

Engaging Expertise in Disaster Governance

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DISASTER GOVERNANCE.ASIA

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This workshop is organised by the Asia Research Institute, National University of Singapore; with support from MOE TIER 2 Grant — Governing Compound Disasters in Urbanizing Asia.

As the frequency and interactive impacts of environment-related disasters continue to rise in Asia and around the world, a shift from expert and professional management of disasters to emerging forms of disaster governance is occurring. By using the term governance, the intention is to acknowledge that disasters are political, and, further, they engage many forms of knowledge and expertise that require governance mechanisms to accommodate, integrate and resolve. At this workshop we aim to explore the production, circulation, interaction, and uses of different kinds of knowledge and expertise in governance for resilience, disaster planning and disaster recovery, especially in the context of urbanizing Asia, which is under the growing spectre of compound, enviro-technical catastrophes in the Anthropocene Age.

We are particularly interested in the following modes of “engagement”, each of which provokes questions about social epistemology, politics, and ethics in the governance of urban communities and their rural hinterlands:

1. Contests and collaborations across scales, such as those involving local knowledge and technical expertise (e.g., collaborative disaster planning projects in which experts and local residents participate)
2. Contests and collaborations across disciplines, such as those involving technical experts from distinct disciplinary traditions (e.g., endeavors in which social scientists work with engineers)
3. “Engaged scholarship” from critical traditions in the humanities and social sciences (such as this workshop's participants).

On this last point, many of us who are interested in disasters and their impacts aim for our research to reach beyond the University to help people who are dealing with the threat or aftermath of disaster. But the critical academic traditions have historically vexed relationships with applied research programs with regard to interventions in the so-called “real world,” whether they be actions “on the ground” or contributions to policy. Thus, we ask: what are the possibilities for this “engaged scholarship”, what might it look like, and what does it entail methodologically when moving knowledge(s) to action? We wish not just to explore these questions in the abstract, but to propose some answers and future directions. As such, in addition to conventional presentations and panels, we will watch one scholar’s documentary film and discuss with him the possibilities and limitations of narrative media as a viable mode of intervention; and we will also journey on a field trip to a site of controversy and action in Singapore.

We theorize “engagement” as a socio-political process in the production of knowledge, implicating four dimensions: (1) normative (ethics/values), (2) explanatory (theory and evidence) of real world conditions and drivers, (3) policy (what to do with what policy tools), and (4) action (implementation/mobilization). Each dimension, in turn, entails epistemological questions that also traverse across the other dimensions. Thus, each may be associated with (1) e.g., the good society, moral economy, utopian dreams, etc.; (2) e.g., competing paradigms of how the world works — Marxist, neoclassical economic, Weberian, etc.; (3) e.g., sector experts, policy makers, and state-aligned technocrats; (4) e.g., participatory planning and action. The problematic is that prevailing forms of governance inhibit social learning within and across the dimensions and also privilege a few voices over the many. Thus, we ask: how can we find innovative modes of engagement that connect all four dimensions with all voices (ways of knowing) toward disaster recovery and resilience?

This workshop will explore analytical and normative questions regarding the roles of expertise — including local and various forms of technical expertise — in disaster governance, in the context of urbanizing Asia, through the lens of engagement. How do/should technical specialists from different disciplines engage with each other? How do/should they engage with local communities and putatively non-expert residents? How do/should residents engage with scientists, engineers, planners, physicians, and other experts whose knowledge may bear on, e.g., reconstruction of the built environment or the environmental risks of radiation and other toxins? What kinds of local knowledge are/should be taken into account by ethical and effective, democratic governance processes? Moreover, we reflexively ask: how should scholars from the humanities and critical social sciences — such as ourselves — engage with such processes, communities, and experts? What are our own ethical responsibilities vis-à-vis disaster governance?

