RESILIENCE OF PLACE: Networking in an age of division

5th Viennese Talks on Resilience and Networks
Program

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Monday, 22nd of May 2017 | 09:00 – 17:00

Vienna University of Economics and Business
"Clubraum" at Building LC
Welthandelsplatz 1, 1020 Vienna

WU Wirtschaftsuniversität Wien Vienna University of Economics and Business

FAS from networks to strategy research

IIASA International Institute for Applied Systems Analysis www.iiasa.ac.at

Acknowledgement

We would like to thank our speakers and contributors for their engagement and input and the participants for their interest and attendance.

Furthermore we would like to thank the Vienna University of Economics and Business for the hospitality and Alexandra Boden (WU) and Andrea Werdenigg (FASresearch) for organizational support.

We are looking forward to an interesting and inspiring day!

Brian Fath, Harald Katzmair & Fred Luks

Resilience of Place: Networking in an age of division

The adage of "Think Global, Act Local", is correct on many levels. First, an eye on the global is needed because, as we know, systems ecology informs us about the interconnectedness of nature–society and that our actions are tied in a complex and intricate hierarchy. Second, all action is, in fact, local and present, unfolding in a specific place at a specific time. Recognition of this latter point gives us hope that if each place is managed sustainably, then the whole system will also exhibit persistent features.

But places differ, due to climate, topology, geology, and ecology, as well as historical events and cultural choices. Local solutions give a better chance to find the right scale, and to know when enough is enough, respecting the local carrying and buffer capacities. Each place is different, and therefore each place is special. In particular, a sharp distinction can be made between the broad brush categories of rural and urban. With humanity pressing more and more into cities, they must be part of our sustainable solutions, but at the same time they are dependent on the landscape around them to supply resources and regulating services (clean air, water, soils, etc.). The rural communities, as stewards of the land, have the challenge to provide agricultural production while maintaining the productivity of the land. Of course, they want to maintain it; it is both their home and their livelihood.

In spite of this shared larger objective, the disconnect between these two places and two ways of living has grown markedly in the 21st century touching on all aspects of social, political, economic, and ecological relations. We live in a divided world as evidenced by such recent event as Brexit, the U.S. election of Donald Trump, and the close election for the Austrian presidency. In all three instances, a factor with high predictive power for a voter's likely choice was place, specifically, the urban–rural

divide. Furthermore, these polarities are re-created and re-enforced through stories and rituals that feed a mental concept of self and sense. However, the stories are not keeping up with the socio-ecological realities in our world of hybridization: rural people commuting to depend on cities and urbanites implementing farming and gardening, to name a few.

