

KEYNOTES

(In alphabetical order by (first) speaker surname)

Cosmo-ecological Sheep and the Arts of Living on a Damaged Planet

Vinciane Despret* and Michel Meuret

University of Liège, Belgium

INRA, Montpellier, France

In recent decades, some young people from urban backgrounds have chosen to become shepherds and to learn to reconnect with the herding practices that many livestock breeders had abandoned under the pressure of agricultural modernization policies. In some cases they have found themselves entrusted with sheep that are as naïve about herding as they themselves were. Before their introduction to transhumance – a process of seasonal movement between pastures – these animals were primarily confined and fed indoors or in small fenced areas. The shepherds had to learn how to lead, how to understand other modes of living, how to teach their sheep what is edible and what is not and how to form a flock; the sheep had to learn how to compose with dogs and humans, to acquire new feeding habits, new ethos, and moreover, new ways of living in an enlarged world. These practices do not amount to a livestock economy, shepherds consider herding as a work of transformation and ecological recuperation — of the land, of the sheep, of ways of being together. Learning “the arts of living on a damaged planets”, as Anna Tsing has termed it, humans and animals are making their own contributions to a new cosmo-ecology, creating cosmo-ecological connections, and therefore contributing to what Eduardo Kohn (relaying Ghassan Hage) calls “alter-politics”: “a politics that grows not from opposition to or critique of our current systems but one that grows from attention to another way of being, one that involves other kinds of living beings.”

Vinciane Despret is philosopher of sciences and Maître de conférences at the University of Liège and at the Free University of Brussels, Belgium. Her first fieldwork was in the Negev desert, Israel, where she explored the possibility of making an "ethology of the ethologists." She has since worked with animals, and with the humans who observe them, live with them or simply know them. From September 2007 to January 2008 she was the scientific curator of the exhibition "Bêtes et Hommes" held at the Grande halle de la Villette, Parc de La Villette, Paris. She is the author of numerous books and articles - most of them not yet available in English. Her most recent book *Que diraient les animaux si... on leur posait de bonnes questions?* will be translated into English in 2015.

The Six Extinctions: Visualizing Planetary Ecological Crisis Today

Joe Masco

University of Chicago, USA

How can we conceptualize and visualize planetary scale environmental crisis? How can we come to understand physical processes that work on scales and in temporal registers that exceed human sensory capacities? This talk examines the challenge posed by planetary environmental crisis via the work of contemporary artists as well as earth scientists. Contemplating the limits of perception, loss, temporality, and scale the paper considers how an industrial economy has transformed our relationship to the both the biosphere and future, demanding new human sensibilities tuned to a radically changing habitat. It ultimately argues that the artistic register is central to understanding life in the anthropocene, and considers how industrial toxicity (across petrochemical, synthetic chemical, and nuclear economies) can become an object of collective concern.

Joe Masco is Professor of Anthropology at the University of Chicago, USA. He is the author of *The Nuclear Borderlands: The Manhattan Project in Post Cold War New Mexico* (2006, Princeton University Press), which won the 2008 Rachel Carson Prize from the Society for the Social Studies of Science and the 2006 Robert K. Merton Prize from the Section on Science, Knowledge and Technology of the American Sociology Association. His most recent book is *The Theater of Operations: National Security Affect from the Cold War to the War on Terror* (2014, Duke University Press). His current work explores the intersection of environmental crisis, visualization practices, and the logics of planetary security.

Ontologies of planetary ephemera: Life cycles and synchronicities of the cryo-sphere

Sverker Sörlin

KTH Royal Institute of Technology, Sweden

Ephemera (singular: ephemeron) is any transitory written or printed matter not meant to be retained or preserved.

The Anthropocene is primarily defined by the traces and scars humans leave behind and the strata they accumulate for posterity. However, the Anthropocene also takes life forms, species, and materials away from the face of the Earth, thus producing mortalities and finitudes as much as their opposites: absence of layers instead of eternal layers. One of the most iconic of these ephemeral materials is ice. Global warming is already reducing the size and shape of glaciers around the world and this process is bound to continue for decades, perhaps centuries. This has caused concern for rising sea levels and islands and current coastlines that threaten to go extinct as such, an extension of the hydro-logical cycle to include a cryo-logical circulation. At the same time the absence of ice – visualized through repeat photography of preceding periods of ice, and manifested as subtle traces in moraines and bedrock surfaces where ice has recently been – stands out as the ultimate evidence of the ‘enviroming’ powers of human societies to literally create environments, near and far. These powers have now reached the all the planetary levels: geosphere, lithosphere, hydrosphere, biosphere, atmosphere, and cryosphere. Of these spheres, the cryosphere can go almost completely extinct, thus offering a collective Anthropocene loss of an entire layer of earthly presence.

In this keynote I will approach waning ice as a template in an attempt to articulate an ontology of what I call ‘planetary ephemera’, deliberately appropriating the concept to refer to features of nature as scriptural, thus precious yet alterable thus ethical. The planetary ephemera, to which we may also count all species of life on earth (including humans) are fugitive yet key elements of the world as we know it, but many of them may become significantly reduced, perhaps extinct, under a continued malign Anthropocene. Ice is a natural element, but its current reduction is synchronic with cultural life cycles, of nations, peoples, and social systems of meaning. While there are indeed already numbers, and a range of observation and data storing technologies installed to capture the natural change, the cultural language of loss and mourning is less obvious and requires different sensibilities for its articulation. Narratives of forming, shaping, or building seem to break down when they are faced with the realities of waning, shrinking, or eradicating. What could a post mortem career of a nature monument be like? If glaciers can listen, as Julie Cruikshank suggested in her 2005 book, is there any point in talking when they are gone?

Sverker Sörlin is a professor in the Division of History of Science, Technology and Environment at the KTH Royal Institute of Technology, Stockholm, where he co-founded the KTH Environmental Humanities Laboratory. He has held visiting positions at Berkeley, Cambridge, Cape Town, Oslo, and most recently at the Institute for Advanced Study, Princeton. Sörlin’s research is focused on the role of knowledge in environmentally informed modern societies. Current research interests include: the politics of climate change, especially as seen through the historical and social practice of geography, oceanography and other field sciences; the changing conception of temporalities and collectivities under the planetary imaginary called the Anthropocene; and the formation of environmental knowledge and expertise including the environmental humanities. In Swedish he has authored or edited some thirty books. In English he has published a range of articles and edited collections including: *Denationalizing Science* (1993); *Sustainability: the Challenge* (1998); *Narrating the Arctic: A Cultural History of Nordic Scientific Practice* (2002) and *Knowledge Society versus Knowledge Economy* (2007).



