-Bird 2015). Agent-based models (ABMs) of social-ecological systems integrate landscape models with individual-based represents of decision-making in order to examine interdependencies and feedback dynamics between human decisions and landscape change. ABMs are simulations of particular phenomena, in this case human land use and landscape change, that can generate hypotheses, test theory, and model emergent phenomena of the system (Parker et al. 2013). This research seeks to generate insight into how the opportunities and constraints facing different groups of farmers in the South Carolina Piedmont, the erosive impact of diverse agricultural portfolios, and the size and topography of the landscape influenced the rate and intensity of soil erosion and experiences of livelihood stress.

John McGreevy, *Economic tradeoffs, adaptive capacity, and tree use: Lessons from rural Haiti*

Haiti stands out as a Caribbean nation that is disproportionately vulnerable to climate change outcomes like drought, changing growing seasons, and increased storm intensity. Much of this vulnerability comes from centuries of deforestation that have left Haiti largely void of forests. Semi-structured interviews, participant observations, and focus groups conducted in three remote villages suggest that tree loss comes largely from limited adaptive capacity to climate change at the household level. Resource users ultimately cut trees after engaging in analysis of trade-offs between short-term economic survival and long-term ecosystem services. Due to limited adaptive capacity and a constrained range of viable livelihood strategies, rural Haitians are often forced to cut down trees in times of economic need. In this process, stored economic and environmental capital (trees) is transferred to economic capital (charcoal) that is sold and removed from the household level. The result is an increase in vulnerability and decrease in future capacity to adapt to climate change.

B. Lynne Milgram, *From market to market: Negotiating risk and resilience in the retail vegetable trade in Baguio City, Philippines*

Throughout the Global South governments have responded to rapid urban growth by embracing visions of "modernity" that favour constructing large-scale infrastructure projects (e.g., shopping malls, supermarkets) while discouraging or even destroying what they view as "traditional" remnants of entrepreneurial trade (e.g., public marketplaces, street vending). Such policies disrupt long-standing livelihoods and provisioning networks on which urbanities have depended for decades.

This paper engages this issue by using the retail vegetable trade in the Baguio City Public Market, northern Philippines to argue that marketers mitigate such top-down development threats to their enterprises by innovatively combining public "advocacy" and under-the-radar "everyday" politics (Kerkvliet) to sustain and diversify their urban livelihood options. At the risk of having their city-controlled store leases terminated, public marketers have

still launched a series of formal civil law suits and appeals that continue today, since 1995, to thwart municipal action. Given long delays in court decisions, in order to achieve some short-term business gains, marketers also operationalize “everyday politics” and “gray spacing” (Yiftchel 2012) (e.g., expanding displays into public market aisles) – illegal actions that by contravening market guidelines additionally put their businesses at risk. That marketers have negotiated an agreement with city officials whereby the latter charge merchants rent to enable their market infractions highlights the resilience the marketers’ enterprises as well as government’s complicity in legalizing illegal practice as an “urban organizing logic” (Roy 2005) when it is to their advantage. Although Baguio’s supermarket sector is expanding, public marketers’ edgy and risky initiatives have thus developed a complementary rather than singularly competitive relationship with supermarket venues. I argue then that Baguio City Public Market retailers’ public and everyday advocacy has thus far sustained the resilience of their businesses – how civic engagement can be effectively negotiated when competing ideologies clash over livelihood rights and how to structure a quality of urban life for and by its residents.

Neelam Raina, *Income, ideology and identity: Women in Kashmir*

Indian Kashmir is a conflict area; with intermittent low scale ongoing conflict becomes a part of the fabric of the state since the early 1990s. Women in Indian Kashmir have borne an unequal burden of the conflict between India and Pakistan, not least due to the deaths and disappearances of men during the conflict.

Women in this region, due mainly to the limitations of identity and geography, have joined the ‘informal’ employment sector by beginning to work in the craft sector. This male dominated sector, has seen a slow influx of women producers, as increasing numbers of women fall back on tacit knowledge and skills within the area to produce incomes for their homes, where they are the de-facto household heads.

This approach to resilience and livelihood generation is useful and successful yet treads carefully around the established civil society norms and patriarchal hierarchies, which these women navigate successfully. This changed role as an income earner, clashes with their gender and religious identities and places various limitations on their income generation abilities in subtle yet compelling ways. This paper shall discuss these limitations, which are often taboo within Kashmir and dismissed in wider development economics discussions as ancillary, but for these women, they are lived realities of the conflict zone in which they live.

This paper thereby examines the interdisciplinary overlaps of design and development and the role they play in providing platforms for income generation for women, who are limited by their identities and geographies.

Thomas Derek Robinson and Eric Arnould, *"Collaboration" vs. "segregation:" A comparative cultural analysis of how the geographical imaginary informs debate on risk and future sustainable energy*

Problem statement: Engaging spatial imagination about the future is an important dimension of sustainable energy, since adaptation to climate change to ameliorate risk is not simply a matter of technical intervention (Crate and Nuttall 2009; Roncoli 2006). As Fiske et al. (2014, 41-42) point out, we need to inscribe technical responses to risk within social and cultural narratives, even mythic parameters. Here cultural and social parameters of spatiality have been explored for adaptive processes involving human mobility, exchange, rationing, pooling, diversification, intensification, innovation and revitalization (Thornton and Manasfi 2010), but there is less knowledge about how sociocultural framing of spatiality intersects with infrastructure. This kind of knowledge is important since consumption behaviours that increase vulnerability to the effects of climate change are not correctable at the individual level. Rather, the “environmental impacts of human choices and actions” (Stern 1997, 13) towards energy, which are at the core of sustainability “...result directly from organizational behavior...” (Stern 1997, 18; Arnould and Press 2011), which are informed by these spatial imagination.

Theoretical frame: Places and spaces are not neutral constructs, but infused with normative assumptions and thus dependent on what Gregory (2004) terms the ‘geographical imaginary’ in culture. In extension, Shapiro argues that the culture of geography denotes issues of international friendship and hostility and thus security and safety (Shapiro 1997, xi). These cultural, normative positions on space inform national strategies regarding energy infrastructure, but also how media translates energy technology into marketable qualities (Firat 1995: 118), since such infrastructures require varying levels of international collaboration.

Methodology: This paper presents a comparative study of Danish and British news media discourses. We contend that popular media encode varying expressions of cultural imaginaries of space (Robertson 1992; Humphreys et al 2013; Hirschman & Thompson 1997: 44). Danish (database: Infomedica) and British (Database: Lexis-Nexis) newspaper articles on energy and the future (2000-2012; search terms: DK > Energi & Fremtiden, UK > ‘Energy & Future’ > DK: N = 50; UK: N = 50), were coded deductively for expressions of spatiality and themes related to energy infrastructure.

Results: This study finds that the Danish geographical imaginary of future spaces and territories draws on themes of : ‘collaboration’ (including, ‘penetration’, ‘connection’, ‘profit’, ‘transformativity’, and ‘institutions’), while the British articulation draws on themes of : ‘self-sufficiency’, (including notions of ‘conflict’, ‘security’, fixed boundaries’, ‘segregation’ and ‘national competition’). Thus, culturally determined discourses of future spaces and territories inform normative stances on self-sufficiency vs collaboration in energy infrastructure development. The data shows this is especially marked with regard to discussions of renewable energy systems like wind power, which require international integration of electricity grids for optimal utilization.

Implications: Because renewables require substantial levels of international collaboration, the geographical imaginary becomes important in planning and marketing energy infrastructure. Interventions aiming to ameliorate risk associated with climate change and enhance sustainability must address cultures of spatiality and the spatial distribution of friendship and hostility across borders for greater effect since it sets up cultural predispositions towards infrastructural collaboration or segregation.