CONTACT DETAILS

Workshop Convenors

Dr Tyson VAUGHAN

Asia Research Institute, and Tembusu College, National University of Singapore

E | arietv@nus.edu.sg

Dr Eric KERR

Asia Research Institute, Tembusu College, and Department of Philosophy, National University of Singapore

E | eric.kerr@nus.edu.sg

THURSDAY, 7 JANUARY 2016**09:15 – 09:30 REGISTRATION****09:30 – 09:45 WELCOME & INTRODUCTORY REMARKS****Jonathan RIGG**, National University of Singapore**Eric KERR**, National University of Singapore**Tyson VAUGHAN**, National University of Singapore**09:45 – 10:00 FIRST WORKSHOP REPORT – TOKYO****Eli ELINOFF**, National University of Singapore**10:00 – 11:00 KEYNOTE ADDRESS**Chairperson **Jonathan RIGG**, National University of Singapore10:00 **We Have Learned Our Lessons: Moving Disaster Research into Practice****Scott G. KNOWLES**, Drexel University, USA

10:45 Discussion

11:00 – 11:30 MORNING TEA**11:30 – 12:40 PANEL 1 | INTERVENTIONS**Chairperson **Caroline BRASSARD**, National University of Singapore11:30 **Red Politics/Green Politics/Water Politics in Fiji and Singapore****Martha KAPLAN**, Vassar College, USA11:50 **A Multiscalar Perspective on Engaging Expertise in Participatory Disaster Governance – Resilience, Compound Disasters and Mega-trends in Urbanizing Asia****Mike DOUGLASS**, National University of Singapore

12:10 Discussion

12:40 – 13:40 LUNCH**13:40 – 14:50 PANEL 2 | MORAL AND ETHICAL DIMENSIONS OF DISASTER GOVERNANCE EXPERTISE**Chairperson **Axel GELFERT**, National University of Singapore13:40 **Disaster Governance, Moral Experts, and Confucian Moral Philosophy****WONG Pak-Hang**, Hang Seng Management College, Hong Kong14:00 **The Ethics of Disaster Governance****Behnam TAEBI**, T.U. Delft, Netherlands

14:20 Discussion

14:50 – 15:00 BREAK**15:00 – 16:10 PANEL 3 | COMMUNITY ENGAGEMENT IN DISASTER RECOVERY**Chairperson **Rita PADAWANGI**, National University of Singapore15:00 **Constructing an Expertise of Engagement****Tyson VAUGHAN**, National University of Singapore15:20 **Participatory Cultural Heritage Recovery: A Way for Supporting Sustainability****Khaerun Nisa**, Atma Jaya Yogyakarta University, Indonesia

15:40 Discussion

16:10 – 16:40 AFTERNOON TEA

THURSDAY, 7 JANUARY 2016

16:40 – 17:40 INTERLUDE | ENGAGING NARRATIONS: DOCUMENTARY FILM

Chairperson **Simone CHUNG**, National University of Singapore

A Journey to Namie (15 mins) by **Sulfikar Amir**, Nanyang Technological University, Singapore

This is a documentary short film that follows a trip of the filmmaker to a small town in Fukushima, Japan. The story focuses on Namie, a fishermen town surrounded by a river and mountains located only 20 kilometers from Fukushima Daiichi nuclear power station. When the 3.11 disaster struck the area, Namie was severely damaged by both earthquake and tsunami. The nuclear meltdown at Fukushima Daiichi caused worse impact on Namie. Within a few hours after the release of radioactive materials from the nuclear power station, all Namie residents were rushed to evacuate. Four years after the nuclear disaster, Namie remains an empty town abandoned by its residents. Reconstructions are underway to decontaminate the area. However, whether and when Namie residents are able to return to their hometown remain to be seen. Exploring an array of contaminated places in the town, this documentary captures the voiceless of Namie as a victim of natural and man-made disasters.

17:40 END OF DAY ONE

18:00 – 20:00 WORKSHOP DINNER (FOR SPEAKERS, CHAIRPERSONS & INVITED GUESTS ONLY)

FRIDAY, 8 JANUARY 2016

10:00 – 11:30 FIELD TRIP TO NEWATER VISITOR CENTRE (FOR SPEAKERS, CHAIRPERSONS & INVITED GUESTS ONLY)