SESSION PRESENTATIONS

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Wisdom of the rocks': Art and the organic after a geologic turn

Monika Bakke

Adam Mickiewicz University, Poznań, Poland

Drawing on Manuel Delanda's concept of 'wisdom of the rocks' understood as "a way of listening to a creative, expressive flow of matter for guidance on how to work with our own organic strata", I will discuss recent art projects by Katie Paterson, Oron Catts and Hideo Iwasaki, Adam Brown, Michael Burton, Oliver Kellhammer, and Ilana Halperin, which employ a geological perspective in their considerations of living and nonliving matter. Such perspective demands the use of scales which are far beyond those of humans, hence, these artists work not only with fossils as evidence of long-gone life and the immensity of time, but also with life to come in the future as a result of both bioengineering and geoengineering. Minerals co-evolving with life as they pass through life forms (including humans) in metabolic processes are a focus of the artists' attention, especially when themes concerning the deep future are introduced with questions such as: what kind of geological strata do we expect to leave behind on the planet and how – if at all – should we promote carbon life in the Universe. I will argue that taking a deep time perspective allows for an attempt to avoid "organic chauvinism" and reconsider questions such as the origin of life as well as organic and mineral evolution but also critically approach biotechnological challenges such as efforts to create synthetic life or the promotion of carbon life in non-terrestrial contexts.

Monika Bakke works in the Philosophy Department at the Adam Mickiewicz University, Poznan, Poland. She writes on contemporary art and aesthetics, with a particular focus on posthumanist, gender and cross-cultural perspectives. The author of two books: *Bio-transfigurations: Art and Aesthetics of Posthumanism* (2010, in Polish) and *Open Body* (2000, in Polish), co-author of *Pleroma: Art in Search of Fullness* (1998), and editor of *Australian Aboriginal Aesthetics* (2004, in Polish), *Going Aerial: Air, Art, Architecture* (2006) and *The Life of Air: Dwelling, Communicating, Manipulating* (2011). Since 2001 she has been an editor of the Polish cultural journal *Czas Kultury* (Time of Culture).

Tagging turtles and chasing ghosts: exploring the times and spaces of extinctions

Michelle Bastian

University of Edinburgh

In this time of habitat pressures and a changing climate, the relationships that make time and space are shifting. This paper offers a creative reflection on the lives of leatherback turtles by drawing out the frayed threads of what Deborah Bird Rose has called 'multi-species knots of ethical time' (2012). I follow the rhythms and spacings that join turtles with jaguars and jellyfish as each attempts to recalibrate the time of life to new conditions and explore the efforts of these creatures to actively make new futures for themselves, even when larger cycles and rhythms might be working against them. Throughout I reflect on human modes of time-telling and ask how they might be re-tuned and re-entrained to the present moment (which one?).

Michelle Bastian is a Chancellor's Fellow at the Edinburgh College of Art, University of Edinburgh. Her work focuses on the role of time in social practices of inclusion and exclusion. She has explored this in relation to feminist theories of community, local food, political apologies, more-than-human participatory research, clocks, leatherback turtles, transition towns and sustainable economies. Her work has been published in *Time & Society*; *Theory, Culture & Society*; and the *Environmental Philosophy*.

Interfaces of Felidae and Extinction: 'Victim' and 'Cause'

Jeffrey Bussolini

City University of New York; Center for Feline Studies, USA

Introducing his classic study on feline ethology, Paul Leyhausen notes that, while humans devote much attention to studying higher primates on the notion that they are closest to humans, we will not understand the violent practices of humans without studying animals like felines (also very close to humans (95 vs 98% genetic similarity), but much less-studied). The focus of these considerations is the multi-valent role of felines in extinction, exploring several different interfaces of cats, humans, and other beings in larger dynamics of ecology and extinction. Roberto Marchesini, Gloria Anzaldúa, and Deborah Bird Rose use the concept of interface to study cognitive, cultural, and ethical intertwinings and overflows between various species. Many large cats are under high extinction pressure due to the encroachment of habitat and eradication by humans. Lions, tigers, panthers (such as the Florida panther), and the Iberian Lynx, among others, face population pressure. In the complex entanglement between feline and human societies some hundreds of millions of 'domestic' and 'feral' cats are killed globally each year in a 'zoecide' that accompanies current human society, alongside the massive zoecide in meat production. On the other hand, so-called domestic felines are pointed to as exerting a strong environmental factor in killing marsupials, birds, or rodents. Recent news headlines about studies attributing billions of bird and small animal deaths to cats in the United States bear this out, as do accounts in Australia faulting cats for marsupial, songbird, and penguin killing.

Jeffrey Bussolini is Associate Professor at City University of New York and Co-Director of the Avenue B Multi-Studies Center (which houses the Center for Feline Studies and the Center for the Ethnographic and Historical Study of Los Alamos and National Security). Has conducted ethnographic study of Los Alamos and related institutions since 1991, and etho-ethnographic study of feline-feline and feline-human interactions since 1995. Appeared as "Feline Sociologist" in the VICE Media/Tribeca Film Festival film *Lil Bub and Friendz* in 2013, and edited and translated for a special issue of *Angelaki: A Journal of the Theoretical Humanities* (19.3, Fall 2014) on philosophical ethology and the work of Dominique Lestel (to be followed by two others on Vinciane Despret and Roberto Marchesini). Jeffrey published "Recent French, Belgian and Italian work in the cognitive science of animals: Dominique Lestel, Vinciane Despret, Roberto Marchesini and Giorgio Celli" in *Social Science Information*, 52.2 May 2013; and "Toward Cat Phenomenology: A Search for Animal Being," *Found Object* #8 May 2000. He also published "Los Alamos as Laboratory for Domestic Security Measures: Nuclear Age Battlefield Transformations and the Ongoing Permutations of Security" *Geopolitics* 16.2 2011, and "The Wen Ho Lee Affair: Between Race and National Security" in *Implicating Empire*, ed. Aronowitz and Gautney, Basic Books, 2002. He translated Dominique Lestel's *The Friends of My Friends: On Animal Friendship*, forthcoming with Columbia University Press and has benefitted greatly from the work of and dialogue with Vinciane Despret, Deborah Bird Rose, and Joe Masco.

Life and Death in the Plastisphere

Heather Davis

Pennsylvania State University, USA

Plastic is often thought of as a malleable material, its metaphorical connotation, plasticity, implying movement and shape shifting. However, with a projected lifespan of 100,000 years, plastic is actually one of the most durable compounds on earth. By existing outside of the time frame of biological life, plastic brings with it a kind of undead quality that exists in opposition to the biological binary of life and death, and spreading this reign throughout all the ecosystems it interacts with. Most of the plastic produced ends up in the ocean, offering itself as a food source to from everything from plankton to whales, slowing sealing off the exchange of nutrients, starving animals though its abundance.

