

# Doktorandentag

12 November 2018

Rachel Carson Center



Organized by Claudio de Majo and Andreas Jünger  
Picture and Graphics by Vitória Spohr

Rachel  
Carson  
Center  
ENVIRONMENT AND SOCIETY

ES  
Environment  
and Society

MU

LUDWIG-  
MAXIMILIANS-  
UNIVERSITÄT  
MÜNCHEN

## PROGRAM

- 9.00** Greetings from the organizers
- 9.30 1st Session: Theories and Technologies in the Age of Anthropocene**  
Chair: Martin Meiske
- 9.45 Kira Schmidt:** Network Building and Negotiation Processes in the EU's Alpine Transit Policy (p.2)
- 10.30 Eugenio Luciano:** Who We Are, Where We Are Going: A Study of The Anthropocene Theory Between Natural Sciences and Humanities (p.3)
- 11.15 2nd Session: Energy Use and Ecological Shortcomings**  
Chair: Ayushi Dhawan
- 11.30 Pui Ting Wong:** Electricity Demand: Explanations and Predictions in Perspective of Time-Use (p.4)
- 12.15 Daniel Dumas:** Tar Sands & Traditional Lands: Contemporary Responses to Tar Sands Extraction in Northern Alberta Canada (p.5)
- 13.00** Lunch
- 14.00 3rd Session: Socio-Ecological Transformations in Urban and Rural Spaces - Chair: Katrin Kleemann**
- 14.15 Talitta Reitz:** Community Transformation and Ecological Restoration in Portland, Oregon, and Munich, Bavaria (p.6)
- 15.00 Andreas Jünger:** Organic Farming in Andalusia: Capitalist Agro-Industrial Continuity or Social-Ecological Alternative? (p.7)
- 15.45 4th Session: Technology, Food Safety and Environmental Art**  
Chair: Fausto Ignatov Vinueza
- 16.00 Othmar Walchhofer:** Crop As Art in the Digital Field (p.8)
- 16.45 Konstantin Biehl:** Practices of Food Safety. Confronting the Uncertainty of Exposure to Aflatoxins in Kenya (p.9)
- 17.30** Final comments and toast

## Network Building and Negotiation Processes in the EU's Alpine Transit Policy

Kira Janina Schmidt

My dissertation aims to analyze and discuss the intergovernmental and supranational dimensions of the EU's Alpine Transit Policy. In a top-down approach, it focuses on the most important bodies of the EU (and its precursors), the European Commission and the European Parliament, but also considers influential international and intergovernmental institutions, as well as relevant non-governmental organizations.

The (European) Alps have always represented a geographical boundary within the European continent. Since early modern times, warlords, travelers and traders tried to and successfully did conquer the natural mountain barrier. The Alps themselves have been divided by various political boundaries, national borders, that separated markets and constrained collaborations.

In the course of European Integration in the 20th century, some boundaries were eliminated, but at the same time the Alps now represented a boundary between the northern and southern parts of the developing EU. Transit Policy became an important issue from the 1980s onwards during the creation of the European Single

Market. The necessary infrastructures for transalpine traffic, e.g. tunnels and bridges, and tariffs caused controversy among EU member states and between the EU and non-member states – as did ecological concerns for the fragile alpine ecosystem. In Austria and Switzerland, local Alpine conservation movements were formed to fight transit traffic.

My research explores the area of conflict between ecological and economic interests concerning the Alpine region and the formal and informal networks that shaped EU transit agendas. The study employs an actor-centered approach to the negotiations within the complex multi-level governance of the EU. It asks how the actors argued for or against transalpine traffic; how they presented their arguments; how they used expert knowledge; and how they collaborated. Thus, the actors' transnational networks and institutional links will be examined.

Using Alpine Transit Policy as a case study, this dissertation points to the influence of various nation-state and civil society actors on the EU's agenda-setting and policy making, and the relevance of transnational networks within the EU's multi-level governance.

This dissertation is part of the project "Issues with Europe - A Network Analysis of the German-speaking Alpine Conservation Movement (1975-2005)", a cooperation between Universität Basel (Switzerland), Leopold-Franzens-Universität Innsbruck (Austria) and Ludwigs-Maximilians-Universität in Munich (Germany).