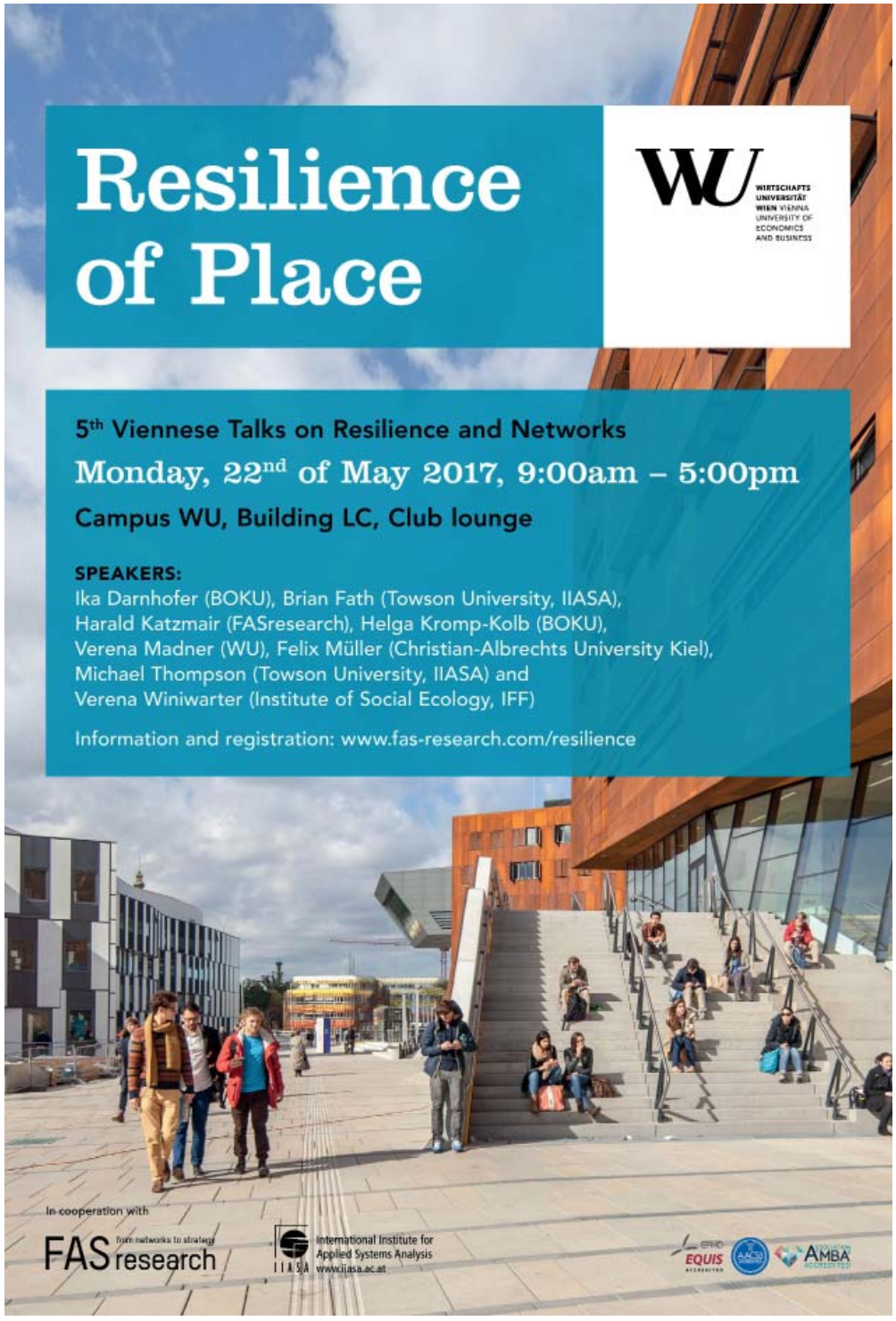
The divide, perceived or real, has real consequences and puts enormous pressure on our ability to focus on common goals of making a better life for present and future generations.
Through this discussion of resilience of place, we hope to explore the following issues:

- Building diverse, cross-scale community networks within sustainable places
- Recognizing place as a resource for experimentation of responsive variety to provide solutions for ecological balance
- Learning and exploring how to overcome the perceived divide

AGENDA

The morning session of the day contains talks of our speakers. After a lunch break, we will continue with an interactive Participatory Impact Analysis.

TIME	TASK
09:00 - 09:30	Registration & Coffee/Tea
09:30 - 09:40	Welcome Note
09:40 - 09:50	Introduction and background information
09:50 - 10:35	Dialogue - Brian Fath and Felix Müller
10:35 - 10:50	Coffee Break
10:50 - 11:45	Trialogue - Ika Darnhofer, Verena Madner and Helga Kromp-Kolb
11:45 - 12:30	Dialogue - Verena Winiwarter and Michael Thompson
12:30 - 13:30	Lunch Break
13:30 - 15:30	Participatory Impact Analysis: How to overcome the polarization of scales?
15:30 - 16:00	Coffee Break
16:00 - 16:30	Interpretation of the Participatory Impact Analysis
16:30 - 16:45	Closing remarks


Resilience of Place
WU
WIRTSCHAFTS UNIVERSITÄT WIEN VIENNA UNIVERSITY OF ECONOMICS AND BUSINESS
5th Viennese Talks on Resilience and Networks
Monday, 22nd of May 2017, 9:00am – 5:00pm
Campus WU, Building LC, Club lounge
SPEAKERS:
Ika Darnhofer (BOKU), Brian Fath (Towson University, IIASA),
Harald Katzmair (FASresearch), Helga Kromp-Kolb (BOKU),
Verena Madner (WU), Felix Müller (Christian-Albrechts University Kiel),
Michael Thompson (Towson University, IIASA) and
Verena Winiwarter (Institute of Social Ecology, IFF)
Information and registration: www.fas-research.com/resilience
In cooperation with
FAS research
from networks to strategy
IIASA
International Institute for Applied Systems Analysis
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Ika Darnhofer