For humans, the many chemical plasticizers, such as Bisphenol A (or BPA), mimic natural hormones, rendering us less and less fertile. Plastic, and its associated plasticizers, are among the many anthropogenic compounds that are heralding in an increasingly infertile future, or future filled with strange new life forms. Plastic is also becoming the anthropogenic substrate of a whole new ecology of viruses and bacteria, termed the plastisphere. While this situation is certainly horrific, what might be learned from queer theory, disability studies, and theoretical approaches to the notion of toxicity? In other words, if instead of running from these toxic and infertile futures, as Mel Chen, Claire Colebrook and others suggest, what might we learn if we began to

embrace the nonfilial progeny that plastic, and the plastisphere, might produce? How might we organize a politics around nonreproduction, a politics that moves beyond the cyclic processes of life and death to correspond and prepare us more adequately for the plastic future?

Heather Davis is currently a Postdoctoral Fellow at the Institute of the Arts and Humanities at Pennsylvania State University, where she works on the ethology of plastic. She is the editor of *Art in the Anthropocene: Encounters Among Politics, Aesthetics, Environment, and Epistemology* (Ann Arbor: MPublishing/Open Humanities Press, forthcoming 2014).

The Unwelcome Crows: Hospitality in the Anthropocene

Thom van Dooren

University of New South Wales, Australia

As their common name implies, House Crows (*Corvus splendens*) stick pretty closely to people. So much so that there are no known populations living independently of us. You might say that, in so far as these birds have a 'natural environment', we're it. This paper focuses on a small population of roughly 30 house crows in the town of Hoek van Holland in the Netherlands, likely all descendants of two birds that arrived by ship in the mid 1990s. In 2014, after 20 years of peaceful co-existence, the government of the province of South Holland began the process of eradicating this population, worried that they may one day become a pest or threat to biodiversity. Just across the water from Hoek van Holland is the Port of Rotterdam – Europe's largest port – and an 'engine' for the global patterns of production, trade and consumption that are today remaking our world, ushering in what many are calling the 'Anthropocene.' Focusing on these crows and this port – in a way that is attuned to the broader placetimes that constitute our present – this paper seeks a more situated way into the relatively abstract notion of the Anthropocene. Working through the lens of 'hospitality', it explores the ways in which other species are made welcome – or not – in the places that we call our own. Telling the story of this little group of birds in a way that holds this port and its impacts in the frame, this paper asks how we might be required to rethink our responses to, to learn to live with, others in this difficult time.

Thom van Dooren is an environmental philosopher and anthropologist in the Environmental Humanities program at the University of New South Wales, Australia. His current research focuses primarily on the ethics and politics of extinction and conservation. His latest book, *Flight Ways: Life and Loss at the Edge of Extinction*, was published by Columbia University Press in June 2014. He is co-editor of the international, open-access, journal: *Environmental Humanities*. From September to December 2014 he will be a visitor in the Environmental Humanities Laboratory at the Royal Institute of Technology, Stockholm (on an intermittent basis). From November 2014 he will also be a Humboldt Research Fellow at the Rachel Carson Center, LMU Munich.

Disaster's Gift: Anthropocene and Capitalocene temporalities in Mahasweta Devi's 'Pterodactyl, Puran Sahay, and Pirtha'

David Farrier

University of Edinburgh, UK

Recent critical interventions on the Anthropocene have tended to highlight its implicit neo-imperialism (Crist) or its neglect of systematic critique (Malm and Hornborg; Moore). In particular, Jason Moore has criticized its dehistoricizing effect, proposing instead a systemic analysis of the Capitalocene to puncture the more grandiose forms of Anthropocene posturing (such as an equivalence between human and geological agencies). Yet Moore's argument also elides the rich potential in more subtle understandings of the Anthropocene's uncanny temporalities. In this paper I will approach the Anthropocene as a "provocation" (Yusoff) via an examination of the gothic ecologies of Mahasweta Devi's 'Pterodactyl, Puran Sahay, and Pirtha.' The novella, rich in untimely moments, depicts a journalist who investigates the appearance of an impossible creature (the pterodactyl) in a drought-afflicted tribal region of Bengal. Devi's text not only provides what Sharae Deckard calls "a praxis for reading the capitalist world-ecology in gothic literature," but also a means of recuperating the implicitly uncanny in Moore's world-ecology (in which, he says, "human agency is not purely human at all"). I propose that the titular creature in 'Pterodactyl...' is the emergence of the *wirkwelt*, the visible materialisation of ecological death in a particular time and place which is simultaneously radically open to other times and

places. Thus, as it bears witness to both the “politics of uneven time” (Sharma) and the “double death” of extinction narratives (Rose), ‘Pterodactyl...’ modulates the different, but equally vital orders of thinking and feeling offered by Capitalocene and Anthropocene debates.

David Farrier is Senior Lecturer in Modern and Contemporary Literature at the University of Edinburgh. He has published books on nineteenth-century Pacific travel (*Unsettled Narrative*, Routledge 2007) and political asylum in contemporary literature and film (*Postcolonial Asylum*, Liverpool UP 2011). His most recent publications include articles on water stress in Palestinian literature, ethical time in the work of Alice Oswald, and reading the work of Edward Thomas from the perspective of the Anthropocene. He also convenes the Edinburgh Environmental Humanities Network.

Shattering Seeds: Temporalities of Miracle Rice

Elaine Gan

University of California at Santa Cruz, USA

In the 1970s, farmers in Southeast Asia began planting "miracle rice" developed by agronomists at the International Rice Research Institute (IRRI, Los Baños, Philippines). Within a decade, miracle rice varieties came to dominate almost 90% of rice fields, fueling a Green Revolution in agriculture. Looking like ordinary seeds, they gave higher yields within shorter growth periods. But they depended heavily on fertilizers and pesticides, and thus may be considered as technoscientific organisms engineered for the forward-marching time of modernity. They enacted unprecedented collisions between life, markets, and progress.

This paper focuses on IR36, the most widely planted of the miracle rice varieties, in order to attend to the specificities of these collisions. Specifically, I look at temporalities of more-than-human agroecological practices that have been domesticated into food supplies or genetic resources for human use. Crossbred from 13 varieties in 1976, IR36 produced yields six times higher than a reported average of one ton per hectare. It could also be harvested in 107 days, two months earlier than the reported average. Its reliance on nitrogen fertilizers had unintended consequences. Accelerated and planned growth, chemical saturation, and biodiversity loss triggered the spread of insects and viruses that deformed grains and fields, particularly in the Philippines. IR36 was pulled from distribution in less than a decade, but the market logics that conditioned the temporality of miracle rice continue to structure agriculture today.