# Who We Are, Where We Are Going: Study of The Anthropocene Theory Between Natural Sciences and Humanities

Eugenio Luciano

In his *Tractatus logico-philosophicus*, the Austrian philosopher Ludwig Wittgenstein wrote that “the limits of my language mean the limits of my world”. I believe that by reaching forms of interdisciplinarity against rigid compartmentalisations of knowledge, we can extend the limit of our language, thus the limits that define of our world – limits that determine meaning and understanding of things. My research undertakes this effort within the field of environmental studies. It does so by analysing the theory of the Anthropocene – a geological theory claiming that anthropogenic activities are so severe that they brought about the beginning of a new geologic Epoch – and the debate it has triggered between natural sciences and environmental humanities. The first goal set by my research is interpreting the impact of human cultures and societies as large-ecosystem

engineering by linking the Anthropocene theory to the eco-evolutionary theory of Niche Construction. This link assumes that human cumulative niche construction extends to the very biosphere and thus the geo-ecological product of human societies that we name Anthropocene also entails relevant evolutionary consequences. The second goal attempts to unify scientific and humanistic knowledge by promoting the idea of ‘analytical environmentalism’ as philosophical stance – and eventually discipline/course of study – opposed to shallow, cynic or naïve interpretations of the *Anthropos/Homo sapiens*-environment relationship. This viewpoint locates at the crossroads between humanities, social and natural sciences. I believe my research to be important in unifying scientific and humanistic knowledge and expand the linguistic, therefore cognitive horizon to face the present and future environmental challenges.

# Electricity Demand: Explanations and Predictions in Perspective of Time-Use

Pui Ting Wong

In the development of renewable energy source, the temporal mismatch between renewable supply and electricity demand have been one of the significant obstacles widely discussed in the recent decade. One of the distinctive electricity demand patterns in the influence of utilization of solar PV presented by California ISO in 2013, i.e., Duck curve, has illustrated a significant undulation of electricity demand in the influence of utilization of solar PV and alerted us the associated potential strain imposed to the stability of power grid. To address the problem, scholars and researchers have purposed various solutions like investing in fast-ramping power plants and implementing peak electricity pricing. Yet, learning from the experience of failure of new technologies in achieving optimal energy saving due to the unexpected behavioral responses of customers (namely rebound effect), this study argues that time-of-use of electricity should be better investigated in the behavioral perspective; and believes time use data, that recording individuals' activity pattern in sequential, will shed light on the issue.

Time-use studies, concern-

ing the time allocations of individuals to activity throughout a day, was firstly conducted in the early 1900s in exploring the impacts of industrialization on the living situations of working-class families; and up to date, more than 180 national time-use surveys have been conducted in 95 countries. It was also regarded as "measure for fundamental descriptive data that not otherwise obtainable on human activities in the various fields of social, demographic and related economic statistics" by the United National Statistical Commission in 1979. Thus, by utilizing this comprehensive data of individual activity pattern, this aims to explore the relationship between individual activity pattern and electricity demand by conducting three major research tasks: i) exploring the impacts of social-demographic factors on individuals' activity pattern that to identify the contributing factors of ones' sequential activity pattern; ii) reconstructing activity-based electricity demand that to resemble time use data with electricity demand; and finally iii) projecting the possible electricity demand profile in the influence of future social changes that to project the possible future electricity demand profile in behavioral perspective.

## Tar Sands & Traditional Lands: Contemporary Responses to Tar Sands Extraction in Northern Alberta Canada

**Daniel Dumas**

This proposed research topic addresses the complicated relationship that Indigenous peoples in Northern Alberta, Canada share with past and present tar sands extraction. Current tar sands extraction takes place exclusively on traditional Indigenous lands surrendered over to the Canadian government following the signing of Treaty 8 at the end of the 19th century when bitumen was discovered. Although Indigenous peoples ceded large tracts of land in exchange for designated reserves, education and healthcare assistance, and relief in times of necessity, they were guaranteed that they would be able to live as they always lived on their lands “as long as the sun shall rise and the rivers shall run”.<sup>1</sup>

Contemporary tar sands extraction has transformed much of Northern Alberta’s pristine boreal forest, muskeg peat bogs, and northern prairie into vast industrial landscapes visible from space. This landscape transformation has undoubtedly altered the traditional livelihoods of many Indigenous peoples. Since tar sands extraction began in 1967, Indigenous nations and peoples have had to adapt to one of the most environmentally disruptive resource

extraction projects on earth. Although many Indigenous and Non-Indigenous peoples (across Canada) vehemently oppose tar sands extraction, there are many Indigenous nations, both First Nations and Metis, who have supported continued extractive activities on their lands as a means of securing a livelihood for both the present and future generation(s).