Dayton Starnes, *Sustainable aquatics: An exploration of histories and the sustainable turn with the marine aquarium industry*

Problem and Theoretical Frame: This poster examines the negotiations between factors of economic resilience and environmental risk within the marine aquarium industry. Assessing the motivations for diversification of product sourcing; how broader cultural trends towards sustainability and environmental awareness affect the systems of transnational livestock (ornamental fish) sourcing and collection for the marine aquarium industry. Exploring how production in this multi-million dollar international trade manages the issue of risks to the environment while ensuring the ability to remain economically viable and competitive within the market.

Methodology: Designed as preliminary research for a potentially larger project this research was conducted via a two-pronged approach. Conducted in the metro-Atlanta area in the spring of 2012, data was collected via participant observation, product surveys, and unstructured interviews with subjects in privately owned aquarium stores in the metro area. A scaled-up literature review of industry practices and impacts was also conducted in order to situate the field data within the contexts of the longitudinal history of the trade.

Results: The results of this project elucidate the marine aquarium trade from its early practices of exclusively sourcing ‘wild caught’ livestock and employing collection methods that posed serious risks to the surrounding ecologies, to the recent changes being undertaken within industry standard practices encouraging alternative sourcing methods. Larger societal awareness of environmental risk and trends towards sustainability have promoted shifts in the marine aquarium industry to fulfill the demands of consumers. These trends include industry innovations focused upon sustainable livestock sourcing and alternative specimen production methods in captive settings.

Implications: This poster depicts the history of the marine aquarium trade, and subsequently traces the contemporary implications of balancing market demand with motivations encouraging industry practices to embrace concepts of sustainability and the promotion of alternative practices that limit potential environmental impacts. This research seeks to unpack the diverse histories of this global trade and to explore how industry innovation and sustainable practices are working to limit historically contentious risks to marine environments and increase market stability that subsequently facilitates both ecological and industry resiliency.

Laura Tilghman, *Mandehandeha mahita raba: Exploring Malagasy new immigrant destinations*

Problem Statement: In recent decades, increasing numbers of Malagasy looking to move abroad are forgoing traditional destinations in Europe for locales in eastern Asia and North America. Why has France fallen out of favor with Malagasy migrants, and why have countries as different as China, Canada, and the United States become desirable? Scholars from both the New Economics of Migration and Sustainable Livelihoods theoretical frameworks argue that households turn to international migration of some members to minimize risk through diversifying both the allocation of its resources and the sources of its income. I will present preliminary findings and propose future directions for research I am conducting with the Malagasy diaspora in Atlanta, Georgia, Montreal, Canada, and Guangzhou, China. I will focus on how risk is one factor that seems to be important for understanding this phenomenon of shifting migration trends from Madagascar.

Methods: Pilot research with the Malagasy diaspora began in 2013 and is ongoing. I identified individuals through snowball sampling, beginning with contacts from previous research in Madagascar. I collected preliminary data using participant observation and in-person unstructured interviews for Atlanta and Montreal, and with online unstructured interviews for Guangzhou. Interview questions focused on basic demographics and the motivations

for migration generally and for choosing that destination in particular. Notes from interviews and observation were analyzed inductively to find common themes.

Results: The movement of Malagasy to China, Canada, and the United States share similarities amongst each other as well as other contemporary “new immigrant destinations” or NIDs (Winder 2014) around the world. Risk has shaped this new migration pathway in a couple ways. First, trying to move to France is seen as an increasingly “risky” proposition, as that country makes it more difficult and cumbersome for Malagasy to travel there temporarily or apply for citizenship. Second, parental desire to educate children and have them settle in a stable place afterwards has been a strong force for initially establishing these new locales as NIDs.

Implications: Winders (2014) calls for looking at NIDs in global comparative perspective in an effort to revisit some of the assumptions of migration scholarship. I would argue that this research project offers exciting opportunities in this vein, and as it moves forward I propose some possible future directions. First, what is different in China, Canada, and the United States that can explain migrants’ different experiences in these new locales? Conversely, what is similar about these three places despite their obvious differences that has made them attractive as new destinations? Second, what are Malagasy migrants’ strategies for adaptation in countries that lack a large community of compatriots upon whom they can rely? Third, how are migrants’ transnational ties to home changing the socio-economic fabric of Madagascar, including local conceptions of what it is to be modern, urban, and successful?

J. Richard Stepp, *Risk and resilience in tea cultivation in the southern Highlands of Yunnan, China*

In recent years, tea (*Camellia sinensis*) has become a significant income source for Akha communities in the Southern Highlands of Yunnan, China. While prices vary based on season and quality, some communities have seen a 300-500x increase in price at the wholesale farmer level since 2000. A major factor affecting the long term viability of tea production in the region is climate change. Farmers have already witnessed an impact on crop quality and production. This paper documents indigenous knowledge of climate change in the region and details farmers’ responses and adaptations within a matrix of expanding wealth and capital accumulation. The effects of rapid wealth accumulation on communities in the region is leading to both positive and negative outcomes. Questions explored include: how do tea farmers perceive the risk of climate variability on their agro-ecosystems and crop quality? How are tea farmers adapting their management strategies and land use? What cultural, cooperative and socio-economic variables are associated with greater farmer resilience?

Silvia Storchi, *The instrumental and intrinsic value of financial networks for people’s wellbeing in Kenya*

Economic anthropology shows that money and economic resources have meanings for people beyond the economic and material. Financial inclusion is about increasing the set of financial services available and the concept of financial capability seeks to capture the idea that their effective use will lead to improved wellbeing. However, financial capability is so far been seen as a set of “optimal” and universal financial behaviours, thus failing to capture the potentially deeper meanings and values of poor people’s financial practices. Financial inclusion has been looked through the characteristics of the financial services offered rather than a perspective from the ground. Insurance products are for instance still developed through an individualistic perspective which often do not fit with people’s mentality. In this research collocated within the discipline of international development, I adopt a perspective from the capability approach to look at both financial capability as the bundle of financial strategies and transactions that people value and financial inclusion in terms of its ability to expand people’s valued capabilities to achieve wellbeing. Indeed, the capability approach argues that wellbeing is best evaluated in terms of people’s valued capabilities, rather than on the amount of resources that they have. At the same time, I adopt an anthropological perspective on money and other economic resources, highlighting that these resources are not only means to wellbeing but also intrinsically important for people’s quality of life.

I have conducted three rounds of qualitative individual interviews (16 respondents) over one year (November 2014 to December 2015) and observations in two rural areas of Kenya (Kitui and Nyamira).

This research shows that financial support is embedded within social networks of reciprocity and mutual support. These networks are a legitimate space for reciprocity mainly in situation of distress and emergencies such as illnesses, death and lack of food. Interestingly, education expenses are also a prominent reason of mutual help, showing how the role of education is today that of ensuring a better future. Research shows that formal forms of insurance have not spread into rural areas where the historic and cultural mode of both insurance and development has been through groups and social relationships. At the same time, this research shows that such social and financial networks are not only relevant for coping with material shocks but essential for people’s wider wellbeing, e.g. to feel part of the community to which they belong.

This wider perspective on how wellbeing is constructed in relationship to identity, status, self-esteem and belonging in interaction with others, presents an alternative perspective on why social networks of support and informal groups remain so important in the ways that people manage their money and cope with emergencies. It shows that the mode of development in which respondents identify themselves collectively and with a morality of mutual support guides people's behaviours and thinking. This lies in contrast to the perspectives of providers and policy-makers who approach the use of financial services from an individualist perspective of how it is most rational to manage resources for self-advancement.

Gordon Ulmer, *Contingent labor and occupational multiplicity in the Peruvian Amazon*

Ecotourism and other conservation-based enterprises are hailed as a panacea to promote sustainable development as alternatives to activities like resource extraction. This hope persists in the region of Madre de Dios, Peru, which contains some of the highest rates of biodiversity globally but is at risk of widespread environmental degradation from informal gold mining and logging. However, conservation and extraction are not in diametric opposition from the perspective of many local laborers who practice occupational multiplicity that includes informal labor in gold mining or logging in addition to short-term work in ecotourism or other environmental jobs. How do we understand the moral economy of people who bounce between jobs in conservation and extraction?