We can no longer consider rice as plant or commodity, a unit of ecological or economic relations. Rather, it is a coordinating device, a time machine that is constituted by, as well as constitutive of, a/synchronicities that materialize into worlds. It is not a mixing of nature and culture, but a technology that enacts the conditions of possibility through which both nature and culture become distinguishable, as if they inhabit different worlds.

In this paper, I draw on Deleuze's figurations of time—difference and repetition—to unfold the temporalities of miracle rice. Understanding the domestication of particular bodies as disruptions of life cycles and species synchronies that remake vast landscapes suggests an analytical tool for studying environmental and economic crises as breakdowns in coordination. Articulating IR36 as an assemblage of rice, insects, viruses, nitrogen, and humans begins to move away from unilinear clock time calculated solely by humans to temporal coordinations across incommensurable difference.

Elaine Gan is an artist who plays at the intersections of digital media, environmental anthropology, and feminist science & technology studies. She is the art director of Aarhus University Research on the Anthropocene (AURA) and a fellow in Architecture & Environmental Structures of the New York Foundation for the Arts (NYFA). Through writing, web-based projects, and art installations, she makes diagrams and clocks that enact temporalities of multispecies coordinations. Her doctoral research at University of California, Santa Cruz attempts to map the timing of organisms, landscapes, and machines. It is a search for speculative and hybrid methods for mapping worlds otherwise.

From Life to Life Support: Ecotechnological Futures in Space

Sabine Höhler

KTH Royal Institute of Technology, Sweden

During the Environmental Era of the 1960s and 1970s, visions of ecologically balanced worlds stimulated high hopes. Systems stability and equilibrium became key concepts. Particularly prominent was the vision of creating closed self-sustained ecological life support systems. The space capsule provided the blueprint to experiment with materially closed cycles. The paper will explore how at the intersection of space research and ecology “life” was transformed to “survival” based on “life support”. Holistic and selective views on life support systems will be discussed that merged sufficiency and efficiency solutions to environmental sustainability. The paper argues that the minimalist principle of survival collapsed images of recreation and creation, of paradisiacal pasts and ecotechnological futures.

Sabine Höhler is an Associate Professor of Science and Technology Studies at KTH Royal Institute of Technology in Stockholm, Sweden. Originally trained as a physicist she received her PhD in the history of science and technology. Her research addresses the history of the earth sciences in the 19th and 20th centuries in a cultural and global historical perspective: aviation and atmospheric physics; ocean exploration and physical oceanography; space flight and ecology. Her work on “Spaceship Earth: Envisioning Human Habitats in the Environmental Age” studies the discourse of environmental life support between 1960 and 1990. The book will be published with Pickering & Chatto Publishers, London, in spring 2015.

Unsettling Life/Death: Living with and as jellyfish

Elizabeth Johnson

University of Exeter, UK

In light of climate change and new threats to life on earth, questions of mortality and immortality in marine organisms have become an increasingly pressing concern. As harmful algae and jellyfish blooms threaten fisheries and put human health at risk, heightened attention has been paid to their extraordinary life cycles in attempts to protect coastal economies. But the study of ‘strange’ marine life cycles also seemingly offers more than the promise of ecological security. Research on the so-called “immortal jellyfish”, *Turritopsis dohrnii*, for example, has provided scientists with hope of eliminating the ultimate risk to human life: that of ‘natural’ death. Drawing on the work of Frederic Neyrat, I consider how the awareness of our mortality in the face of climate change is in tension with scientific practices that continue to pursue a ‘fountain of youth’ through research on the bodies of marine organisms. The presentation reflects a portion of emerging research in collaboration with colleagues at the University of Exeter and elsewhere, in which we are exploring how atypical life-cycles of nonhumans might help us to rethink “struggles for survival” beyond desires for immortality and biopolitical drives for power over life.

Elizabeth Johnson is a research fellow with the Science, Technology, and Culture Research cluster and Department of Geography at the University of Exeter. Her work centers on emerging connections among the bio-sciences, technological innovation, and environmental change. She explores how these trends open up new avenues toward life’s privatization and weaponization while also recasting nature as a participatory actor in the process. Her work has been published in the journals *Ephemera: Theory & Politics in Organization*, *Acme*, and *Progress in Human Geography*. She has papers forthcoming in *Theory, Culture, Society and Society and Space*. She is working on a book entitled *Life’s Work: Biomimesis and the Labor of New Natures*.

Towards a reading of temporal ecology and differentiated natural temporalities (durations, rhythms, tempos) in the narrative timescapes of modernity

Owain Jones

Bath Spa University, UK

Towards a reading of temporal ecology and differentiated natural temporalities (durations, rhythms, tempos) in the narrative timescapes of modernity / The film *The Day After Tomorrow* (2004) was notable for being one of the early Hollywood made, high budget general release films that addressed issues of climate change. Setting aside both its interesting twists – American citizens crossing into Mexico for security reasons, cynical and disbelieving national politicians eating humble pie, and mawkish family based sentiments that beset so many American movies – what interests me is the treatment of time in relation to narrative and plot. To affect a classic Hollywood pattern of quest, conflict, suspense and resolution within the narrative, the writers and director simply speeded the process of climate change so that America (and in fact the whole Northern Hemisphere) was subject to a new ice age in the period of six weeks!! Standard Hollywood motifs of (car) chases were created in a new forms. Killer temperature gradients literally chasing a protagonist and his comrades through the streets of New York, who just make their refuge in time, the killer weather sounding menacingly at the door just as they slam it shut. And two military helicopters being over taken and frozen out the sky by a another high speed killer weather front. This, and similar examples, tells us a lot about the challenges of representing ecological time within the temporalities of human narratives. Stories are the tissue – or essence - of life itself as A S Byatt says. They underpin constructions of the self, individual and collective identities, and cultural, social and political atmospheres more broadly. The narratives which dominate enlightenment culture are set at human pace and to human durations -so narratives of lives and generations of lives, and the twists and turns in the common time frames of human life, be they in hours, days, week, season, years, stages of life. *There is little tradition or skill within these modern narratives of extreme human exceptionalism and a split nature-culture, of weaving many forms of natural temporality into our stories.* Indeed it could be argued that modern narratives rest in part on stripping non-human temporalities out of our stories. Be they the differing processes speeds of non-human brains; the very other life cycles of other beings (from weeks to centuries): the ‘long’ rhythms within the biosphere such as ice ages, and sun spot cycles, we don’t know how (with some emerging exceptions) to tell stories with these other temporalities woven into the plot. This is one reason why, as the one of the greatest (most tragic) events ever unfolds (the unravelling of the current diversity of the biosphere by a self-other destructive single species), as the band Talking Heads put it, “as things fell apart, nobody paid much attention”.