This research project therefore seeks to identify the multiple and often conflictual relationships different Indigenous peoples share with tar sands extraction, while addressing the lack of Indigenous centered research concerning with this topic available in the current literature. Moreover, it will be argued that Indigenous peoples closer to the core of extraction activities have become more favourable towards the tar sands whereas Indigenous peoples located on the periphery have adopted a more resistant stance towards tar sands extraction. This will be tested specifically in regards to the current debate over the expansion of the Trans Mountain pipeline and the proposed Frontier Oil Sands Mine Project, which would become the largest-ever tar sands mine. Ultimately, this project will seek to understand the settler colonial nature of tar sands extraction, the importance of traditional lands and rights to Indigenous peoples, and the ways Indigenous peoples have adapted in the face of historically asymmetrical power relations in order to oppose or support resource extraction on their traditional territories.

<sup>1</sup> Hugh Brody, *Maps and Dreams*, (London, Faber and Faber, 2002), 62.

## Community Transformation and Ecological Restoration in Portland, Oregon, and Munich, Bavaria

Talitta Reitz

The establishment of sustainable development as a prime concern for politicians, urban planners, and communities has been the greatest discussion topic of the last decades. As large cities are set to accommodate around 60 percent of the world's population within the next decade and produce the greatest share of global environmental problems<sup>1</sup> (such as greenhouse gas emissions), it is evident that sustainable development will become a pressing necessity. As nations and cities have been developing mitigation plans for the impacts of population growth and urbanization, some pioneer cities have already developed their own strategies. For this trend to continue, it is necessary to study and disseminate successful approaches to facilitate and strengthen the processes of sustainable development.

In light of this, the cities of Portland and Munich have been selected for this study because of their leading character in environmental responsibility, starting during the 1970's with unique initiatives for ecological urban development and achieving worldwide notoriety and respect. There is a lot to be learned from these cities in terms of environmental consciousness, shared

identity, strategic planning, and the power of well-directed political approaches. The comparative analysis of both cities is feasible because of their analogous settings and backgrounds: both are state capitals in economically developed countries, present similar size and metropolitan population, have a high-tech industrial character, similar urban growth patterns, geological features, climate, and biomes.

This interdisciplinary research will trace the historical perspectives from which the attempts to sustainable development emerged in these cities. Moreover, it will examine the benefits and most significant transformations that have occurred since their first initiatives. The study will aim to determine which approach has shown the best results, based on the analysis of their particularities and essential qualities. Ultimately, the research will provide further insights for the adoption of such precedents in cities of analogous characteristics.

Since the investigation of such approaches to sustainability holds enormous complexity, this research is structured through selected comparative topics. The chapters will present historical perspectives and the critical exploration of subjects relevant to the framework and the agenda of sustainable cities. The intention of this combined analysis is to construct a comprehensive picture of the composite strategies for sustainability in Portland and Munich.

<sup>1</sup> Wuppertal Institut für Klima, Umwelt, und Energie. Sustainable Urban Infrastructure: Munich, towards a Carbon-Free Future. Germany: Siemens AG, 2009.

## Organic Farming in Andalusia: Capitalist Agro-Industrial Continuity or Social-Ecological Alternative?

Andreas Jünger

During the dictatorship in Spain - as in other parts of the world - the so-called Green Revolution led to fundamental changes in the agricultural sector through mechanisation and new technologies. In the numerous rural areas of the Andalusian region, this development also caused ecological problems (e.g. soil degradation, inflationary pesticide use, heavy groundwater extraction), social crises (e.g. unemployment due to mechanization, rural exodus) and economic failures (e.g. concentration of land ownership, widening of the gap between rich and poor). Less than three decades later, a new narrative of agricultural development has taken shape in the south of Spain: within a few decades, Andalusia has transformed itself from a region primarily known for its export-oriented, modern, high-performance agriculture, with extensive plastic greenhouses, monocultures and poor working conditions, to one of the largest European organic farming areas.