11:30 BUS TRANSFER FROM NEWATER VISITOR CENTRE TO ASIA RESEARCH INSTITUTE

12:00 – 14:00 LUNCH AT ASIA RESEARCH INSTITUTE

14:00 – 15:00 PANEL 4 | TEMPOS AND TEMPORALITIES OF DISASTER GOVERNANCE

Chairperson **Eli ELINOFF**, National University of Singapore

14:00 **Anticipating Disaster, Fast and Slow: Asia in Comparative Perspective**

Kim FORTUN, Rensselaer Polytechnic Institute, USA

14:30 Discussion

15:00 – 16:30 OPEN ROUNDTABLE | ENGAGED SCHOLARSHIP

Facilitator **Eric KERR**, National University of Singapore

Lead Discussants **Kim FORTUN**, Rensselaer Polytechnic Institute, USA

Scott G. KNOWLES, Drexel University, USA

Michelle MILLER, National University of Singapore

Lisa ONAGA, Nanyang Technological University, Singapore

16:30 – 17:00 AFTERNOON TEA

17:00 – 17:45 CLOSING REMARKS | NEXT STEPS

Eric KERR, National University of Singapore

Tyson VAUGHAN, National University of Singapore

17:45 END OF WORKSHOP

KEYNOTE ADDRESS

We Have Learned Our Lessons: Moving Disaster Research into Practice

SCOTT G. KNOWLES

Drexel University, USA

scott.gabriel.knowles@drexel.edu

The rhetoric of "learning lessons" from disaster is pervasive. With so much learning going on, we might expect fundamental shifts in technological risk-taking, environmental policy, and the reduction of disaster vulnerabilities. Yet, there is little evidence to suggest that learning from disaster results in meaningful disaster risk reduction. The "resilience revolution" that has swept across the global disaster bureaucracy and technical disaster research fields is at a critical stage--will "resilience" actually materialize into measurable risk reduction for the poor and the exposed? What are the impediments holding disaster research performed in the social sciences and health fields back from meaningful engagement with policy? What are the potential ways forward? The time to "learn lessons" has passed. This talk suggests that the time is now for disaster researchers across different fields to rethink their approaches towards engagement.

PANEL 1

Red Politics/Green Politics/Water Politics in Fiji and Singapore

MARTHA KAPLAN

Vassar College, USA

makaplan@vassar.edu

Neither Fiji nor Singapore faces immediate environmental disaster. But in this paper, discussing the water challenges they have faced, I will highlight the role of resilience in postcolonial circumstances. "Red Politics/Green Politics/Water Politics," contrasts water policy and consequences in postcolonial Fiji and Singapore. Fiji seems initially a stereotypical third world site, a former sugar colony now exploited by a wildly successful North American beverage corporation. But external corporate exploitation is not the only issue for Fiji's ongoing land, water and resource politics. The Fijian side of Fiji water's story engages a particular and powerfully ongoing anticolonial local history of the site of production, and the national level ethnic politics that led to multiple ethno-nationalist coups. Singapore's colonial past was as a resource colonizer. Previously relying on imported water, the Singapore state now focuses on technologies for water self-sufficiency, most famously NEWater (reclaimed waste sewage water, treated with dual membrane and ultraviolet technologies). Strikingly different from Fijian water which is sold to Americans as natural and Edenic, Singapore's state NEWater is clearly engineered. Some of Singapore's state technologies are also semiotic, including the endearing anthropomorphized water drop, Water Wally, the mascot who represents the Public Utilities board. In everyday life, many Singaporeans transform their public water in kitchens and kettles, in ways that both comment on and mirror the valence of water of the postcolonial nation-state. In sum "Red Politics/Green Politics/Water Politics" considers key water contrasts in these two nation-states to think about how environmental politics intersect with classic analyses of power in post-colonial places.

PANEL 1

A Multiscalar Perspective on Engaging Expertise in Participatory Disaster Governance – Resilience, Compound Disasters and Mega-trends in Urbanizing Asia

MIKE DOUGLASS

Asia Research Institute, and Lee Kuan Yew School of Public Policy, National University of Singapore
arimike@nus.edu.sg

In Asia's age of rapid urbanization, disasters are increasing in number, impacts and costs. They also increasingly have anthropogenic causalities that emerge well before and create vulnerabilities that compound far beyond the moment of a disaster event. In this context, disaster management by experts is insufficient in either preparing for or tackling manifold recovery problems. Instead, inclusive participatory governance approaches are needed to bring many voices and types of knowledge, resources and energies to create on long-term capacities for disaster resilience. Such capacities also need to operate across scales of causalities and responses. Of particular concern are the dynamics of megatrends that intersect in particular configurations at specific localities to further unsettle prospects for resilience. In pursuing a social learning framework for disaster resilience, a principal question is how to empower and mobilize people at grassroots levels to scale up to macro levels of political decisionmaking and action.

