



IN-EAST  
SCHOOL OF  
ADVANCED  
STUDIES

INNOVATION IN EAST ASIA

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UNIVERSITÄT  
DUISBURG  
ESSEN

*Offen im Denken*

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## 01

## ABOUT US

THE IN-EAST  
SCHOOL OF ADVANCED STUDIES

## A MULTIDISCIPLINARY RESEARCH PROJECT

The IN-EAST School of Advanced Studies was founded in order to explore innovation in East Asia from a multidisciplinary perspective and gain a better understanding of the dynamics and the success or failure of innovation in society. Research at the Advanced School focuses on the interdependent topics of electromobility and urban systems. It is funded by a four-year grant from the German Federal Ministry of Education and Research (BMBF).

The Advanced School brings together researchers from five different faculties at the University of Duisburg-Essen (UDE). Advanced School members have expertise in political science, economics, social sciences, engineering and cultural studies. The team itself is highly international. The 19 young scientists working on their PhD and postdoctoral projects at the Advanced School come from six different countries, namely Germany, China, Russia, the Netherlands, Korea and the US.



*All research activities at the Advanced School take China, Japan and Korea as subject of their analysis*

**DR. KATHARINA KLOKE, GERMAN FEDERAL MINISTRY OF EDUCATION AND RESEARCH:**

"One of the important but difficult objectives of the BMBF's funding policies is to initiate links between humanities or social sciences and the natural or engineering sciences. The application from the IN-EAST School of Advanced Studies convinced the jury primarily because it includes the original idea of involving engineering disciplines.

Due to global, cultural and political interdependencies, solutions to many of the pressing issues facing us today must increasingly be found at a transnational level. It is also extremely important to develop Germany's intercultural competence in relation to different regions in the world if we are to maintain our competitiveness in the globalization process.

Politics, culture and industry are calling for expertise in the humanities and social sciences beyond the short term, with a move away from the isolated treatment of topics, regions and regulations. Experts in regional studies have a key role to play here as they offer a broad range of knowledge of different regions, cultures and societies.

I am convinced that the IN-EAST School of Advanced Studies will enrich the field of regional studies in Germany."

**INTRODUCTORY REMARKS AT THE INAUGURATION CEREMONY ADVANCED SCHOOL**

## THE RESEARCH GROUP CONCEPT

### JUNIOR RESEARCHERS IN CHARGE

At the Advanced School, research is first of all conducted in the framework of six research groups led by young academic professionals. Six early career scientists who hold a doctoral degree or junior professorship manage their own group of young researchers. Each team includes two doctoral researchers, working on their

individual research projects. The goal is to train highly qualified scholars for top research positions in the future. A team of experienced professors from the participating faculties at the UDE act as formal PhD supervisors and provide advice and support for specific research activities. With this research group concept – already well-established

in the natural sciences but still new to social sciences – the Advanced School is exploring innovative ways of training junior researchers in regional studies. Each research group works on one specific aspect of the research agenda.

## OUTREACH

### FACILITATING AN EXCHANGE OF IDEAS

A significant objective of the IN-EAST School of Advanced Studies is to reach out to academia, interested parties and the public. Accordingly, Advanced School scholars have been engaged in a dialogue with academic peers since day one. The inauguration of the IN-EAST School in November 2013 was embedded in the 30th EAMSA Annual Conference on “Innovation in Asia and

Europe – Approaches and Answers to New Challenges”. Since then, the Advanced School has hosted and organized several international workshops and conferences, designed to promote a better understanding of the dynamics of innovation. Academics from various areas of research have visited Duisburg to give guest lectures, thus contributing to the training of young researchers,