Taking into account this historical fact, the two central questions

of the study are: 1) which concepts of organic agriculture have been developed by political and economic actors in Andalusia? and 2) to what extent these concepts offer solutions for the ecological and socio-economic problems of the Andalusian agricultural sector? Multiple are the actors that will be considered in this research efforts: the Andalusian regional government, the Socialist Party and the Green Party, a trade union (Sindicato Obreros del Campo), as well as individual companies, cooperatives and farmers.

From the perspective of the environmental humanities, this dissertation project seeks to contribute to current debates on sustainable organic agriculture, examining both the past and future viability of organic agriculture through the example of Andalusia. In particular, it investigates the tension between social-ecological transformations of agriculture and the role that eco-capitalism (green capitalism) plays in this process. These debates, mostly linked to the present time, need to be historicized by the results of the planned dissertation project. This would allow an in-depth understanding about possible political innovations (system change?), paving the way towards an eco-social agriculture.

Thus, taking a look back at the conflicts that have contributed to the current status quo, as well as at the ineffective paradigms of organic agriculture, is important in order to widen the horizon to social and ecological alternatives taking into account successful past experiences.

# Crop As Art in the Digital Field

Othmar Walchhofer

The PhD-project 'crop as art in the digital field' focuses on social practices related to environmental art. Within this, the project specializes on crops and agricultural issues. The project is based on Theodor W. Adorno's 'aesthetic theory', Pierre Bourdieu's concept of 'habitus' as well as Andreas Reckwitz's latest theoretical positions to a contemporary 'imperative of creativity'. These theoretical positions will be discussed and developed regarding the question of how artists generate increasing circulation of their work, network and livelihood. Beside the theoretical discussion the project is also interested in empirical findings. So there will be conducted an ethnographic field study in the art world. The ethnographic study will be developed along three significant spaces of art production, circulation and consumption: one main interest will lead to the artist's studio as a distinct and today also flexible (ideological) ground for producing art. Also very important to the ethnographic study will be the social world, which reflects on art and brings it to circulation e.g. via social media. A third relevant space will be the labour market and the artist's commitment to organize livelihood. This ethnographic approach wants to bring together plausible and contemporary insights regarding the art world, relevant to the question and theoretical discussion sketched above.

## Practices of Food Safety. Confronting the Uncertainty of Exposure to Aflatoxins in Kenya.

**Konstantin Biehl**

I investigate how scientific institutions, farmers and traders confront aflatoxins produced by the mould fungi of the *Aspergillus flavus* species as by-products of its metabolism. Aflatoxins are the most toxic and potent hepatocarcinogenic natural compounds ever characterized, can cause death by acute toxication and may cause stunting and malnutrition in children.

Being invisible and tasteless, the toxins can only be detected with specific testing technologies. In Kenya, people knowingly and unknowingly interact with the moulds and the toxins on an everyday basis. *A. flavus* is present in the soil and can infect maize, peanuts, silage, and many other agricultural plants pre- and post-harvest. The aflatoxins it produces are thermostable, withstand the processing of agricultural products and the metabolism of animals fed with contaminated fodder. Farmers, mill workers, and consumers often lack required infrastructure and technologies to test but must still ensure that their food is safe.

At the same time, researchers and local administrative boards try to produce knowledge on moulds and toxins. The latter are testing agricultural products to ensure that the food entering the market is safe and thereby establishing consumer's trust in food (and the state). The scientific research confronts toxic uncertainty on a larger scale: beyond the safety of specific marketed products, it aims in understanding the health impact and biological mechanisms of moulds and aflatoxins.

My research follows the different practices of engaging aflatoxins and investigate how procedures of testing are intertwined with practices of producing safe maize. I address the question of how the actors come to know and connect this knowledge production to forms of accountability. The exact intervention that addresses the lack of knowledge can generate economic problems for the farmers: the better access to testing tools renders food as potentially dangerous, but without resources to manage fungi or purchase aflatoxin-free maize, the farmers' situation is precarious. Additionally, regulators are forced to confiscate and destroy contaminated crops, resulting in further food shortages and adding to the problem of famine and malnutrition in parts of Kenya. Therefore, the fight against aflatoxin produces uncertainty in the very field it should address: food security. I investigate these entanglements of toxic uncertainty, scientific and humanitarian intervention and accountability.

[illegible]

[illegible]

This image shows a full page of blank handwriting practice paper. It features approximately 20 evenly spaced, horizontal green lines across the entire page, providing a guide for letter height and placement. The background is plain white, and there are no margins, text, or other markings present.