I argue that working in conservation and extraction are complimentary responses to household insecurities and reflect broader strategies for surviving in a place where the informal economy is not just a means of living, but also a way of life. My analysis is based on 16 months of fieldwork on contingent labor among conservation workers in Madre de Dios, Peru and includes results from: 1) structured interviews with 76 conservation workers about earning opportunities, asset inventories (including productive and intangible assets), household structure, and economic decision-making; and 2) data generated from participant observation in protected areas along the Madre de Dios Watershed, during which I shadowed park guards, tour guides, cooks and kitchen helpers, boat pilots and crewmen, to learn more about the contexts in which someone might work in both conservation and extraction.

I report on two key findings. First, *cachuelos* ('odd jobs' or informal short-term earning opportunities) are particularly important for unskilled contingent conservation staff whereas those in professional positions (e.g. educated tour guides, administrators) tend to be more economically secure and thus rarely seek work in extraction. This finding poses challenges to the Foucauldian concept of environmentality if socioeconomic class and alienated labor, rather than "environmentalist logic" influence choice. Second, extractive labor such as hauling timber or washing gold is sometimes embedded in acts of reciprocity or is expected filial piety, especially in a locale where informal labor of kin is crucial to production. Thus, labor choices must be also understood as embedded in cultural processes and are often tied up in kin obligations among other social exigencies.

John Vilecco, *Opaque public-private partnerships in Mozambique's emerging resource extraction industry* (Haplerin Award Winner).

Recent, massive natural gas discoveries near Pemba, a booming port town on the northern coast of Mozambique, and modernization projects in Nacala, a special economic zone (SEZ) and the site of the deepest port in southern Africa, have spurred foreign investment and increased public-private partnership in the relatively impoverished nation. Government elites have heralded these large-scale efforts – frequently extractive enterprises – as central to Mozambique's medium- and long-term plans for industrialization. Furthermore, resource-extraction centered infrastructural developments, in conjunction with Mozambique's low inflation, have contributed to the nation's strong economic growth forecast. Yet, Mozambique's rapidly transforming international economic positioning, which includes investments from corporations and individuals from Nigeria, Italy, Brazil, the United States, China, and Mozambique, among other states, has come with criticisms of the national government's involvement in opaque decision-making processes concerning multi-billion dollar development contracts.

First, my poster provides economic and political context within which widespread public-private partnerships are emerging in Mozambique. Second, based on six weeks of exploratory fieldwork conducted between June and July 2015, it describes how local laborers, many of whom are displaced and resettled or whose rural livelihoods are supplanted by industrial occupations, are perceiving and reacting to rapid infrastructural development. Whether or not directly affected by the transforming economic landscape, my participants expressed two common ideas: (1) perturbation about the opacity of economic decision-making processes between the government and foreign investors and (2) the inevitability of commodity-centric industrial growth without concern for local needs. Increased natural resource extraction will likely enhance Mozambique's macroeconomic output, but nontransparent processes underlying these new developments are further alienating already disempowered populations. My preliminary

research begins the work of describing the processes and effects of rapid industrial growth as well as the concomitant emergence of capitalism in Pemba and Nacala.

Richard Wallace, *Economic anthropology in the field: Lessons learned from field methods courses with community supported agriculture farms in the Central Valley of California*

Field methods courses are a critical part of undergraduate education in cultural anthropology. Field courses can introduce students to a range of approaches, methods and tools for responding to theoretical questions and provide the opportunity for students to practice anthropology, developing and implementing a variety of data gathering techniques, such as participant observation and interviewing. Field methods courses provide opportunities for experiential learning, developing undergraduate research projects and papers, and service learning experience, all high impact practices that contribute to student success. Although the student benefits of field courses are clear, field courses can pose challenges for faculty in deciding what goes into a semester long course. Key aspects of research such as how to develop a research question, research design, sampling, ethical considerations, data collection methods and tools, and data analysis techniques and reporting results (at least preliminary) all are critical to field methods. Arguably a focus should be on doing anthropology, i.e. using methods and tools, but how can methods be placed in proper context that requires data organization, analysis and presentation skills while emphasizing the obligations that come with research, in particular to informants?

To contribute to the discussion on the challenge of developing and implementing field methods courses, this paper explores lessons learned from a cultural anthropology field methods course focused on economic anthropology implemented in the Central Valley of California during three spring semesters from 2011 to 2015. During each semester students conducted research on Community Supported Agriculture (CSA) farms, working hand-in-hand with the CSA owners and workers/volunteers. During these farm visits, students employed participant observation and informal interviewing techniques and near the end of the semester conducted a more formal semi-structured interview with the CSA owner. In addition, students worked with the farmers to develop a shareholder survey that was placed in shareholder food boxes with a return stamped envelope. Students analyzed the survey data and presented the results to farmers at the end of the semester as part of a service-learning component. The lessons-learned were identified through instructor observations during the courses, student course evaluations and discussion, and conversations with CSA farmers. Students indicated they wanted more time in the field, and farmers also appreciated greater interaction. Students also noted the need for more in-class time for data analysis; in particular, time was insufficient to develop student confidence in text analysis. Students noted that putting the final presentation together for farmers based on the shareholder survey data was challenging due to a lack of prior work with coding and spreadsheets; however, they highly valued returning their results to the farmers and having closure to the project. One course change implemented over the 4-year period was increasing the number of farm visits and moving farm visits to a 4-hour activity on Fridays. Fieldwork was complemented by in-class instruction during the week to balance field visits with research preparation and data analysis.

Cynthia Werner, *The perception and politics of risk in a radioactive setting*

Over a forty year period (1949-1989), the Soviet Union used a large tract of land in what is now the independent Republic of Kazakhstan to conduct over 470 nuclear weapons. The 19,000 square kilometre site is surrounded by villages populated by tens of thousands of people. There is substantial evidence to suggest that numerous people living near the test site were exposed to dangerous levels of radiation from these tests, as reflected in morbidity and mortality for illnesses specifically associated with radiation. Yet, national and international efforts to help these people deal with chronic illnesses and poverty have remained paltry.

This poster addresses two sets of questions: First, how do perceptions of environmental and health risks associated with nuclear testing vary within Kazakhstan? And, secondly, how do perceptions of risk play out in a larger political context where responsibility and blame can translate into expensive programs for compensation and aid for the perceived victims of nuclear testing?

This study is informed by risk perception studies that focus on radiation-related risks. Existing studies demonstrate that specialists and non-specialists do not always agree on the risks associated with certain hazards, and that non-specialists generally assume that the risk of radiation exposure is from these hazards is greater than experts would argue based on scientific evidence. While most studies are conducted in settings where radiation exposure is a hypothetical risk, this research was conducted in a setting where many people have been exposed to chronic low-dose radiation for decades.

Similar to existing studies, this study finds that perceptions of risk vary greatly within the scientific community and within the general population, and that, on average, nuclear scientists perceive lower risks from radiation-related

hazards compared to villagers and doctors. Further, compared to villagers and doctors, nuclear scientists believe that nuclear testing is less responsible for the health problems experienced by local residents than other factors, such as diet. I argue that scientific models of risk have political consequences, if not political motivations. During the period of testing, scientific assessments minimizing the health risks of radiation exposure limited efforts to protect local populations from the harmful effects of radiation. Similarly, assessments that minimize current levels of radiation exposure limit current efforts to provide compensation and assistance, and bolster current proposals to use the former test site for new purposes, such as agriculture and mining.

This project is based on fieldwork conducted in northeast Kazakhstan, as well as a careful review of the scientific literature on the health impacts of nuclear testing in Kazakhstan. During the course of fieldwork, interviews and surveys were conducted with villagers living near the former Semipalatinsk Nuclear Test Site, health care workers based in Semipalatinsk, and nuclear scientists affiliated with the National Nuclear Center. While interviews focused on individual experiences with nuclear testing and understandings of radiation's impacts on human health, surveys were based on studies of risk perception where respondents are asked to rate the relative risk from various hazards, such as a nuclear energy plant.