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Ika Darnhofer is associate professor at the Institute of Agricultural and Forestry Economics at the University of Natural Resources and Applied Life Sciences in Vienna. After completing her studies in agricultural economics she spent a few years in the private sector before returning to academia in 2000. Her research focuses on management and decision making on family farms, not least linked to resilience of farms. Taking a qualitative approach, she explores issues linked to farming values, autonomy and adaptability. The focus on resilience is strengthened by the recognition that we live in turbulent times. Family farms thus need a high level of adaptive capacity to cope with rapid and often unpredictable change as well as with the ambiguity and contradictions in consumer's demands. She is member of the executive committee of the International Farming Systems Association (IFSA), and a member of the editorial board of the „Journal of Rural Studies", of „Agricultural Systems" and of „Agriculture and Human Values".

Food as a bridge over the rural-urban divide

While „rural" and „urban" are often conceptualized as distinct, they are also interdependent. One of the obvious interdependencies is visible through food production and consumption. While most of it is grown in rural areas, it is consumed in urban areas. At the same time, it is what urbanites want to eat that drives farmers' choices of what to grow and how to grow it. Thus, rather than focusing on the divide, on the perceived disconnect between rural and urban, it might be useful to conceptualize their resilience as relational. A relational perspective highlights fluidity and change, by focusing on how linkages are continuously made and remade. Indeed, food production and consumption are not stable, but are always in a process of „becoming": they are provisional, enacted, contingent and always under construction. Both rural farmers and urban gardeners are entangled in this on-going process of creative experimentation. By focusing on what enables interactions and meanings to unfold, a relational perspective allows us to explore patterns that enable transformational change.

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Brian D. Fath is Professor in the Department of Biological Sciences at Towson University (Maryland, USA) and Research Scholar within the Advanced Systems Analysis Program at the International Institute for Applied Systems Analysis (Laxenburg, Austria). He teaches courses in ecosystem ecology, environmental biology, networks, and human ecology and sustainability. Prof. Fath has also taught courses on ecological networks and modeling in Portugal, China, Italy, Germany, Denmark, Croatia, France, Russia, and South Africa. He holds visiting faculty appointments at the School of Environment, Beijing Normal University and at the State Key Laboratory of Urban and Regional Ecology, Chinese Academy of Sciences both in Beijing, China. He was a Fulbright Distinguished Chair at Parthenope University of Naples, Italy in spring 2012 and recipient of the Prigogine Medal in 2016.

His research is in the area of systems ecology and network analysis applied to the sustainability and resilience of socio-ecological systems. His interests range from network analysis to ecosystem theory to urban metabolism to systems thinking and environmental philosophy.

Prof. Fath has published more than 140 research papers, reports, and book chapters. He co-authored three books: Flourishing Within the Limits to Growth: Following Nature's Way (2015), Ecological Modelling (4th edition, 2011), and A New Ecology: Systems Perspective (2007). He is also Editor-in-Chief for the journal Ecological Modelling; Editor-in-Chief for Encyclopedia of Ecology (2nd edition, to be published 2018); President of the North American Chapter of the International Society for Ecological Modelling; Chair of the Ecosystem Dynamics Focus Research Group in the Community Surface Modeling Dynamics System; and, member and past Chair of Baltimore County Commission on Environmental Quality.

Locus iste: co-evolution of place and culture to avert fragmentation across and within landscapes

"healthy [culture] sustains itself the same way that a healthy tree does: by belonging where it is; by maintaining a proper relationship to the ground." (Wendell Berry, 1978, p. 189)

One simple and obvious approach to build a sustainable community can be taking care of place – not spoiling your own nest. This requires that place and culture co-evolve to create conditions that sustain over time giving sustenance, if not profit, to the dwellers. This relationship with place will be compromised by a fragmented society with a mobile mindset, always looking elsewhere and not grounded. In America, this mobile mentality dominates conventional thinking: a home is a financial asset not a dwelling, a place is for work not living, to be moved on from easily if work or other conditions (like retirement) change. How can one promote sustainable solutions if the intention is not to be there long term to cultivate and enjoy them? This fragmentation between place and people can be overcome with a recognition and respect for the features and facilities that each landscape offers to prosper. Positive feedbacks in the form of investment in place, over generations, can generate healing, coherence, identity, and resilience. This entails an understanding ecosystem function, which then can be used as an integral part of managing socio-ecological and socio-economic systems. Nature demonstrates the cycle of life in a long-term balance of the forces of growth and the forces of decay. This presentation starts from the ecosystemic perspective to inform how human culture and place can co-evolve together.