PANEL 2

Disaster Governance, Moral Experts, and Confucian Moral Philosophy

WONG PAK-HANG

Department of Social Science, Hang Seng Management College, Hong Kong
phwong@hsmc.edu.hk

Experts and expert knowledge have an important role in disaster preparation, response, and recovery in a world characterised by *the fact of expertise*; and, the question *who are experts (and, who are non-experts)* is one of the central questions in disaster governance, as it addresses the issue of legitimacy (i.e. who *can* make decisions?) and ascribes responsibility (i.e. who *should* make decision?) before, during, and after disasters strike. Different accounts of the boundary between experts and non-experts have been offered. For example, it has been suggested that expertise is socially constructed, and thus the *all* boundaries in decision-making should be open for contestation (e.g. Jasanoff, Wynne); on the other hand, it is argued that expertise is grounded on objective measures (e.g. Sunstein), and thus it is the experts who have legitimacy and responsibility of decision-making. Interestingly, *moral expertise* is either denied or ignored in the discussion. However, the possibility of moral expertise will have significant implications to the decision-making in disaster governance, particularly to the questions of legitimacy and responsibility. Using Confucian moral philosophy as an example, I illustrate the need to (re)consider the question about moral expertise in disaster governance and its implications to the field.

PANEL 2

The Ethics of Disaster Governance

BEHNAM TAEBI

Ethics/Philosophy of Technology, Delft University of Technology, the Netherlands,
and Belfer Center for Science and International Affairs, Harvard University, USA
b.taebi@tudelt.nl

This paper has two goals. In the first part I will present justice as an overarching notion for addressing the ethical issues of disaster governance. In different stages of disaster mitigation, preparation, response and recovery, there are three justice issues at play, namely distributive justice, recognition of those affected and procedural justice. In the second part, I focus on procedural justice. I argue that good governance of disasters requires that we at least warrant i) the quality of information (i.e. transparency, credibility of knowledge and information and trust) and ii) the fairness in stakeholders engagement (i.e. inclusiveness and due process in participation). The paper will focus on disasters that involve radiological risk such as the Fukushima-Daiichi disaster in 2011, but the rationale of the argument is more broadly applicable. Similar to discussions on good governance of risk, I argue that the ambition of good disaster governance should be to provide a conceptual and normative framework to deal with the complexity of knowledge and information and to ensure a fair process during all stages of disaster governance.

PANEL 3

Constructing an Expertise of Engagement

TYSON VAUGHAN

Asia Research Institute, National University of Singapore
arietv@nus.edu.sg

In the reconstruction of the tsunami-devastated northeastern coast of Japan, local recovery planning endeavors largely follow “the Kobe Way:” participatory planning that involves local residents and government officials facilitated by expert consultants. This paper excavates the history of this approach, and tells how a particular group of technical experts — engineers, planners, architects, etc. — became, in their own words, “a new breed of specialists” by constructing a new field of expertise paradoxically predicated upon the reflexive consideration and incorporation of local knowledge, alternative perspectives, and the engagement of non-experts. The Great Hanshin-Awaji Earthquake, which devastated Kobe in 1995, prompted Japan’s most significant large-scale urban reconstruction since World War II. A peculiar set of social and historical conditions set the stage for Kobe’s recovery. On the one hand, the city’s history of industry-oriented technocratic city planning and development had earned it the nickname “Kobe Inc.” On the other hand, it had nurtured an active grass-roots planning movement of neighborhood-based *machi-zukuri* (“community making”) organizations. Recovery planning after the earthquake was thus characterized by a combination of technocratic, centralized city planning and community-based participatory recovery planning (PRP) through *machi-zukuri* organizations. Through the collaborative process of re-constructing Kobe, locally based expert consultants and other *machi-zukuri* participants constructed PRP as a particular field of expertise while establishing the consultants themselves as experts in that field. By popularizing and institutionalizing their approach, they have influenced subsequent and ongoing disaster recovery processes elsewhere in Japan and the world. Moreover, their approach gestures toward an alternative, richer and more inclusive regime of urban and sociotechnical governance.