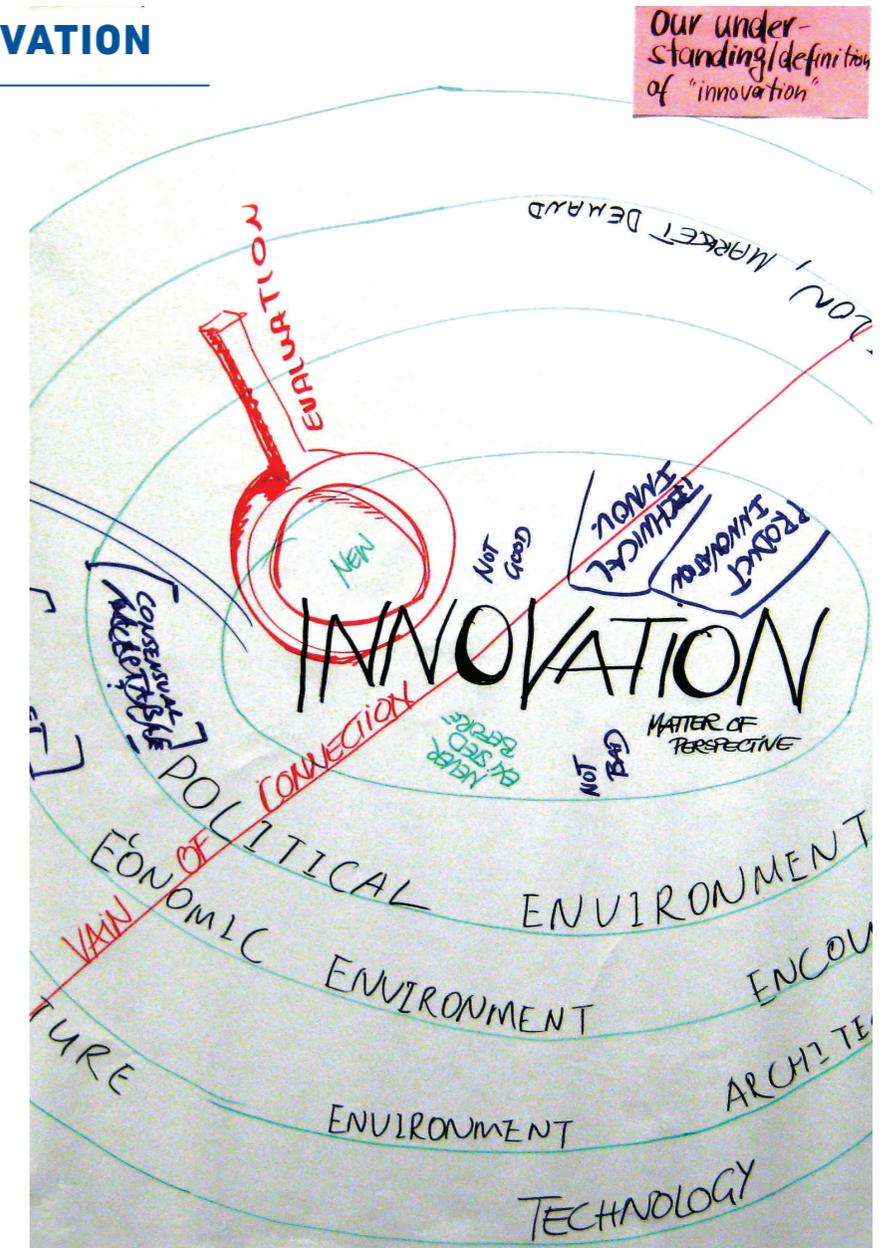
and are engaged in joint research projects. Exchange and networking with young academics who are working on related research projects have been given high priority. In addition, IN-EAST School members frequently share their expertise with the political and corporate sectors, the interested public and the media.

## RESEARCH ON INNOVATION

### THE SOCIAL DIMENSION

The IN-EAST School of Advanced Studies aims to understand processes of innovation embedded in society as a whole. Our research goes beyond the “mere” act of technological innovation. We understand innovation as a social phenomenon. Specific social frameworks are needed to encourage innovation and promote the entry of new technological solutions into the socio-economic system. In our understanding, innovation as a process is determined by distinctive national and cultural characteristics.

*Towards a better understanding of the dynamics of innovation. Brainstorming at the IN-EAST School of Advanced Studies*



## SPOTLIGHT ON EAST ASIA

### REGIONAL STUDIES

The economic and geopolitical importance of East Asia and its impact as a research area will continue to increase over the course of the 21st century. In order to contribute to solutions to many of the world's most pressing issues, such as climate change, energy supply, population growth, migration and pollution, it is essential to take current developments in East Asia into account. Cooperation between different scientific fields is key in finding solutions to these problems. All research activities at the Advanced School take East Asia (China, Japan, and Korea) as the subject of their analysis, but provide interfaces for international comparisons and comparative research agendas.

To accommodate the increasing relevance of East Asia, the UDE aims to integrate East Asia as a research area in all faculties, with the Institute of East Asian Studies (IN-EAST) playing an important role. With its approach, based on integration of the core IN-EAST disciplines (political science, economics, and sociology) with engineering and cultural studies, the IN-EAST School of Advanced Studies is embedded in the UDE's East Asia strategy.



### DR. INGRID LOTZ-AHRENS, VICE PRESIDENT, UNIVERSITY OF DUISBURG-ESSEN:

"The IN-EAST School of Advanced Studies is a major initiative involving the IN-EAST and various faculties of our university, and is a great enrichment for our university.

The exchange of knowledge across faculties, institutions and borders is an important factor for the prosperity and productivity of every university. It offers immense opportunities to simplify existing problems and generates new and exciting impetus.

The UDE's goal is to integrate East Asia as a research area in all faculties, to initiate further research in this field and to promote project-based networking. IN-EAST and the IN-EAST School of Advanced Studies are an important part of this strategy and can be the basis for further activities and cooperation with other departments of the university."