Natalia Zotova and Jeff Cohen, *Migration and insecurity: Central Asian migrants in New York City*

Many migrants from Kyrgyzstan, Tajikistan and Uzbekistan are shifting from destinations in Russia to the US and New York City. In this paper, we argue that studying the shift to US bound migration is an opportunity to examine how Central Asians organize themselves, maintain connections to their sending communities and adapt to changing risks associated with their mobility.

Russia remains an important destination for many Central Asian migrants; some movers are looking for new opportunities in Western countries, including the United States. The shift in destinations is one of the ways in which Central Asian migrants adapt and respond to the changing world that defines life in Russia and opportunities in the West. While increasing xenophobia in Russia tends to limit employment and challenges well-being, settlement in the US brings challenges around identity, assumptions about religion, difficulties with language and the rethinking of traditional practices, including bonds of kinship that are reinvented. Our presentation is based upon fieldwork with Central Asians settled in New York in 2015.

Migration can be perceived as process that grows less complicated over time and as pioneers settle in the destination country—becoming a resource for future movers. While some of the risks associated with migration can decline over time; there are often new risks that movers must address as they enter new destinations and as they move through the life course.

Decision-making by movers and non-movers is supported by accumulated experience and information, social networks (familial, communal, linguistic and religious) that can mitigate some of the risks associated with migration; shifts in destinations (from Russia to the US) and challenges rooted in increasing xenophobia and economic slowdowns can create challenges that movers cannot anticipate.

The flow of migration to the US and large urban centers on the east coast are relatively new, complex and continually developing. Remittances from the movers in these new destinations are irregular and problematic; and reflect the costs of settlement as well as shifts in social connections. Tajiks in New York often remit small amounts as they balance the relatively high cost of living in the US against the demands of sending households. We argue that it is the value of movement to the US itself, rather than expectations around remittances that transform statuses for household members who are left-behind and addresses issues of risk and uncertainty among movers and non-movers. We expect that the pioneers we interviewed for this project will be followed as friends and relatives join them in the US and build connections between Tajikistan and the US—following this process gives us a window into the many unique and powerful ways movers and non-movers cope with the risks associated with migration.

We show how people cope with and adapt to the challenges, which range from a lack of English proficiency to lacking systems of social support as well as problematic documentary status, limited access to jobs, education and health care services among other things; and engage opportunities associated with migration.

Saturday, 16 April

7:30

Bagels and coffee; Registration and check-in

Session 3A: Risk in the marketplace, Miller Learning Center, room 248. Chair: Ty Matejowski.

8:30-8:50 Jessica Chelekis, *Risks and strategies of Amazonian households: Retail sales and mass-market consumption among caboclo women*

Problem statement: The Amazon is widely regarded as a peripheral world region, connected to international economies primarily as a supplier of forest materials. Research on Amazonian household economies is largely based in cultural ecology approaches concerned with models of human – environment interaction, especially the relationship of household production and land use/ deforestation (Wagley 1973; Chibnik 1994; Brondizio 2008). However, little research investigates other ways Brazilian-Amazonian *caboclos* are connected to global markets, especially through the sales and consumption of mass-produced goods. This paper presents research investigating how Amazonian sales representatives for global beauty brands use their work not only for household income, but also as a means for social inclusion.

Theoretical frame: Institutional theory informs the theoretical perspective of this study, which views the economy as a process of social provisioning, where people use culture to establish resilient livelihood strategies within an institutional environment comprised of the state, household, and market (Folbre, 2004; Jennings 2009; Oughton and Wheelock, 2006). I follow Oughton et al.'s (2003) use of social exclusion and inclusion concepts, in which inclusion occurs “through civic, economic, social and personal integration into society” (333). I therefore examine women’s motivations for working in direct sales at two levels: the first at the household level, regarding household provisioning. The second is the societal level, considering the degree to which direct sales facilitates participation and inclusion in the local community as well as the global, imaginary world of beauty brands and products.

Methodology: Ethnographic fieldwork, primarily participant-observation and semi-structured interviews, was carried out in three different communities in the Ponta de Pedras municipality over an 11 month period. The fieldwork sought to capture the role of direct sales within the distinct environments and predominant economic activities of each community. A survey was also conducted comparing households with and without direct sales representatives regarding demographics, income, economic activities, household goods, and decision-making.

Results: While direct sales offers the potential of significant contribution to household income, in practice most representatives earn meager profits or just break even; many lose money and some fall into debt due to non-payment or delayed payments from customers. Considering the economic risk of direct sales, women appear to be motivated by one (or both) of two distinct yet overlapping operating logics: “selling-to-save” as a household provisioning strategy, and “global sociality” as a pursuit of social inclusion.

Implications: While the traditional focus on household production and land/forest use in the Amazon region remains an important area of research, it does not fully capture the ways in which Amazonian households articulate with national and global markets. Consequently, this focus reinforces prevalent views of the Amazon as a supplier of raw materials to the world, overlooking the rapidly growing consumer culture and relationship to mass produced goods. This paper aims to address these issues by examining how selling and consuming direct sales beauty products offers provisioning opportunities and risks, as well as a platform for local and global social inclusion.

8:50-9:10 Discussion

9:10-9:30 Brandon Lundy, *Drivers and deterrents of entrepreneurial enterprise in the risk prone Global South*

Problem Statement: What encourages or discourages foreign entrepreneurship in a country such as Guinea-Bissau with protracted political and economic underdevelopment? How and why do small-scale, cross-border entrepreneurs mitigate risk and establish resilient businesses able to cope with ongoing political and economic shocks?

Theoretical Frame: “One might argue that in the activities of the entrepreneur we may recognize processes which are fundamental to questions of social stability and change” (Barth 1963, 3). The entrepreneur, as a manager of a business aimed at making a profit through innovation, is a “risk and

uncertainty bearer” (Belshaw 1955). The entrepreneur enacts inter-personal relationships that may progress into corporate groups and associated activities. In understanding an entrepreneur’s motives as shaped by incentives and barriers, we can begin to address both social and structural effects that have broader implications for understanding south-south investment.

Methodology: Over two months in June 2011 and January 2014, 19 purposefully selected semi-structure interviews with government officials, business leaders, traders, entrepreneurs, and non-governmental organization managers were carried out. Additionally, through diversity sampling, 153 formal surveys of businesses were conducted within major business districts and markets of Guinea-Bissau to assess entrepreneurial contributions to the economy in terms of nationality, investment drivers and deterrents, employment, wages, and economic impact.

Results: Findings show that small-scale private investment from the Global south in Guinea-Bissau is increasing. Many of these enterprises, however, are being forced to downsize or close for a variety of reasons including a lack of traffic/sales, inadequate infrastructure, a lack of available credit, small profit margins, a poorly trained labor force, high stock prices, political instability, and insecurity. Some of the main reasons given for initially investing in Guinea-Bissau were already established socio-economic networks, regional integration, business expansion opportunities, and less competition compared with comparable markets in other countries.

Implications: Our findings show that as foreign investors further integrate and expand in the overall economy, their interests in increased stability, security, and transparent regulatory policies also increase. We argue that “entrepreneurship is not a binding constraint on growth and development in the poorest countries” (Naudé, 2011), although economic growth in the face of risks such as instability and capital flight is slow (Ajayi & Ndikumana, 2015). Commercial enterprises complement official aid, which is in decline. The entrepreneurial landscape of Guinea-Bissau shows a perceptible rise in trade partners from the Global south for very specific reasons even though they face great risk in doing so. Similar to Barth’s assertions, many of these actors have limited assets and therefore, limited opportunity. Resiliency for these investors is improved and risks are mitigated through established social capital that can be converted into financial capital, linked social-business networks across borders, micro-environmental knowledge, and by maintaining relatively small businesses able to fly “under the radar.” Improved understanding of regional and scalar integration of economies through the study of small-scale entrepreneurs signals the overall health of an economy and where it might look for future partnerships.