PANEL 3

Participatory Cultural Heritage Recovery: A Way for Supporting the Sustainability

KHAERUN NISA

Department of Architecture, Atma Jaya Yogyakarta University, Indonesia
khaerunnisa@mail.uajy.ac.id; khaerunnisa1984@gmail.com

Participation of the beneficiaries is a key feature in the recovery program. Engaging the public, in one way or another, is crucial to achieving a holistic and sustainable recovery from a disaster. This research focuses on how beneficiaries for holistic recovery might be engaged in the recovery process, to ensure the sustainability of the cultural heritage. Seven participatory cases from post 2006 Yogyakarta earthquake and 2008 west Sumatra earthquake have been selected and evaluated based on the variety of frameworks and actors. The frameworks of engaging local people by INGO, University, private company, religion and cultural association as well as local organization become the main discussion in this paper. As result, people centred recovery framework has proven effective to support timely recovery process by utilizing the indigenous framework at the local level prior the earthquake for recovery purposes. Nevertheless, without engagement of heritage expert, this condition can give more threats to the heritage buildings. Accordingly, it is very important to support them with appropriate consideration and knowledge on cultural heritage conservation, in order to prevent the degradation of cultural heritage assets after the recovery. The above mentioned results required to be explored to find the opportunity for elaborating with the factual condition of the available framework, especially in role sharing between private sector, community as well as government.

PANEL 4

Anticipating Disaster, Fast and Slow: Asia in Comparative Perspective

KIM FORTUN

Department of Science and Technology Studies, Rensselaer Polytechnic Institute, USA
fortuk@rpi.edu

Anticipating disaster depends on the availability of expertise, data infrastructure, and complex coordination among diverse organizations. Flash events (the 2001 World Trade Center disaster in New York City, for example) also shape disaster anticipation, as do historically and culturally sedimented styles of governance and political communication. In this presentation, I will sketch an analytic framework for characterizing disaster anticipation in different regions, casting Asia in comparative perspective.

ABOUT THE WORKSHOP PARTICIPANTS

Axel Gelfert is Assistant Professor in the Department of Philosophy, National University of Singapore. He completed his PhD in History and Philosophy of Science at the University of Cambridge in 2005, having previously studied Physics at the Humboldt University in Berlin and the University of Oxford. Before coming to Singapore, he held a Junior Fellowship at Collegium Budapest (Institute for Advanced Study) in Hungary, where he also guest-lectured in the Department of Philosophy and History of Science (Budapest University of Technology and Economics). In the summer of 2009, and again in 2011, he was a Visiting Research Fellow at the Institute for Advanced Studies in the Humanities, University of Edinburgh. His research and teaching revolve around issues in the philosophy of science and technology, social epistemology, and the history of philosophy.

Behnam Taebi is an Assistant Professor of philosophy at Delft University of Technology, and a Research Fellow at Harvard Kennedy School's Belfer Center for Science and International Affairs. His research interests are in energy ethics, responsible innovation and nuclear ethics. He studied Material Science and Engineering (2006) and received his PhD in Philosophy of Technology (2010). Taebi is working on a research on 'ethics and governance of multinational nuclear waste repositories'. He is the coordinating editor of a volume on *The Ethics of Nuclear Energy* (2015, Cambridge University Press) and a special issue of *Journal of Risk Research* on "The Socio-technical Challenges of Nuclear Power Production and Waste Management." Taebi is a member of the European COST Action project 'Disaster bioethics: addressing ethical issues triggered by disasters' and also a member of Task Group 97 of the International Commission of Radiological Protection (ICRP) that is preparing a publication on the protection of the public, the workers and the environment for surface and near surface disposal of radioactive waste.

Caroline Brassard worked as an economist for the Government of Ontario in Canada, and then undertook research and long term consultancy work on poverty reduction strategies for several international non-governmental organizations in developing countries, including United Nations Children's Fund in Madagascar, CARE in Bangladesh and Save the Children in Vietnam. She then went on to undertake a PhD in Economics at the University of London, where she taught empirical analysis for economics and management for two years, prior to joining the Lee Kuan Yew School of Public Policy, National University of Singapore. Dr Brassard continues to consult with various international organizations including the United Nations Development Program and she teaches on aid governance, research methods, economic development policy, poverty alleviation strategies and empirical analysis for public policy. Her current research focuses on aid governance in Bhutan, Nepal, Indonesia and Vietnam, comparing policies to alleviate poverty and reduce inequalities, Bhutan's development based on Gross National Happiness and the development policy lessons from the Post-Tsunami reconstruction in Aceh, Indonesia.