Owain Jones is Professor of Environmental Humanities, School of Humanities and Cultural Industries, Bath Spa University.

Endlings, endings, and new beginnings

Dolly Jørgensen

Umeå University, Sweden

In April 1996, two men working at a convalescent center wrote a letter to the journal *Nature* proposing that a new word be adopted to designate a person or individual of a species that is the last in the lineage: endling. This had come up because of patients who were dying and thought of themselves as the last of their lineage. The word appears to have never caught on. Then, in 2001, when the National Museum of Australia (NMA) opened its doors, it featured a gallery called *Tangled Destinies* and endling reappeared. On the wall above a case with two thylacine specimens was written: Endling (n.) The last surviving individual of a species of animal or plant.

In this paper, I will examine the tensions between narratives of the extinction of a species with the death of last individual and a general unwillingness to believe the species has been lost. Using the historical cases of the European beaver’s extinction in Sweden and the thylacine’s extinction in Australia, I will trace the stories about a species’ end yet potential survival. In both places, the remoteness of the countryside led to continued belief for up to several decades after the last known individual died that individuals could be found alive. Yet as time progressed, the reality of the loss set in and new narratives told/invented the stories of the endlings, the last, to mourn and commemorate the lost. These somber narratives were counterbalanced by hopes of return -- through reintroduction for the beaver and deextinction for the thylacine. Looking at the interplay of these historical narratives, we see both despair and hope as reactions to extinction.

Dolly Jørgensen is an environmental historian who has researched a broad array of topics, including medieval forestry management, late medieval urban sanitation, the modern practice of converting offshore oil structures into artificial reefs, and environmentalism in science fiction. She was a practicing environmental engineer before earning a PhD in history from the University of Virginia, USA, in 2008. She is currently employed at the Department of Ecology & Environmental Science, Umeå University, Sweden, where she is working on a comparative history of animal reintroduction in Norway and Sweden.

"Ghost Species"

Shane McCorristine* and Bill Adams
University of Cambridge, UK

In recent years a series of artistic interventions have sought to effect creative resurrections of extinct and endangered species. Chief among those has been the Ghosts of Gone Birds project (2011-13) which toured Britain as a "sad exhibition of ghost stories", using spectral metaphors in its ruminations on disappearance and reappearance. With Ghosts of Gone Birds as its starting point, this paper will tease out some of the theoretical and empirical implications of taking the idea of 'ghost species' seriously.

Thinking about existence in an age that has witnessed mass extinction (disappearance), synthetic biology (reappearance), and the haunting of future generations (Anthropocene), we are led towards a new vocabulary of ghosts in order to make sense of what it means for a species to be 'on the cusp'. In classifying species either according to whether they are present and accessible, or extinct and lost to the human gaze, do we miss out on the spectral gatherings that hover on the fringes of visibility? What of transparent, cryptic, hidden, or resurrected species? In this paper we therefore introduce the idea that the spectre of absence is haunting conservation policies. What if the 'almost-gone' or 'barely-there' have a power that eludes the schematic representations of decline and disappearance publicised by the IUCN Red List? 'Ghost species' is an attractive label to channel paths about the extinct, but it must also inspire strategies that use and value indeterminacy in a mongrel world.

Shane McCorristine is an interdisciplinary geographer and historian with interests in polar exploration and the environmental humanities, focusing on the themes of embodiment and the spectral. He has published on the history of ghosts, Arctic exploration, and post-mortem punishment. He is currently a Wellcome Trust Postdoctoral Fellow at the University of Leicester and a College Lecturer in Geography at Downing College, University of Cambridge. (Presenting)

Bill Adams is the Moran Professor of Conservation and Head of the Geography Department at the University of Cambridge. He is interested in sustainability, resource development, ecological restoration, and the evolution of conservation ideas. Bill has published widely on these topics including "Green Development" (1990, 2001, 2009) and "Against Extinction: The Story of Conservation" (2004).

Im/mortal Perspectives: The "Useful Dead" in Contemporary Fiction

Susan McHugh
University of New England, USA

This paper explores how contemporary novelists incorporate a range of im/mortal characters to confront conditions marked by what Deborah Bird Rose terms "double death," and more specifically, to figure the future of traditional human-animal relationships at the crux of histories of genocide and extinction. It focuses on two contemporary novels, Linda Hogan's *People of the Whale* (2009) and Robert Barclay's *Mejal: A Novel of the Pacific*, (2002) both of which place indigenous hunters in scenes where a traditional chase of a whale and a dolphin, respectively, is botched. Within the narratives, the hunts are critiqued by not only people seeking protection for animal "victims." The hunters' long-dead ancestors and their gods also enter these scenes, and instead see ill-equipped people from tribal communities devastated by the colonial legacy injured or killed, and members of species whose future is likewise threatened and suffering prolonged, painful deaths, all as a result of radical ruptures to patterns of cross-species intimacy via massive-scale resource extractions and nuclear weapons testing.

To consider how the stories depict the influence of these supernatural – or, more appropriately, multi-natural – characters as highly contingent on the responsiveness of mortals to indigenous knowledges, I adapt Vinciane Despret's concept of "the useful dead" to literary analysis. As both immaterial specters and the stuff of history – things with a distinctly disembodied presence -- the useful dead people a category of thinginess that is distinct from all other things by nature of the response they inspire among the living. Their particular figurations in these novels suggests further a way of understanding how fiction itself participates in forming the response that is the thing that reanimates the useful dead in social life – that is, how it creates more hopeful ways of caring and knowing through what Steve Baker characterizes as "language that is somehow closer to its objects, enlivened by its objects," especially "its dead objects."

Susan McHugh, Professor and Chair of English at the University of New England, USA, is the author of *Animal Stories: Narrating across Species Lines* (Minnesota, 2011) – which was awarded the Michelle Kendrick Book Prize by the Society for Literature, Science, and the Arts in 2012 -- as well as *Dog* (Reaktion, 2004). She co-edited *Literary Animals Look*, a special issue of *Antennae: The Journal of Nature in Visual Culture* (2013) with Robert McKay, and *The Routledge Handbook of Human-Animal Studies* (Routledge, 2014) with Garry Marvin. McHugh serves as Managing Editor of the *Humanities for Society & Animals*, and she is a member of the editorial boards of *Antennae*, *Animal Studies Journal*, *Environment and History*, *H-Animal Discussion Network*, and *Humanimalia: A Journal of Human-Animal Interface Studies*.