9:30-9:50

Discussion

9:50-10:10

Laurel Zwissler, *Markets of the heart: Negotiating economic and ethical risks at Ten Thousand Villages*

Problem Statement and Theoretical Frame: This project seeks to explore tensions at the heart of fair-trade organization Ten Thousand Villages’ seemingly two contradictory projects: helping producers in the developing world do more than scrape by, while, as a retail organization, it does just that. Advocates of fair-trade emphasize the movement’s potential to ameliorate the risks of global capitalism for small-scale producers (e.g. Jaffee 2007, Besky 2014, Lyon and Moberg 2010). Villages promotes an alternative value system that includes the well-being of producers in calculating what products are worth monetarily (Brown 2013, McMurtry 2009, Lyon 2006). Yet, the organization operates as a business within the global economy and is subject to the rules of the market, placing it somewhat at risk.

Methodology: This paper draws on fieldwork with stores in Toronto (2011-2012) and on-going fieldwork (summer 2024 and 2015) with the flag-ship store in Ephrata, Pennsylvania.

Results: Villages understands its main role to be reducing financial risks for and promoting resilience among producers in the developing world (Myers 2013) and it communicates that role to employees, volunteers, and consumers in North America. Within the broader context of the economic recession, however, corporate leadership must deal with the uncertainty of its own existence within a risky retail market; they must balance their commitment to care for others abroad with a bad economy at home. The recession throws into question some of the tacit assumptions within the Villages worldview: that life in North America is always more fortunate than life in the developing world; that living-wage work is available to North Americans; that the inevitable excesses of the economy here

can be redirected to ameliorate poverty abroad. These new challenges for the organization emphasize continuing tension between its founding Mennonite values and the more recent orientation chosen by leadership, the goal to compete successfully in “regular” retail space against non-fair-trade brands, such as Crate and Barrel. Villages’ practices, meant to provide “fairness” to producers (e.g. commitment to repeat orders, providing half-payment in advance), are somewhat inconsistent with treatment of North American store employees. Most are part-time and paid less than they perceive peers in more traditional retail settings as receiving. Implicit messages, also common to other non-profits, are that Villages cannot afford to pay more and that employees receive extra benefit by being able to do fulfilling work. This element of volunteerism is further promoted by the presence of actual volunteers in store environments, who perform nearly all the same tasks as paid employees.

Implications: At a time of increasing dialogue about alternative value systems that expand notions of economic worth (e.g. triple bottom line Elkington 1997, Savitz 2006; B Corps), the fair-trade movement offers a useful model for one such attempt to work within the market system and adapt to its risks. Understanding how one organization negotiates its own competing value systems can provide useful perspective on other revaluation projects.

10:10-10:30 Discussion

10:30-10:45 Break

10:45-11:05 Mark Brahier, *Going green: Unintended consequences in informal sector recycling*

The idea of “Going Green” has become a global phenomenon in the 21st century. First for sustainability and now for profitability, consumers have an incentive to recycle. In most of the developed world, waste management systems consist of a formal recycling sector; however, many developing countries lack this capacity and instead experience Informal Sector Recycling (ISR). This sector consists of a fleet of informal workers who remove and sell recyclables from trash bin to garbage dump. ISR presents opportunities for double and triple-bottom-line solutions related to the 2015 Sustainable Development Goals, such as the opportunity to achieve environmental sustainability and economic prosperity simultaneously. The informality of such practices currently poses significant health risks and inconsistent incomes. In “La Joya” garbage dump outside Granada, Nicaragua, over 70 informal sector recyclers depend on discarded recyclable materials for their income and livelihood. This study seeks to explain unintended consequences within ISR and the impact on personal income and healthcare. We surveyed recyclers in La Joya regarding finances, spending prioritization, any changes in recycling practices, medical history, and access to healthcare services. We then interviewed government officials, recycling companies, and a variety of entities that profit from recycling such as households, schools, and hotels. Our results showed that incomes have been decreasing among informal sector recyclers – and specifically garbage pickers. Incomes have decreased by 39% in the last year and 68% over the past five years. Results indicated that due to the ease and profitability of household and industrial recycling, fewer recyclables now arrive at La Joya. As a result, average incomes have dwindled below \$1.25 USD per day in these communities for the first time in over a decade. Reduced incomes impact many aspects of life – from nutrition and healthcare to education and housing. We go on to describe economic barriers to healthcare within this population. This study inspires a search for similar trends in larger garbage dumps throughout the world. It also raises questions of how to reconcile the green movement with the risk of suppressing recyclers and invites policy reform that could achieve sustainability while protecting these vulnerable populations.

11:05-11:25 Discussion

11:25-11:45 Sarah Hitchner, John Schelhas, and J. Peter Brosius. “*Even our Dairy Queen shut down: Risk and resiliency in bioenergy development in forest-dependent communities in the U.S. South*”

Problem Statement and Theoretical Frame: Over the past several decades, outmigration of young adults, mechanization in agriculture, conversion of agricultural lands to forests, and declining forest industries have played a role in the weakening of economies in many parts of the rural South. Recently, existing commercial-scale wood pellet production for the European renewable energy market and a nascent liquid biofuels industry using wood and grasses as feedstocks have been enthusiastically embraced in many sectors of this region for their potential contribution to energy independence and rural development. At the same time, the promise of this new bioeconomy has also

garnered opposition and concerns about social, ecological, and environmental sustainability, as well as concerns about tax breaks, subsidies, and government incentives for bioenergy companies and about competition with established forest industries. Due to heavy state and local investment in new bioenergy facilities in forested areas, local communities, which are often small and economically depressed, face particular economic risks when these large-scale and sometimes experimental facilities are located within their towns or counties. Using an integrative analytical framework designed to illuminate different perspectives and trade-offs, this research aims to elucidate public perceptions of bioenergy development, as well as the socio-economic dynamics of the communities in which bioenergy facilities are located.

Methodology: Funded by a 3-year USDA/NIFA grant, we used a multi-sited ethnographic approach to analyze the views of various stakeholders (landowners, local development leaders, community members, bioenergy and forestry industry representatives, and others) regarding the economic risks of bioenergy development to rural towns and the potential contribution of such development to community development and resilience through economic diversification. We conducted ethnographic research in several communities in the southeastern U.S. with different types of bioenergy facilities: Soperton, GA (site of the failed Range Fuels cellulosic ethanol plant and current LanzaTech experimental plant), Waycross, GA (site of the currently operating Georgia Biomass pellet mill), and Columbus, MS (site of the KiOR cellulosic biocrude facility, which was operating when we conducted fieldwork, but has since gone bankrupt).

Results: Bioenergy development opportunities are often pursued by rural communities as they struggle to maintain declining economies in the face of larger economic and social shifts. While bioenergy promises rural development compatible with existing economic and social patterns, it is highly contingent on policies and broader energy markets, and many bioenergy facilities have failed to deliver on their promises. Our research illustrates diverse processes by which rural communities navigate tensions between desire for economic development and continuity in rural lifestyles, while at the same time highlighting social tensions within those communities.

Implications: Understanding how bioenergy development may change economies and land use, and how it is viewed by and may affect various stakeholder and interest groups, is critical to both enhancing the long-term social and economic sustainability of the bioenergy sector and to relieving the economic burden on local communities and forest landowners when bioenergy projects fail.

11:45-12:05 Discussion

Session 3B: Risks to health, safety, and identity, Miller Learning Center, room 250. Chair: Deborah Crooks.