Eli Elinoff is currently a joint Postdoctoral Fellow in Asian Urbanisms in the National University of Singapore's Department of Sociology and the Asia Research Institute. He received his PhD in Anthropology from the University of California, San Diego. He is currently working on a book manuscript that explores questions of democracy, citizenship, and urban sustainability through an ethnographic examination of new forms of participatory planning and historical struggles over land rights in Khon Kaen, Thailand. He has publications in *South East Asia Research*, *Political and Legal Anthropology Review*, and *Contemporary Southeast Asia*. He has also begun new research on urban ecologies and concrete in contemporary Thailand.

Eric Kerr is Postdoctoral Research Fellow in the Science, Technology & Society cluster at the Asia Research Institute, Lecturer in the Department of Philosophy, and Fellow of Tembusu College, National University of Singapore. He writes primarily on the philosophy of technology and epistemology, with a focus on petroleum engineering. He is currently working on issues of risk, safety, expertise, responsibility, evidence, artefacts, perception and cognition based on his philosophical research and fieldwork with engineers in Thailand. Eric received his PhD from the University of Edinburgh in 2013 and has been a visiting researcher at the University of Vienna and TU Delft.

Jonathan Rigg is a development geographer interested in illuminating and explaining patterns and processes of social, economic and environmental change in the Asian region and the impacts of such changes on ordinary people and everyday life. In his work, he has tried to give a “face” to the individuals buffeted by modernisation and ascribe to them an agency which is sometimes absent in higher level interpretations of change. He has been concerned to treat ordinary people as special and the geographical contexts in which they live – and which they help to shape – as distinctive. He is currently working on three projects: an international, interdisciplinary study of resilience to earthquake risk in the continental interior of Asia; a study of the role of land in agrarian change in Thailand; and a project on the survival of the smallholder in East and Southeast Asia. His latest book *Challenging Southeast Asian Development: The Shadows of Success* was published in August 2015.

Khaerun Nisa is a Lecturer of Architecture at the Atma Jaya Yogyakarta University, Indonesia. Nisa received her Master and now expecting her Doctoral degree (by January 2016) of Sustainable Energy and Environmental Engineering at Osaka University, Japan. Nisa experienced working with International Recovery Platform Kobe for five years as Assistant Researcher. She is highly involved as an editor in Guidance note on recovery series especially in Livelihood sector. Nisa has personally been researching on disaster recovery since 2007, especially on privately and community owned cultural heritage recovery program in Indonesia.

Kim Fortun is a cultural anthropologist and Professor of Science & Technology Studies at Rensselaer Polytechnic Institute. Her research and teaching focus on environmental risk and disaster, and on experimental ethnographic methods and research design. Her research has examined how people in different geographic and organizational contexts understand environmental problems, uneven distributions of environmental health risks, developments in the environmental health sciences, and factors that contribute to disaster vulnerability. Fortun’s book *Advocacy After Bhopal Environmentalism, Disaster, New World Orders* was awarded the 2003 Sharon Stephens Prize by the American Ethnological Society. From 2005-2010, Fortun co-edited the *Journal of Cultural Anthropology*. Currently, Fortun is working on a book titled *Late Industrialism: Making Environmental Sense, on The Asthma Files*, a collaborative project to understand how air pollution and environmental public health are dealt with in different contexts, and on design of the Platform for Experimental and Collaborative Ethnography (PECE), an open source/access digital platform for anthropological and historical research. Fortun also runs the EcoEd Research Group, which turns ethnographic findings about environmental problems into curriculum delivered to young students (kindergarten-grade 12), and is helping organize both the Disaster-STS Research Network, and the Research Data Alliance’s Digital Practices in History and Ethnography Interest Group.

Lisa A. Onaga joined the School of Humanities and Social Sciences at Nanyang Technological University, Singapore as an Assistant Professor in 2012. She received her MA and PhD degrees from the Department of Science & Technology Studies at Cornell University, and she received her ScB in biology from Brown University. Her research on the history of biology in Japan examines how and why the study of heredity and genetics grew alongside the booming raw silk trade of early twentieth century. Her book project, "Anatomy of a Hybrid: A Sericultural History of Genetics in Modern Japan," illustrates why the rationalization of silkworm husbandry serves as a potent site for understanding a nation's entangled interests in industry and trade, biology, and race. Her additional interdisciplinary research interests include: history of agriculture, technology, and industry; biodiversity and genetic resources at national and global levels; and histories of Asian Americans in biology.