Is Security Going Extinct?

Audra Mitchell

University of York/University of Edinburgh, UK

The concept of 'security' is paradoxical. It acknowledges the fragility of life and promotes strategies of 'survival' to mitigate this condition. Yet it also presumes that human interventions can guarantee survival – that is, ensure that life and death 'go on'. This belief in the power of human agency to shape the conditions of being is epitomized by Anthropocene security interventions, ranging from military invasions to conservation norms to massive geo-engineering projects. But does the concept of security have any meaning in the face of mass extinction? I argue that the temporal dimensions of mass extinction undercut the possibility of security in several ways. First, extinction is not simply an aggregation of deaths; it marks the cessation of both life and death. This undermines the biopolitical logics that contemporary security discourses, especially notions of 'resilience' that emphasise the persistence of life processes through time. Second, mass extinction is an what I call an 'enormity': a phenomenon that is massive in its spatio-temporal dimensions, and which has profound but largely unarticulated ethical significance. It vastly exceeds the frameworks of security – from the human-calibrated dimensions of international ethics to the linear temporality of intervention. Third, mass extinction is a multi-temporal process of becoming that problematizes two aspects of security: inattention to the emergence and destruction of worlds; and the drive towards stability. In articulating these arguments, this paper suggests that mass extinction negates the possibility of security, and calls for modes of response more attuned to the time, space and enormity of extinction.

Audra Mitchell is a Senior Lecturer in International Relations at the University of York, UK. She is currently a visiting fellow in the School of Politics and International Relations, University of Edinburgh, and in 2015 she will be a visiting fellow in the School of Social and Political Sciences, University of Melbourne. Audra has published widely in the areas of international security, philosophy and ethics, including her books *International Intervention in a Secular Age: Re-enchanting Humanity?* (Routledge, 2014), *Lost in Transformation: Violent Peace and Peaceful Conflict in Northern Ireland* (Palgrave, 2011), and (with Oliver Richmond) *Hybrid Forms of Peace: From the Everyday to Postliberalism* (Palgrave, 2011). She has published articles on a range of interdisciplinary subjects – from process thinking to cosmology to posthumanist conceptions of harm – in journals such as *Security Dialogue*, *Review of International Studies*, *Millennium*, *Third World Quarterly*, *Alternatives* and other journals. She also writes the blog 'Worldly IR' (www.worldlyir.wordpress.com). Audra is currently working on a major research project (funded by the Independent Social Research Foundation) exploring the ontology, ethics and security dimensions of mass extinction through the lens of posthumanist thought.

Deep Time as an Archive of Feeling (Queering the Anthropocene)

Astrida Neimanis

University of Toronto, Canada / Linköping University, Sweden

Speaking of 'public feeling,' Ann Cvetkovich recently wrote: "I think of our bodies as this site of weight-bearing. If you think of yourself as a sensory body who is feeling the atmosphere around you when you are connecting with people in a room, sometimes you carry their heavy energy as much as you are buoyed up by their joyous energy. We are a sensitive interface with the world. We are carrying historical residues, collective residues." Decades before, Audre Lorde wrote that "In order to withstand the weather we had to become stone." Neither of these queer, anti-racist feminist thinkers was knowingly intervening in debates on the Anthropocene or deep time, but I wonder how their thoughts on surviving a queer, marginalized life might bear on recent attempts to decenter the Anthropos, while enlivening non-human natures, as part of an ethical project of (to quote Yusoff) "fracking the Anthropocene." Put otherwise, how might Audre Lorde's observation inaugurate not a metaphorical but a material relation to stone-life—one in which all bodies are 'sensitive interfaces,' bearing the weight of other lives, injustices and joys? To think this human-inhuman kinship, I want to rethink the idea of deep time as a planetary "archive of feeling" (Cvetkovich) in which we can acknowledge affective transcorporeal time-travels and the residues of lives not only human but variously inhuman. In this case we need not only to read this archive for signs of past worlds, but we also need to ask about its mode of curation, and measures of literacy. What has been left out or off of these pages? What kinds of counterarchival practices, or "queer archive activism" (Cvetkovich) need to be enacted in order to seek, and perhaps find, feminist, queer, anti-racist and anti-colonial justice in deep time?

Astrida Neimanis is a feminist writer and teacher interested in water, weather, feminist alter-Anthropocenes and other such naturalcultural matters. She teaches at the University of Toronto (Canada) and is a Researcher with the Environmental Humanities Collaboratory / Posthumanities Hub of Linköping University (Sweden). Most recent publications include *Thinking with Water* (with C Chen and J MacLeod, MQUP, 2013), "Weathering: Climate Change and the Thick Time of Transcorporeality" (with R Walker, Hypatia 2014), "Alongside the Right to Water, a Feminist Posthumanist Imaginary" (Journal of Human Rights and Environment, 2014), "Natural Others? On Nature, Culture and Knowledge" (Sage Handbook of Feminist Theory, 2014) and "Speculative Reproduction" (philoSOPHIA 2014). Current collaborations involve thinking with ((pollen)) (with Perdita Phillips), extremophiles (with Kathy High, Oron Catts and others) and toxic life in the Gotland Deep (with Cecilia Asberg).

Poetics of place and trickeries of time: the creative challenges of evoking 'the anthropocene'.

Sara Penrhyn Jones

Aberystwyth University, UK

Time has emerged as a pivotal concept in climate-change communication. Projections of 'tipping points' have developed into thoughts that we may have 'run out of time', or even the impression that time has tricked us by moving too quickly. Following recent winter storms in the UK (in 2013-2014), the National Trust stated that the coastal town, Formby, had two years 'worth' of coastal erosion in one afternoon. If time (or nature) is acting too quickly, then the place we have landed in, bewildered and unprepared, is our own (compressed) future. A history of inadequate media coverage of the 'wicked problem' (Rittel and Webber, 1973) of climate change may be contributing to the perception of a giant, time-travelling leap towards a climate adaptation agenda that had previously belonged, if anywhere, to distant times and places. As a filmmaker I have recorded hundreds of interviews internationally about the effects of climate change, and travelled with scientists to Greenland. Here, I filmed glaciologists and biologists delving into the earth's older story of change, to translate the knowledge held in the ice-cores which pre-date human histories. The scientists' deep-time perspective help us realise how radically different the earth can be, yet also complicate notions of the anthropocene; very long-term climactic and geological imprints are not the same. The challenges of finding a language across media to frame the current ecological crisis in multiple temporal terms are manifold, complex, and a personal creative challenge. How can the past, present and future be visualised, or even unified as 'ectases' in a tangible image or piece of film? Can new technologies outsmart time? What *is* time in relation to humans and non-humans, and how does (must) time relate to place?