8:30-8:50 Alyson Young, *Risky resources: Household production, food contamination and perceptions of aflatoxin exposure among Zambian female farmers*

A key component of ensuring nutritional security is access to and utilization of safe, affordable and nutritious foods. Mycotoxins pose a significant threat to food and nutrition security through their health and economic impacts. In Zambia, women are central to household food production and are responsible for preparing, storing, and processing staple crops, including groundnuts. As such, they are key to ensuring household food safety and prevention of aflatoxin contamination, yet their ability to feed their families properly is often compromised by lack of physical and human capital.

This paper uses semi-structured interviews, participatory risk assessment techniques and focus group discussions to examine the relationship between women's workloads and management of aflatoxin contamination among female farmers in Eastern Province Zambia. Interviews were conducted in July-August 2015 and consisted of individual interviews with 25 women and five focus groups in three regions of Eastern Province. Interviews focused on knowledge of aflatoxin-producing fungi and food contamination, groundnut production practices and the groundnut value chain—including use of aflatoxin reduction strategies and choices in grading, use and sale of groundnut products.

Women's knowledge of aflatoxin-producing fungi and aflatoxin contamination of groundnuts varied although all of the women were familiar with basic strategies for reducing contamination during post-

harvest storage and links between aflatoxin exposure, child stunting and cancer. The extent of women's knowledge about aflatoxin-producing fungi and its prevention was linked to their participation in community organizations and access to extension services. Overall, participants were less familiar with pathways of exposure, particularly risks of exposure through animal pathways or during pregnancy/breastfeeding. Women's post-harvest practices were driven primarily by labor constraints and market demand. For example, women added water to shells to soften them for shelling and sold top grade groundnuts while keeping the least healthy specimen for household consumption, despite the increased risk of aflatoxin exposure associated with both practices.

Results from this study indicate the importance of gender disaggregated data on differences in household allocation of labor/resources, risk management and participation in agricultural value chains for understanding food safety risks and exposure. It also emphasizes the importance of including women in rural advisory services and training. Future research that integrates participatory approaches to gender and risk assessment with analyses of exposure pathways and biomarkers of exposure to mycotoxins can help strengthen research on the mechanisms that link social and biological components of risk and resilience.

8:50-9:10 Discussion

9:10-9:30 Jennifer Jo Thompson, Amanda June Brawner, and Usha Kaila, *At risk of "knowing where your food comes from": How food safety concerns can threaten the success of farm to school initiatives*

Farm to School (FTS) programming is a national initiative in the United States to "teach children where their food comes from." Most often this involves bringing local food into school cafeterias by connecting farmers with existing school nutrition programs. Since the mid-20th century, directors of school nutrition programs have primarily procured food for schools through national or global producers and distributors. Thus, recent efforts to source food locally have been met with a variety of obstacles, from compliance with USDA procurement regulations, to distribution across the district. Where these initial obstacles are overcome, however, new ideological barriers emerge.

We draw from 18 months of ethnographic research with a regional FTS project and interviews with district-level school nutrition directors across the state of Georgia (n=17) to examine food safety as an emerging barrier in efforts to bring local foods into school cafeterias. Our analyses are informed by social theories of risk and responsibility as late-modern techniques of governance reliant upon the development of expert knowledges, the responsabilization of individuals as prudent yet entrepreneurial subjects, and the identification of at-risk and risky populations as targets for external surveillance and management (Castel 1991; Dean 2002; Foucault 1975; O'Malley 2000).

We argue that, paradoxically, this barrier emerges as the result of FTS ideology: knowing where food comes from. Nutrition directors voice strong support for FTS as a means of bolstering local economies. Nevertheless, visits to farms, intended to promote enthusiasm for the purchase of local foods among school nutrition staff, render visible the realities of food production (e.g., food growing in the "dirt," the presence of pests, or unfamiliar systems such as aquaponics). The transparency of local food production invites scrutiny, especially toward unfamiliar practices, and can fuel uncertainty about whether on-farm practices pose risks to food safety. In an example of the neoliberal "downshifting of responsibility" (DuPuis, et al. 2005), nutrition directors are cast in the role of having to audit and assess on-farm safety practices, despite their lack of expertise, in an effort to protect at-risk subjects (school children) from potentially risky objects (fresh produce). In contrast, food procured through standard institutional channels is protected from scrutiny by an opaque supply chain that renders invisible the realities of growing, harvesting, processing, and transporting food—allowing school nutrition directors to place their trust in distant forms of expertise and an abstract system of regulations (Giddens 1991).

These findings highlight the assumption of oversight that accompanies food procured through commodities markets and the converse supposition that local foods are "risky." This rationale casts nutrition directors, already tasked with ensuring food safety practices in school cafeterias, in the role of having to assess and verify the on-farm food safety practices of farmers. Importantly, because this places the responsibility on individuals often unqualified and unprepared to be farm safety auditors,

many nutrition directors may decide that “it’s not worth the risk” to purchase from local farmers. We argue that this may have detrimental effects on the success and long-term viability of FTS.

9:30-9:50 Discussion

9:50-10:10 Steve Winterberg, *Risking ethnic pride in business among Kashmiri tourism-related shopkeepers*

Kashmiri tourism-related shopkeepers rely on tourists in order to survive financially. They also view their role as ambassadors of Kashmiri ethnic pride to non-Kashmiri tourist customers coming to visit as a significant way to display and demonstrate their ethnic superiority. India and Pakistan have fought over the Kashmir Valley for a long time, which fosters a feeling that Kashmiris are caught in the middle between outsider goals and objectives. The militancy, along with other factors are fostering risks for shopkeepers as outsiders’ perceptions of Kashmiri ethnicity are challenged. At the same time, changes in tourism have challenged Kashmiri shopkeepers in their business goals and in their desire to reestablish Kashmiri ethnic pride. How do Kashmiri tourism-related shopkeepers understand the risks to their ethnic pride and to their business pursuits? How has the Kashmiri militancy movement and changes in tourism impacted Kashmiri objectives? How have Kashmiri tourism-related shopkeepers adjusted and adapted as a result of these challenges? This presentation will demonstrate that Kashmiri tourism-related shopkeepers are caught in the middle between their objectives of ethnic reestablishment, which they feel are being challenged, and their goal of financial gain through their business.

This ethnographic study was conducted in the summer of 2014 and involved participant observation and ethnographic interviews. This study demonstrates that Kashmiri tourism-related shopkeepers risk losing business if they fail to address changes in global tourism that are impacting them, but they also face a decrease in ethnic pride and prestige if they make adjustments. The most common way that shopkeepers have adjusted was through making changes in their products. Kashmiri shopkeepers felt that selling machine-made products challenged their ethnic identity, but they felt compelled to do so in order to survive economically. The participants in this study all sold machine-made goods, but they certainly did not broadcast it. Also, they felt justified in calling the products “Kashmiri” since the styles and patterns on those products were Kashmiri, even if they were not produced by hand in a traditional manner. This adaptation demonstrates that the shopkeepers face ethnic risks in order to survive financially, but also that they were resilient in attempting to find ways of continuing to pursue both their goal of financial success and their goal of ethnic reestablishment.

10:10-10:30 Discussion

10:30-10:45 Break

10:45-11:05 Lauren Johnson, *Making "easy" money: Resilience and risk in Jamaica*

Problem Statement and Theoretical Frame: Local adaptations to economic blight and overreliance on the tourism industry demonstrate varying aspects of resilience and risk among Caribbean populations. Those individuals who choose sex tourism as a way to benefit from the increasing revenue generated demonstrate resilience through their adaptations to shifts in the local and national economies, including national debt, expansion of the all-inclusive hotel industry, and seasonal variations in tourist arrivals. In a locale where it has become common for men to sell sex to women tourists for a living, residents rationalize female sex tourism using constructs that correlate with traditional views of masculinity, sex, and sexuality. This paper argues that the very activities of hustling and sex work that illustrate men’s resilience are the same practices that put their sexual health at risk. As a result, the question becomes whether or not male sex workers in tourist areas are targeted by the same condom use and STI/HIV programs as female sex workers. To what extent is the health of this population prioritized over the revenue generated by the (sex) tourism industry? Using a political economy approach, this research contextualizes the practice of female sex tourism using the anthropology of tourism, gender and sexuality studies, and the anthropology of HIV/AIDS with a focus on the Caribbean region.