Helga Kromp-Kolb

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Helga Kromp-Kolb, Professor at the Institute of Meteorology and Head of the Centre for Global Change and Sustainability of at BOKU University of Natural Resources and Life Sciences in Vienna, specialises in climate change (downscaling from the global to regional and local levels) and air pollution dispersion, including a focus on the dispersion of radioactive clouds. She was instrumental in setting up the Austrian Centre for Climate Change, a network of research institutions, and in the publication of the Austrian Assessment Report on Climate Change in 2014. In addition to her scientific focus she has become engaged in education for sustainable development and plays a key role in the Alliance of Sustainable Universities in Austria.
Helga Kromp-Kolb has repeatedly served as scientific consultant to the Austrian government and frequently gives public lectures and newspaper, radio and TV interviews on climate change. She has been awarded a number of prizes for her scientific work and was elected "Scientist of the Year 2005" by the Austrian Science Journalists Association.

Helga Kromp-Kolb is going to contribute to our discussion with her comprehensive expertise and knowledge.

Verena Madner

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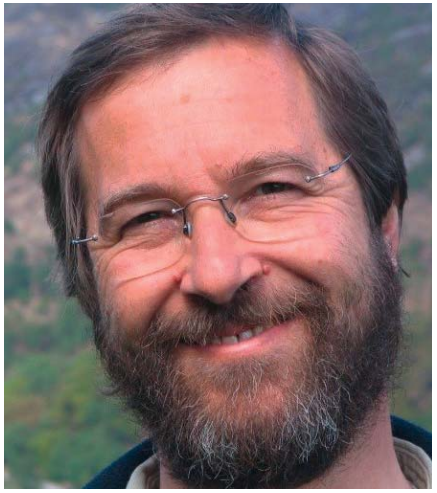
Verena Madner is Professor of Public Law, Environmental Law, Public and Urban Governance at Vienna University of Economics and Business (WU). Her research and teaching covers Environmental, Planning and Infrastructure Law, Globalization, Multilevel Policy and Governance. The interaction between national and supranational law, modes of environmental governance, and socio-ecological transformations are of particular interest to her. As Head of WU´s Research Institute for Urban Management and Governance she explores issues of sustainable urban development. Her current research projects address topics such as the interface of energy transitions and spatial planning, concepts of smart city governance, as well as international trade policy and the legal framework for the provision of public services at the municipal level.

Verena Madner is going to contribute to our discussion with her comprehensive expertise and knowledge.



Felix Müller

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Felix Müller has studied Biology and Geography at the Universities Kiel and Regensburg. His PhD thesis about soil-geographical investigations on the fate of pesticides was published in 1987. He was coordinator of the long-term project "Ecosystem Research in the Bornhöved Lakes District" and has participated in 25 national and international research projects. Since 2010 Felix Müller is affiliated as leader of the Department Ecosystem Management at the Institute of Natural Resource Conservation of Kiel University.
The main research interests are ecosystem analysis, ecosystem services and ecosystem theories, landscape applications of ecosystem approaches and indicator sets for the management of human-environmental systems.
FM has been editor or co-editor of 22 books and special issues and has published more than 150 scientific papers. He was editor-in-chief of the journal "Ecological Indicators" and board member of 5 journals. In 2010 he received the Prigogine Medal of the Wessex Insitute of Technology and the University of Siena. FM was president of the German chapter of the International Association of Landscape Ecology and secretary of the German Chapter of the International LTER Program.

Landscape resilience – always a good target?

In this paper, it is initially argued that the basic comprehension of resilience in ecology is not resilient: there is an increasing influence of human demands flowing into the definitions of environmental resilience which contradict the original meaning of the concept. Therefore, an ecosystem based terminology is proposed, which clearly distinguishes resilience and adaptability.
Using the landscape approach as a starting point, the roles of places and their potentials for resilience and adaptability are demonstrated by case studies from a joint effort of the LTER program. The interpretation of these investigations leads to an assentuation of the role of scales for resilience analysis.
In a next section the resilience of ecosystem services is presented using the rural – urban gradients around the case study areas Leipzig-Halle (Germany) and Nairobi (Kenya). These examples show resilient and non-resilient dynamics. They are applied to derive methodological consequences referring to the strong information demand required for resilience studies, to the subjectivity of indicator selection and to the problem of interrelated disturbances. Finally some conclusions are drawn, illuminating potential outcomes for sustainability management.