Sara Penrhyn Jones: I'm a creative practitioner as well as an academic, and have made award-winning observational documentaries for television, as well as participatory and new-media films for broadcasters, charities, NGOs, educational and activist organisations. I produced online content at UN Climate Change Conferences (2009, 2010 and in 2011), and have undertaken three trips to Greenland with scientists. My work has mostly centred on environmental issues and community engagement. I'm currently a Co-investigator on the three year AHRC 'Hydrocitizenship' project, as part of the Connected Communities programme and Principle Investigator on the AHRC project 'Troubled Waters, Stormy futures; heritage in times of accelerated climate change.'

Placing the Anthropocene

Libby Robin and Dag Avango

Australian National University / National Museum of Australia / KTH Royal Institute of Technology

Geological epochs are usually found in rock strata, but this new one is all around us and includes the present and the future, at least as constituted by a humanities vision. Svalbard's coal city, Pyramiden is a place shot through with Anthropocene imaginaries. At latitude 78 degrees north, Pyramiden, is born of Swedish mercantile imperialism in 1910, but now an industrial heritage site. It celebrates the industry of several nations, particularly Soviet Russia and its 1930s concept of modernity. Pyramiden is a time capsule where modernity, coal, mercantilism, globalism and strategic territoriality have all found a place just 1000 kilometres from the north pole, as a 'cultural landscape' under Norwegian environmental law.

Libby Robin FAHA is Professor of Environmental History at ANU, Senior Research Fellow at the National Museum of Australia and Guest Professor at the KTH Environmental Humanities Laboratory, Stockholm. Current projects include Collecting the future: museums, communities and climate change, The Culture of Weeds and Expertise for the Future. Libby is author of How a Continent Created a Nation (NSW Premier's Australian History Prize 2007), Flight of the Emu (Victorian Premier's prize for science writing 2003), and co-editor of Boom and Bust: Bird Stories for a Dry Country (Whitley Medal 2009). One recent book is The Future of Nature: Documents of Global Change (Yale UP) (New England Book Prize for Anthologies 2013). She and Iain McCalman edit Routledge Environmental Humanities book series.

Dag Avango is a researcher in the Division of History of Science, Technology and Environment at the Royal Institute of Technology (KTH), Stockholm.

On time, finitude and infinite compassion: How do we begin to care?

Astrid Schrader

University of Exeter, UK

How do we begin to care about 'unloved others' about animals we don't already form close bonds with, that are not part of a charismatic megafauna and for whom empathy or mutual recognition seem far-fetched, such as for insects or microbes, for example? Is there a necessary limit to human compassion or our passions for 'the animal'? In his recent book *Before the Law*, Cary Wolfe suggests that the undifferentiated appreciation of all forms of life is untenable. 'We must choose', he insists, 'and by definition we cannot choose everyone and everything at once'. Why under what circumstances would 'choice' be necessary? Drawing on the work of Jacques Derrida, this paper revisits the questions of care and compassion for 'the animal' in relation to conceptions of finitude and time. As Wolfe is a close reader of Derrida, his appeal to choice and the introduction of a new functional 'limit' between kinds of animals seems troubling. I suggest that crucial differences manifest themselves in divergent conceptualizations of time. For Derrida compassion issues from vulnerability due to the finitude that we share with all living beings. Rather than extending or simply multiplying the limit between human and nonhuman animals, he suggests changing its logic. This paper then explores how Derrida's 'abyssal logic' reconfigures the relations between life and death, finitude and infinitude and what that could possibly entail in terms of hope for 'unloved others' (Rose & van Dooren).

Astrid Schrader is currently an Advanced Research Fellow at the University of Exeter in the Department of Sociology, Philosophy, and Anthropology. She received her PhD in History of Consciousness at UC Santa Cruz. Astrid works at the intersections of STS, human-animal studies and feminist and poststructuralist theories. Her recent work has been exploring questions of responsibility, care, and agency in scientific knowledge production, new ontologies, and the relationship between anthropocentrism and conceptions of time. Her current project examines the scientific reconfigurations of life and death through research on programmed cell death in unicellular marine microbes. Her work has been published in the journals *Social Studies of Science*, *Environmental Philosophy* and *Differences*. She recently co-edited (with Sophia Roosth) a special issue of *Differences* titled "Feminist Theory out of Science".

Is loss a precondition for activism? Critiquing mourning / melancholia distinctions in the context of ecological irreversibility.

Stefan Skrimshire

The University of Leeds, UK

This paper begins by recalling Cormac McCarthy's exploration of memory loss in *The Road*: a thought experiment for the Anthropocene if ever there was one, and for the possible value in keeping memory of things his burnt world no longer recognises - "of things that cannot be put back". I argue that this dilemma – what to imagine into our futures, what to accept has become our past forever – is an under-explored tension within environmental practices of resistance to extinction (as strategically diverse as those of climate action, survivalism, or de-extinction technologies). Furthermore I look critically at the claim, made both by activists and philosophers, that 'working through' loss could constitute a basis for political engagement rather than despair. The often cited Freudian distinction between mourning (in which attachment to the lost object is overcome) and melancholia (in which attachment becomes pathologically 'fixed') has, I will argue, blurred some of the useful nuances of this debate. Are there not grounds for the activist to retain something of the spirit of melancholia, acknowledging the 'forever' of loss? To delve back into such muddy waters, I draw upon two opposing legacies in the western philosophical and theological canon – represented by G.W.F. Hegel's and Walter Benjamin's respective thinking on mourning, dialectic and eternity – as competing temporal frames for the Anthropocene. A desire to overcome loss on the one hand, and to redeem and 'fix' it through memory, on the other.