Methodology: This study draws conclusions from ethnographic research conducted in Negril, Jamaica in 2010-2011. My research project on the local impact of female sex tourism involved observation, semi-structured interviews, and life history interviews with a total of 54 Negril residents, tourist

visitors, government health officials, local doctors, and tourism officials and workers. Qualitative data were compiled, coded, and analyzed with Atlas.TI software using a grounded theory approach.

Results and Implications: Many men in Jamaica demonstrate a convergence of sexual risk factors including poor health seeking behaviors, multiple sex partners, drug and alcohol abuse, sex with a female sex worker, fear of needle testing, and relatively low condom use despite knowledge of sexually transmitted infections (STIs) and HIV. Men who sell sex to support themselves and their families face the added factors of transactional sex with multiple partners, both local and foreign, and express the need to establish intimacy quickly in relationships with tourist women in order to build a basis for requesting funds. Informants for this project indicate that health and tourism officials have normalized this tendency towards engagement in male sex work in key tourist destinations. Despite the development of health interventions targeting female sex workers, no such programming exists for men who sell sex. Further, tourism officials have generally avoided the issue of safer sex practices and condom use in touristic spaces due to concerns over the loss of tourism revenue. In order for the issue of STI/HIV risk to be adequately addressed among this population, effective public health efforts must prioritize health over tourism revenue and utilize anthropological approaches to explore the health costs of the tourist dollar.

11:05-11:25 Discussion

11:25-11:45 Rebecca Adkins Fletcher, *The financial risks of living wellness: Contextualizing the Affordable Care Act wellness incentives through the political-economy of health risk management and health insurance governance*

Numerous Medical Anthropological accounts describe disparities in accessing health care in broad relation to neoliberal market transformations and state governance. It is in the intersections of political-economy and biomedicine that we see the ways in which individual abilities to maintain health are determined by ties to the global job market that regulate access to resources, including health insurance and health care. Within this framework, the ability to manage one's health is increasingly tied to market principles that increase vulnerability regarding access to an assembly of resources that affect health status. However, belying the consequences of neoliberal economic policies and transformations that decrease security for individuals and families, public health paradigms largely focus on health behaviors and individual lifestyle choices to explain health disparities. This paper describes the financial links to health behaviors that emerged through ethnographic participant-observation and semi-structured interviews in an urban Central Appalachian community in 2007-2008. While my research broadly asked how union members of the United Steelworkers (USW) and Retail, Wholesale, and Department Store Union (RWDSU) unions in this community described the links between health insurance, access to health care, and union membership, this paper relocates health behaviors within a political economic framework to showcase the complexities of cultural and economic factors (e.g. changing employment statuses, wage differentials, social location, and health insurance status) that influence individual and family choices for maintaining health. Theoretically, this paper utilizes political-economy, health risk behavior, and health insurance governance perspectives to contextualize the ways in which differentially insured individuals and families seek to mitigate the financial burden of health risk, including health risk avoidance and prevention. In so doing, I discuss instances of "job lock" in terms of health insurance access and draw upon recent reevaluations of fatalism to reassess how negative health and lifestyle behaviors are sometimes rational responses in the form of risk management regarding employment and health insurance governance. Ultimately, I argue that revisiting the actions (agency) individuals take towards securing health and financial security within a health behavior paradigm unmasks the political-economic nature (structure) in which health disparities have expanded from the rewriting of the social contract linking work with culturally appropriate access to health care. I argue here that expanding the health behaviors concept to include a broader array of actions individuals take to better their health and well-being provides a means of placing health disparities into meaningful social context, creating avenues for better public health outcomes. The implications of this research point to the need to re-categorize health behaviors within a framework that acknowledges the political-economic shifting of risk management to individuals and families, especially as through increased consumer cost-sharing disincentives (health insurance premiums, deductibles, and co-pays) to health seeking behavior. In so doing, I offer an informed critique of the Wellness programs incentivized in the Affordable Care Act in relation to health behavior risk assessment.

11:45-12:05 Discussion

12:05 - 1:30 Lunch on your own

Session 4 **Resilience in complex human-natural systems**, Miller Learning Center, room 250. Chair: Carolyn Lesorogol.

1:30-1:50 William Keegan, *Supply-side resilience*

In classic Resilience theory the dynamics of social-ecological systems are described as a cycle that passes through four phases. The first two are a growth and exploitation phase r , merging into a conservation phase K . As Keegan, Johnson and Earle pointed out 30 years ago, the smooth curve between r and K only occurs under conditions of inelastic supply. Moreover, at $K/2$ there is an unstable “optimal” equilibrium point (the inflection point in the Verhulst-Pearl logistic equation where $d/dN \, dN/dt = 0$; here called A), which may represent a “basin of attraction.” Using examples from Island Archaeology, this paper explores the evolution of supply in relation to systems transformations prior to the terminal transformation or “collapse.” When an economy enters a period of diminishing marginal returns to production it is encouraged by density dependent constraints to pursue new means, modes, and relations of production. These are not invented or developed *sui generis*, but rather are intensified from among marginal options. These options emerge during periods of pre-optimal production (r_0 to r_{max}). During these periods non-optimal and non-rational behaviors provide a foundation for resilience during episodes of dependent and independent changes. The mathematical models provide a method for calculating the timing and direction of such changes, and the rate of density-dependent transformations. In addition, from the perspective of Chaos theory the r to K transition has very different properties than those predicted by the standard model. Populations are actually pulled in two dimensions, defined by the stable equilibrium point K and the unstable equilibrium point A (r_{max}). These are expressed as conservative (i.e., equilibrium) and opportunistic responses.

Finally, it is argued that human systems rarely collapse as the result of constraints to production. Their key factor is social organization and kinship as instituted process.

Two brief examples. First, a major constraint to the colonization of islands by horticultural groups is the capacity of their gardens to rapidly produce substantial quantities of carbohydrates (i.e., beachhead bottleneck). Raymond Firth reported that in Tikopia the sweet potato was considered the “mother crop,” yet taro and breadfruit were the staples and sweet potato was a minor cultigen. The reason given is that irrigated taro land was five times more productive than rain-fed sweet potato. The reason sweet potato was regarded as special was likely because it can be harvested in three to six months versus nine to eighteen months for taro. Thus, sweet potato provided the first crop available from the new colonists’ gardens. The importance of sweet potato was again demonstrated following two hurricanes and a tsunami in early 1952. Sweet potato and manioc were the first edible cultigens from the replanted gardens. Second, in the Caribbean (and elsewhere), the consumption of small mollusks makes little economic sense. Changes in mollusk use through time are discussed in terms of resilience. It is argued that mollusks originally allowed women and children to contribute protein to the diet at a relatively low marginal labor rate, and that mollusks were fetishized in certain ceremonial activities because they were expensive yet abundant.

1:50-2:10 Discussion

2:10-2:30 Keely Maxwell, *Resilience indicators as system measures and epistemological narratives*

In past few years, government agencies, corporations, and non-profits have initiated a spate of resilience policies and programs in the United States. Along with increased investment in community resilience come increased calls from the scientific and policy arenas to measure it. Federal agencies are designing resilience assessments. Scientists from disciplines as diverse as geography, engineering, and public health have proposed resilience indicators, metrics, and indices. Given the rush to add resilience forecasting to resilience-building tools, a critical examination of these efforts is warranted.