Michael Thompson

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After leaving the British army (just in time to enjoy the „Swinging Sixties") Michael Thompson studied social anthropology (University College London and Oxford) while also following a career as a Himalayan mountaineer (Annapurna South Face 1970. Everest Southwest Face 1975). His early research on how something secondhand becomes an antique, or a rat-infested slum part of Our Glorious Heritage „Rubbish Theory", Oxford University Press 1979; second edition 2017, Pluto Press) diverted him into teaching at the Slade School of Fine Art, London and at Portsmouth University's School of Architecture, and from there to the International Institute for Applied Systems Analysis (IIASA), an East-West think-tank in Austria.There he worked on energy futures, on risk perception, on environment and development in the Himalayan region and on the design of processes for public participation, the key unifying concept in all that being „plural rationality": people doing very different things and yet still behaving rationally, given their different sets of convictions as to how the world is and people are („Cultural Theory", with Richard Ellis and Aaron Wildavsky, West View, 1990: „Divided We Stand", with Michiel Schwarz, University of Pennsylvania Press, 1990; „Organising and Disorganising", Triarchy Press, 2008). He is currently a Senior Research Scholar at IIASA and an Associate Fellow at Oxford University's Institute for Science, Innovation and Society (InSIS, the „n" serving to differentiate it from ISIS).

From local to global and from rural to urban: the approach by way of material flows, household consumption styles and contending schools of engineering thought

The cardamoms that are produced by a tiny farm on a remote Himalayan hillside end up being consumed in some household in a huge city on the other side of the world. Each needs the other, yet their interaction often has less-than-happy environmental consequences: „competitive deepening" (the lowering of the water table across South Asia that has resulted from an increasing reliance on pumps and boreholes), for instance, and „eutrophication" (the near-explosive growth of algae, for instance, in the lakes and rivers close to Northern urban centres, thanks to our reliance on technologies that get our human wastes out of the city by putting them into the water cycle). We can see these sort of consequences as „inadvertent exercises in earth systems engineering": the tens of millions of pumps-and-boreholes across South Asia have now transformed the entire sub-continent's hydrology, and the widespread adoption of Thomas Crapper's water closet has had similarly large-scale repercussions for our cities and their watersheds. The solution, therefore, lies not in „elegant", top-down and global model-based prescriptions (such as Kyoto/IPCC or UN/SDGs) but in the deliberate and everywhere local, democratic and „clumsy" re-engineering of all those „inadvertent exercises".

Verena Winiwarter

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Verena Winiwarter is Professor of Environmental History at Alpen-Adria-Universität Klagenfurt since 2007. First trained as a chemical engineer, she holds a PhD in Environmental History from Vienna University, where she was granted the venia legendi in Human Ecology in 2003. Her research interests comprise the history of rivers, landscapes, tourism and its images, and the environmental history of soils. She led two interdisciplinary projects to reconstruct the Danube and the smaller Viennese Rivers and trace their history over more than 450 years and one to study the evolution of Alpine Ski Tourism in Austria. A full member of the Austrian Academy of Sciences, she has published numerous articles and edited several books. In 2014, she was Austrian Scientist of the Year, her popular "Umwelt hat Geschichte. 60 Reisen durch die Zeit" (2014) was elected ‚Umweltbuch des Jahres' in Germany. For her current sabbatical (3-9/2017), she has joined IIASA's Risk and Resilience Program to bring environmental history and risk research into contact.

The role of environmental humanities in building sustainable rural places

Recently, Kate Raworth has called for a 'double doughnut' approach for sustainable development within the planetary boundaries laid out by Johan Rockström et al. While these and other global approaches are indispensable, their polyvalence comes out when they are used to justify local implementation of change. In this in-between scales space, the emerging environmental humanities are called to bring their expertise into the quest for a liveable future. Here, I will offer 7 theses for the needed transformation.