Martha Kaplan is Professor of Anthropology, Vassar College, New York. A cultural and historical anthropologist who studies meaning in colonial and postcolonial situations, she is the author of *Neither Cargo Nor Cult: Ritual Politics and the Colonial Imagination in Fiji*, (Duke 1995) and co-author with John D. Kelly of *Represented Communities: Fiji and World Decolonization* (Chicago 2001). Recent works on the anthropology of water ("Fijian Water in Fiji and New York" 2007; "Lonely Drinking Fountains and Comforting Coolers" 2011) appeared in *Cultural Anthropology*. In 2014-15 she held a Fulbright Fellowship and was Distinguished Affiliated Fellow at the Asia Research Institute, National University of Singapore, working on a book titled *Water Cultures: Fiji, New York, Singapore*. Her ongoing work in Singapore (summer 2015, 2016) is now supported by a grant from the cultural anthropology program of the US National Science Foundation.

Michelle Miller is a Senior Research Fellow in the Asian Urbanisms Cluster at the Asia Research Institute, National University of Singapore. She previously taught in the Masters of International and Community Development program at Deakin University and on subjects related to participatory approaches to development at Charles Darwin University. Her PhD from Charles Darwin University is in the field of political science and she is the recipient of that university's Speaker Prize in Politics. She has been principal investigator or collaborator on numerous grants that have centered on themes such as disaster governance, urban change and decentralization in Asia, minority rights, conflict resolution and local development. Dr Miller has conducted research in Indonesia for fifteen years, focusing particularly on Indonesia's western most province of Aceh, but more recently on Yogyakarta and Solo. Her current research investigates the role of decentralized urban governance in preparing for, responding to and recovering from environmental disasters. She has authored, edited or co-edited a number of books including: *Rebellion and Reform in Indonesia: Jakarta's Security and Autonomy Policies in Aceh* (Routledge, 2009); *Autonomy and Armed Separatism in South and Southeast Asia* (ISEAS, 2012); *Ethnic and Racial Minorities in Asia: Inclusion or Exclusion?* (Routledge, 2012); (with Tim Bunnell) *Asian Cities in an Era of Decentralisation* (Routledge, 2014); and (with Mike Douglass) *Disaster Governance in Urbanising Asia* (Springer, forthcoming 2016).

Mike Douglass is Professor and Leader of the Asian Urbanisms Cluster at the Asia Research Institute and also Professor at the Lee Kuan Yew School of Public Policy at the National University of Singapore. He received his PhD in Urban Planning from University of California, Los Angeles (UCLA). He is Emeritus Professor, former Chair of the Department of Urban and Regional Planning and former Director of the Globalization Research Center at the University of Hawai'i. He previously taught at the Institute of Social Studies (Netherlands) and at the School of Development Studies, University of East Anglia (UK). He has been a Visiting Scholar/Professor at Stanford University, UCLA, Tokyo University, Thammasat University and the National University of Singapore. With a professional focus on urban and regional planning in Asia, he has lived and worked for many years in Asia both as an academic and as a staff of the United Nations. He has also advised university programs on planning education in Asia and the U.S. His current research focuses on globalization and livable cities, creative communities, disaster governance, and global migration.

Rita Padawangi is a Senior Research Fellow at the Asia Research Institute, National University (NUS). She was a researcher at the Lee Kuan Yew School of Public Policy, NUS and a Research Fellow at the Global Asia Institute, NUS; Center for Urban Research and Learning at Loyola University Chicago; and Centre for Strategic and International Studies in Jakarta, Indonesia. She received her PhD in Sociology from Loyola University Chicago where she was also a Fulbright Scholar for her MA studies. With research interests spanning over the sociology of architecture and participatory urban development, Dr Padawangi has conducted various research projects in Southeast Asian cities, including in Indonesia, the Philippines, and Singapore. She is also actively conducting research on social movements and public spaces in Indonesia. Her commitment to social activism in the built environment keeps her connected with community groups and practitioners in many cities in the region.

Scott Gabriel Knowles is Associate Professor and Interim Head of the Department of History, Drexel University. He is also a research fellow of the Disaster Research Center of the University of Delaware. He is the author of *The Disaster Experts: Mastering Risk in Modern America* (2011), and is series co-editor (with Kim Fortun) of "Critical Studies in Risk and Disaster" (UPenn Press). His work on the history of risk and disaster has appeared in the *Natural Hazards Observer*, *Journal of Policy History*, *Technology and Culture*, and *Engineering Studies*--he has also written for popular venues such as *Slate*, *Conservation Magazine*, *U.S. News and World Report*, the *Philadelphia Inquirer*, and *The Hill*. Knowles is presently working on a new book titled *The United States of Disaster*; as well as a second project comparing disaster research globally in the new "age of resilience."