This paper presents the results of a systematic review of indicators of community resilience to disasters. It discusses why measuring resilience has become so popular, what is being measured, and how. This research used a coupled human-natural systems framework to categorize indicators in a way that reflects underlying human ecosystem structures and processes. The framework situates disaster causes and consequences within broader human-environment relations. A literature search was conducted to find articles containing resilience indicators. The search covered four databases of scientific journals and four institutional reports. The 434 articles retrieved were screened to determine eligibility for inclusion. They had to be about resilience of communities, to disasters, and contain indicators. A total of 42 articles met these criteria. The 42 articles contained 902 counts of resilience indicators. This paper presents an analysis of a subset of economic indicators (e.g. household savings, unemployment rates, municipal revenues) and social indicators (e.g. demographic vulnerability, civic organizations, social networks). It evaluates indicator trends in terms of measurability, meaningfulness, and what they do or don't tell us about key system variables. It also assesses what the indicators reveal about underlying perceptions and values regarding resilience, including the role of capital, neoliberalism, and the nature of community. The demand for resilience assessments is not likely to abate anytime soon. Indicators will be put to use in designing programs, allocating resources, and measuring community progress. An anthropological perspective on resilience indicators can help scientists, community constituents, and decision-makers identify appropriate indicators and reflect critically on how to use them in a way that supports community efforts to build resilience.

2:30-2:50 Discussion

2:50-3:10 Nora Haenn, Bridget Schmook, Claudia Radel, and Sophie Calmé. *Livelihood networks in Southern Mexico: A response to resilience theory*

This paper draws on research that depicts changing household economies in rural southern Mexico to question resilience theory's implicit support of social persistence. Resilience researchers premise persistence by calling it "robust" and view change as an agent of "vulnerability." Vulnerable socio-ecologies are those that must undergo some modification "or face extinction." While resilience in ecosystems may be desirable, some researchers argue that when applied to humans, the concept fails to address questions of poverty and inequality. The idea, furthermore, is challenged to respond to the ongoing changes, including creative destruction, demanded by today's economies. This paper reports on findings from southern Mexico that show households there have changed both at the instigation of neoliberal state policies and as a result of local preferences. Where farming was once the most important economic activity, now farming is part of a diversified economy that includes state subsidies, migrant remittances, and other possibilities. Cash-poor families of two decades ago now engage eagerly in consumer behavior by which they tap into distant and unknown ecologies. These changes are not unique to Mexico but represent larger, global shifts at the end of the 20th century. The paper explores how we might conceptualize these changes within a justice framework while retaining the innovative way resilience research has linked dynamic, interacting socio-ecologies. We propose the idea of Livelihood Networks to consider the range of livelihood strategies that people, wildlife and other non-human species undertake in southern Mexico's globalized rainforest landscapes. Through a Livelihood Networks approach, we hope to better understand socio-ecological systems as material arrangements but also sites where multiple, even conflicting, meanings travel across linkages with consequences for the well-being of human and non-human actors.

3:10-3:30 Discussion

3:30-3:45 Break

3:45-4:05 David Manuel-Navarrete, Lakshmi Charli-Joseph, Hallie Eakin, Bertha Hernández Aguilar, Alejandra Martínez-Canedo, Beth Tellman. *Changing identities of socio-ecological systems and water-related risks in the Xochimilco lake system of Mexico City*

The system of lakes, canals, and artificial islands for intensive farming (*Chinampas*) that was predominant in the Valley of Mexico in pre-Hispanic times, has historically supplied food, water, recreation, and land for the urban expansion of Mexico City. It has also become a sink for its wastewaters, as well as a flood regulation system. The dominant mental models amongst Spanish and Mexican authorities portrayed this aquatic system as incompatible with urban progress, and have

consistently promoted its decay and elimination. An alternative mental model that articulates narratives of the system identity as integral to the city's heritage and functionally linked to urban dynamics through ecotourism, organic agriculture, and the provision of key ecological services gained legitimacy in the 1980s. The government responded with the top-down declaration of the area as World Heritage by UNESCO (1987), and the establishment of a Natural Protected Area (1992) but failed to effectively support traditional agriculture. In parallel communal (*ejido*) and other farmlands in the area were expropriated, which increased irregular urbanization pressures. These events show that dilemmas posed by opposing mental models can result in unexpected and undesirable material outcomes. They suggest the need to understand socio-ecological dynamics as emerging from entwined material and cognitive processes.

This paper evaluates how different mental models incorporate diverse aspects of environmental risk, and how risk in turn shapes mental models and the narratives of the social-ecological system identity. Research was conducted in the context of NSF research project "Dynamics of Multi-Scalar Adaptation in the Megalopolis: Autonomous action, institutional change and social-hydrological risk in Mexico City" (MEGADAPT). Interviews, participatory workshops and focus groups were conducted with: (1) agricultural producers, (2) NGOs, (3) experts and academics, and (4) government officials in charge of urbanization, flood risk management and conservation both in Mexico City and at the borough of Xochimilco. The mental models of these actors were elicited in relation to flooding, scarcity, and water quality.

Preliminary results indicate that water pollution is a central risk in the majority of elicited mental models. Risk is meaningful to different actors in different ways. Perceptions of risk factors shape each agent's constellation of interrelated material and socio-cultural drivers and factors through which the system is rendered intelligible. Responsibility for causing and managing risks are attributed to material factors as well as the actions, perceptions and interests of other agents. At the same time risks are interconnected across scales. The lake serves as a risk mitigation function for the entire city, but this function poses direct risk of flooding to agricultural use, thus threatening the natural and cultural heritage associated with it. Locally, livelihoods are at risk by water quality, which in turn jeopardizes the lake system as a viable source of longer-term ecological functions (also the city scale). The analysis of mental models is a first step to grasp the cognitive complexity associated with the changing identities of socio-ecological systems, including the role played by environmental risks.

4:05-4:25 Discussion

4:25-4:45 N. Thomas Hakansson, *Undead Theory: Is resilience thinking actually systems theory walking again?*

In this paper, I examine the analytical utility and theoretical status of the resilience concept. I compare it to political ecology theory through two case studies of land use and livelihoods in the South Pare area, northeastern Tanzania. One case is based on my own research on land use change in northeastern Pare, and the other is a study that applies resilience theory in an area of southwestern South Pare.

Resilience has become a very popular term that is used in a variety of scholarly and development planning endeavors. It is used in many ways, often in a vague sense, by authors who want to portray social and economic situations in which people maintain subsistence and some form of institutional coherence in the face of adversity or shocks to their livelihoods. In this way, the popularity of resilience can be compared to the earlier widespread popularity of the resistance concept from James Scott's work. But it also has a more specific meaning that is connected with a popular and widespread approach to the analysis of the interrelationship between environment and social and economic institutions and activities, especially in the current global South.

The theoretical concept of resilience derives from a particular approach to ecology developed by the Canadian ecologist, C. S. Holling, and has its intellectual home at the Stockholm Resilience Center, Sweden. Within this more theoretically focused context, resilience is defined as the ability of human communities to withstand and recover from such stresses as environmental change, or social, economic or political upheaval. Within resilience theory, or resilience thinking as it is also called, these human-environmental relationships are conceived of as complex adaptive social-ecological systems that exhibit resilience as a trait of the system itself through feed-back loops between individual

behavior and macro-level properties of the system. At first glance, it seems as though proponents of resilience thinking view resilience as a property of systems dynamics, rather than as property of social structures and individual agency. However, followers of this approach also explain resilience as conscious, collective action through learning and co-management, an analytical approach that entails an unrealistic assumption about the homogeneity of interest and power, and hence reduces sustainable land use to no more than knowledge acquisition and the ability to organize management. Thus, resilience theory contains within it a contradiction between systems teleology and the agency inherent in conscious management.

My comparative analysis of the two communities and theoretical approaches shows that the concept of resilience is difficult to operationalize and should not be taken to be a theoretical explanation of how social activities are related to natural phenomena. At most, resilience thinking may yield useful descriptors of how households and communities are impacted by, and respond to, events such as droughts or floods, and by long-term economic trends.

- 4:45-5:05 Discussion
- 5:05-5:40 **Final discussion**
- 7:00-9:00 **Banquet**, The Graduate, graduateathens.com