1. A sustainable rurbal development is based on embracing new roles and hence, calls for new identities. This deeply irritates all involved, as identity is a key feature of human existence. Place-making as appropriation of space for identity becomes central to the endeavour's success.
2. All involved institutions (communities, firms, agrarian landowners etc.) are non-trivial systems that are deeply challenged by these changes and prone to react by siding with either 'changers' or 'preservers', depending on their interests. Resistance is to be expected.
3. Building resilient rurbal spaces happens outside the comfort zones of all actors involved and therefore, needs special zones of fostering (including high-risk funding).
4. The innovations needed are based on inter- and transdisciplinary knowledge. They are not merely technological, but are at core social challenges or at least involve such challenges.
5. New and self-defined and delineated sustainable rurbal entities need a multi-criteria-based, forward-looking, formative culture of evaluation and feedback on their action especially, as they are likely to encounter wicked problems.
6. The resulting transitory middle grounds (after Richard White) likely lead to multiple niche strategies that have to account for socio-ecological inheritance, long-term and side-effects and develop tools for precautionary or proactive action.
7. The sustainable and resilient rurbal will need new narratives to stabilize a precautionary attitude to become feasible within planetary boundaries. Natural and cultural heritage can be used to create such identity-bearing narratives.

Participatory Impact Analysis

In the afternoon, an interactive Participatory Impact Analysis (PIA) will take place. PIA is based on FAS ImpactMap, a software solution developed by FASresearch grounded on the works of biochemist Frederic Vester and the mathematician Thomas L. Saaty.

Objectives

PIA is used during a structured and interactive workshop with the purpose to:

- develop a common understanding of a complex situation in a systematic way
- formulate a goal every participant can agree with
- determine the success factors which have the strongest impact on this goal
- identify the most practical action possibilities to reach the goal.
- develop a plan to implement the project of target achievement.

Implementation

The software tool leads the participants through a structured process. At first they discuss which goal the participants want to attain or which issue is addressed. Then a brainstorming process follows in which the participants define the success factors that have the greatest impact on the target. After that the causal relationships among all factors are determined. Some of them are strongly dependent on others, some are not. Based on the inputs of the participants FAS ImpactMap ranks the success factors according to two dimensions – their influence on other factors (active) and their sensitivity towards other factors (passive).

Outcome

The outcome of this process is the determination of the role each factor plays within the process:

- Active factors have a strong impact on others but do not depend on them. They represent action possibilities in the initial stage of the process.
- Critical factors are both strongly influential and sensitive. They refer to action possibilities in a later, critical stage.
- Passive factors are more sensitive than influential. They do not allow influencing the system or the process but rather act as indicators which show the status of the pro-cess and how close the project is to the goal.

Based on this distinction the team can develop a step-by-step plan – a roadmap – to start the process and implement the project to reach the goal.

The guiding question for the afternoon of the 5th Viennese Talks on Resilience and Networks is:

How to overcome the polarization of place in an age of fragmentation?

Our question reflects the ambiguity and increasing diversity of our time with the objective to approach the tension between urban and rural areas as well as local and global issues.

Organizing Team

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Brian D. Fath is Professor in the Department of Biological Sciences at Towson University (Maryland, USA). Since 2002, he has been a summer Research Scholar within the Advanced Systems Analysis (ASA) Program at IIASA.
Brian Fath graduated from Miami University, Ohio, USA in 1990 with degrees in physics and aeronautics. He completed an MS degree in environmental science at Ohio State University (1993) and earned a PhD in ecology from the University of Georgia in 1998 under the supervision of Dr. Bernard Patten. He was a Post-Doctoral Fellow at the University of Georgia (1998-2000) with Dr. Bruce Beck and the U.S. Environmental Protection Agency in Cincinnati (2000-2001).

Harald Katzmair

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Harald Katzmair, social scientist and philosopher, is the founder and director of FASresearch, a Social Network Analytics & Strategies firm located in Vienna. Over the last two decades Harald has developed a unique and proprietary set of tools and technologies to empower decision makers in the areas of social network dynamics, robust decision making, story telling, stakeholder engagement and participatory impact analysis as well innovation und resilience in Vienna.
Harald Katzmair supports as vice-president the foundation NEIN ZU KRANK UND ARM in its endeavor to overcome illness and poverty in Austria and is a member of the supervisory board of the Austrian Science Fund (FWF).

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Fred Luks is the head of the Competence Center for Sustainability. He has been involved in sustainability-related research, teaching and management for many years, for example as the chair of the Vereinigung für Ökologische Ökonomie, an association of researchers active in ecological economics.
Previously, he has been principal investigator of an interdisciplinary research project, a guest professor at the University of Hamburg, and sustainability manager of a large corporation. He is the author of numerous publications on sustainability-related topics, including eight books.