Stefan Skrimshire is a lecturer in Theology and Religious Studies at The University of Leeds, UK. He teaches courses in the broad areas of Religion and Politics, and Ethical Theory. His research spans political theology, continental philosophy and environmental ethics. The theme that unites these is a long standing interest in the formation, in both Christian doctrine and western philosophy, of apocalyptic and eschatological thought; more specifically in the impact of apocalypse belief upon contemporary environmental and political movements. He is the author of *Politics of Fear, Practices of Hope: De-politicisation in a Time of Terror* (Continuum 2008) and editor of *Future Ethics: Climate Change and Apocalyptic Imagination* (Continuum 2010). He has published numerous chapters and articles on apocalyptic, messianic and eschatological themes in journals such as *Political Theology*; *Cultural Politics*; *Environmental Philosophy*; *Journal for Cultural Research*; *Literature and Theology*. Between 2007 – 2010 he led a research project on apocalyptic imagination and climate activism at The University of Manchester. He is currently in the planning stages of a new interdisciplinary research project at Leeds called 'Religion and the Anthropocene: Rethinking Belief in Progress, Crisis and Deep Time'.

http://www.leeds.ac.uk/arts/profile/20042/927/stefan_skrimshire

<http://skrimshire.org.uk/>

The Martian Book of the Dead

Bronislaw Szerszynski

Lancaster University, UK

It is 2197. In response to massive environmental change, scientific and technological developments and extra-terrestrial contact, Earth religions and cultures have gone through an upheaval known as the Second Axial Age, which has involved embracing a radical new metaphysics of matter, time and space. Mars has been settled and terraformed, and a new branch of Buddhism established there: Mangalayana or 'Mars-vehicle' Buddhism. In

this presentation we will hear the introduction to an edition of the Mangalayana text popularly known as the 'Martian Book of the Dead', which is used to prepare the dying for the experience of 'interval-being' and the possibility of liberation into the deep becoming of the planet.

The presentation is based on Bronislaw Szerszynski (2014) 'Liberation through hearing in the planetary transition: funerary practices in twenty-second-century Mangalayana Buddhism', in *Grain/Vapor/Ray*, edited by Katrin Klingan, Ashkan Sepahvand, Christoph Rosol and Bernd M. Scherer, Berlin: Haus der Kulturen der Welt. <http://www.lancs.ac.uk/staff/isabs/liberation.pdf>

Bronislaw Szerszynski is Head of Department at the Department of Sociology, Lancaster University, UK, where he also works at the Centre for the Study of Environmental Change (CSEC). His research places contemporary changes in the relationship between humans, environment and technology in the longer perspective of human and planetary history, drawing on social theory, qualitative sociological research, geophilosophy and the environmental humanities. Current topics of interest include climate geoengineering and the social and philosophical implications of the Anthropocene. He is author of *Nature, Technology and the Sacred* (2005), and co-editor of *Risk, Environment and Modernity* (1996) *Re-Ordering Nature: Theology, Society and the New Genetics* (2003) and *Nature Performed: Environment, Culture and Performance* (2003). He also guest-edited special double issues of *Ecotheology* on 'Ecotheology and Postmodernity', (2004), and *Theory Culture and Society* (2010, with John Urry) on 'Changing Climates'. His collaboration with Bruno Latour and thirty artists on the Anthropocene Monument will be staged at Les Abattoirs, Toulouse, October 2014 – January 2015.

De-Extinction and Melancholia: Narcissistic Attachments

Emily Thew

University of Sheffield, UK

Thom van Dooren and Deborah Bird Rose argue that rhetoric which frames de-extinction projects as progressive tools to overcome extinction disregards the need to 'dwell' with extinction through a process of mourning allowing us 'to learn from and "work through" experiences of loss' in order to come to an altered understanding of the world and our own relationships within it.

Responding to this, I argue that de-extinction projects are inherently melancholic. In his 1917 essay 'Mourning and Melancholia', Sigmund Freud argues that melancholic attachments can be seen as related to a loss of ego rather than of object, and as such the melancholic's inability to work through and detach from the lost object is a direct result of the 'narcissistic foundation' of the initial object attachment. The tendency for de-extinction projects to be framed as moral endeavours seeking to undo the effects of human-caused extinction in a process of necessary atonement would suggest an attempt to repair a collective human ego is at work. However Freud's suggestion that the immortality of the ego is most fully secured in the narcissistic relationship of parent to child is a useful way to think through the complexity at work in the relationships between scientists and the nonhuman animal children they hope to create, their narcissistic investment in whom is linked to the immortality of the human ego in ways that trouble species boundaries.

Emily Thew is an English Literature PhD student at the University of Sheffield and is funded by the Wolfson Foundation. Her research examines the ethical interactions between embodied beings in contemporary literature, particularly focusing on ill and animal bodies in relation to grief and mourning. She recently co-organised the symposium 'Animal Machines: Animals and/as Technology' held at Sheffield University.

Anthropogenesis: Rescue Genetics in the Anthropocene

Stephanie S. Turner

University of Wisconsin-Eau Claire, USA

Following Crutzen's suggestion to rename the current epoch the "Anthropocene" in 2002, the term quickly became salient beyond the academy. Journalists repeatedly ask some version of the question, "What is the Anthropocene and are we in it?" while artists envisage an "accelerationist" aesthetics of time and space

(Bratton, 2013) and entrepreneurs work on a clock that will tick for 10,000 years (Long Now Foundation). We are simultaneously contending with the accumulating evidence of our global impact and thinking ahead to the next epoch. What is this new now? Could the Anthropocene be a sort of anthropogenesis?

For recently extinct species, reconceptualizing the present epoch as the Anthropocene is good news: the current mass extinction has at last become aligned with climate change, habitat destruction, and other Earth-wide anthropogenic effects, with the potential to advance conservation both philosophically and practically. As evidence, some ecologists and conservation biologists are tackling projects with intriguingly chronological connotations: backbreeding species to resemble their wildtype ancestors, rewilding habitats to restore former ecosystems, and developing synthetic biology to de-extinguish species. Recuperating the past to create a different future than current circumstances presage, these projects intercede in evolutionary processes in unprecedented ways. All three projects reimagine not only time and place, but also species. How do genetic rescue projects reconceptualize these human constructs? This presentation, part of a larger project examining cultural responses to the current mass extinction, analyzes philosophical concerns about nostalgia, nationalism, and species integrity evoked by genetic rescue strategies.

Stephanie S. Turner's scholarship works at the intersections of Science Studies and Animal Studies to consider the critical historical and cultural factors influencing the ways scientists and artists describe, archive, and represent living things and, in turn, to examine the ways these representations influence the wider culture's perception of the living world. Her most recent article, "Relocating 'Stuffed' Animals: Photographic Remediation of Natural History Taxidermy," published in *Humanimalia: A Journal of Human/Animal Interface Studies*, explores the phenomenon of photographers making images in natural history museums. At present she is working on a larger manuscript examining scientists' and artists' representation of the current mass extinction of species. She teaches in the Rhetorics of Science, Technology, and Culture program at the University of Wisconsin-Eau Claire in the US.