Simone Shu-Yeng Chung is a Postdoctoral Research Fellow in the Asian Urbanisms cluster at the Asia Research Institute, National University of Singapore. She holds a PhD in Architecture and an MPhil in Screen Media and Cultures from the University of Cambridge as well as an MSc in Advanced Architectural Studies from University College London. Prior to pursuing postgraduate studies, she was a Rome Scholar in Architecture and practiced as an architect for several years in London. Her research interests reside in the synergistic potential offered by the moving image medium to the discipline of architecture and urban studies. Some of her more recent work include articles published in *Scroope Cambridge Journal of Architecture*, *Studies in Ethnicities and Nationalism* and a book chapter in *Cambridge in Concrete* (2012).

Sulfikar Amir is an Associate Professor of sociology at Nanyang Technological University, Singapore. His research interests primarily focus on science, technology, and society (STS), risk, disaster, and resilience. He is the author of "The Technological State in Indonesia: the Co-constitution of High Technology and Authoritarian Politics". In 2012, he produced "Nuklir Jawa", a documentary film that depicts the debate and controversy surrounding the proposed construction of nuclear power plants in Central Java, Indonesia. Currently, he is working on a project that examines the impacts of Fukushima nuclear disaster in Japan.

Tyson Vaughan is a Postdoctoral Research Fellow in the Asian Urbanisms and Science, Technology & Society clusters at the Asia Research Institute of the National University of Singapore. He studies public engagement with technoscience, the social construction of expertise, and democratic governance of "envirotechnical" risk and sociotechnical order. Much of his work is ethnographically grounded in the context of post-disaster recovery in Japan. He holds a PhD in Science & Technology Studies from Cornell University, USA.

Wong Pak-Hang is a Lecturer at Department of Social Science, Hang Seng Management College. His research interests are in philosophy of technology, ethics of technology, responsible innovation, and STS. Previously, he was a Research Fellow at the Institute for Science, Innovation, and Society in the University of Oxford, working on the social, ethical, and policy issues of climate change and climate engineering. He is the co-editor of *Well-Being in Contemporary Society* (2015, Springer), and his research is published in *Philosophy & Technology*, *Zygon*, *Science and Engineering Ethics*, *Dao*, and other academic journals. Currently, he is exploring the potential of Confucian moral and political philosophy for climate ethics, responsible innovation, and big data ethics.

LIST OF WORKSHOP PARTICIPANTS

AXEL GELFERT

National University of Singapore
phigah@nus.edu.sg

BEHNAM TAEBI

Delft University of Technology, the Netherlands,
and Harvard University, USA
b.taebi@tudelt.nl

CAROLINE BRASSARD

National University of Singapore
sppbc@nus.edu.sg

ELI ELINOFF

National University of Singapore
arieae@nus.edu.sg

ERIC KERR

National University of Singapore
eric.kerr@nus.edu.sg

JONATHAN RIGG

National University of Singapore
jonathan.rigg@nus.edu.sg

KHAERUN NISA

Atma Jaya Yogyakarta University, Indonesia
khaerunnisa@mail.uajy.ac.id;

KIM FORTUN

Rensselaer Polytechnic Institute, USA
fortuk@rpi.edu

LISA ONAGA

Nanyang Technological University, Singapore
lonaga@ntu.edu.sg

MARTHA KAPLAN

Vassar College, USA
makaplan@vassar.edu

MICHELLE MILLER

National University of Singapore
arimam@nus.edu.sg

MIKE DOUGLASS

National University of Singapore
arimike@nus.edu.sg

RITA PADAWANGI

National University of Singapore
ritapd@nus.edu.sg

SCOTT G. KNOWLES

Drexel University, USA
scott.gabriel.knowles@drexel.edu

SIMONE SHU-YENG CHUNG

National University of Singapore
ariscsy@nus.edu.sg

SULFIKAR AMIR

Nanyang Technological University, Singapore
sulfikar@ntu.edu.sg

TYSON VAUGHAN

National University of Singapore
arietv@nus.edu.sg

WONG PAK-HANG

Hang Seng Management College, Hong Kong
phwong@hsmc.edu.hk