### WELCOME SPEECH AT THE INAUGURATION CEREMONY OF THE ADVANCED SCHOOL

## 02

THE SIX RESEARCH  
GROUPS01 INNOVATION AND THE  
CHINESE ECONOMY**INSTITUTIONS, NETWORKS, AND NATIONAL SYSTEMS OF POLICIES**

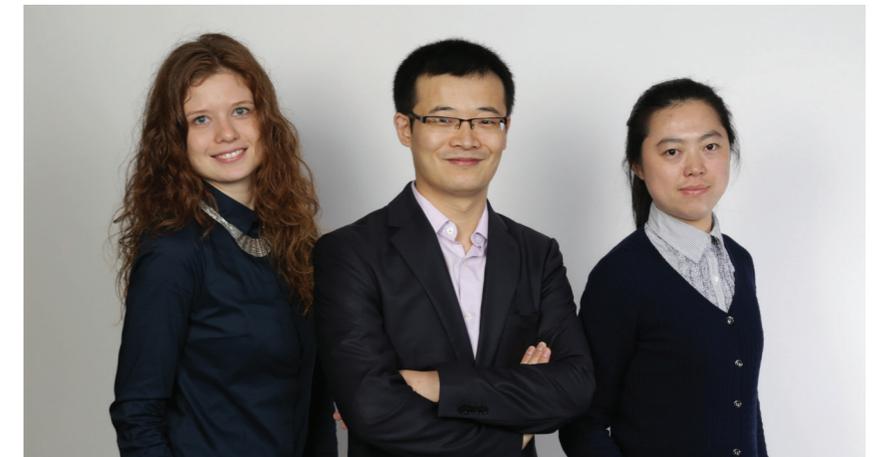
Over recent decades, China has experienced successful development if measured in terms of its GDP. However, China has not developed its own excellent entrepreneurs and innovations accordingly. This project therefore investigates Chinese innovation strategies and explores the possibilities for improvement in innovation activities.

The essence of innovation is not only to create new products, new technologies and new management approaches, but also to open up the social structure, to create conditions for the emergence of new institutions, to protect freedom of innovation, and to ensure the power of markets. In other words, innovation is a social phenomenon. This is our starting

point for evaluating Chinese innovation strategy and the future of the Chinese economy.

Aware of the importance of social structure and interaction in innovation activities, we are developing a systemic approach to understand Chinese innovation policies.

*Aleksandra Davydova,  
Professor Dr. Shuanping Dai,  
Yang Liu  
(from left to right)*



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## THE PROCESS OF ECONOMIC INNOVATION IN CHINA: ROLES OF SOCIAL INTERACTIONS AND INSTITUTIONS

### JUNIOR PROFESSOR DR. SHUANPING DAI, RESEARCH GROUP LEADER

We define innovation as a social phenomenon supported by certain social structures and institutions. Therefore, the basic issue we will address is what kind of social structures, e.g. networks among entrepreneurs and financial

networks among firms, are favorable to innovative activities. The surrounding issues, for instance, innovation networks in regions, industries and firms, in which we explore the inner structure of innovators, are also our concern.

At the macro level, we will investigate the effects of institutions on innovation activities. The study of the national system of policies will provide evidence for this.

## THE EFFECTS OF CHINESE OUTWARD CROSS-BORDER M&A ON INNOVATION

### ALEKSANDRA DAVYDOVA, DOCTORAL RESEARCHER

One of China's key current objectives is to develop an innovation-based economy. Both macro- and microeconomic processes are significant for this transformation.

This research project explores the connection between Chinese outward mergers and acquisitions (M&A) and innovation. It investigates how Chinese

companies enhance internal innovation by means of outward cross-border M&A.

From a theoretical perspective, the relationship between M&A and innovation is rather ambivalent. Existing empirical investigations do not present consistent and definite findings. The research addresses this contradicting

issue using the network analysis approach on the dyad level.

It aims to contribute to the understanding of current innovation practices which in turn might help to strengthen China's overall innovation power and lead to some conclusions on how China might push its further economic growth through indigenous innovation.

*Supervisor: Prof. Dr. Shuanping Dai | Economic Studies China | Institute of East Asian Studies (IN-EAST) | Mercator School of Management*

## ENTREPRENEURSHIP AND POVERTY ALLEVIATION IN CHINA

### YANG LIU, DOCTORAL RESEARCHER

This project studies innovation from a micro level, focusing on the entrepreneurship's role of carrying out innovation. The main question to be answered is how to alleviate poverty through entrepreneurship in China. Although entrepreneurship has been used as a practical poverty alleviation tool, its effects remain vague. This project stud-

ies its effects by exploring the underlying mechanism. We regard entrepreneurship as an opportunity for the poor to escape from poverty by facilitating innovation through knowledge spillover. Value exchange along the value chain in poor regions determines the effects of entrepreneurship on poverty. Using the economic network analysis

method, we try to clarify the mechanism by studying the formation of an efficient and stable value network involving the poor and firms. Both theoretical and empirical analysis will be employed. After building an economic model of value network formation, a case study in China will be used to test it.

*Supervisor: Prof. Dr. Shuanping Dai | Economic Studies China | Institute of East Asian Studies (IN-EAST) | Mercator School of Management*

## 02 POLITICAL INNOVATION IN EAST ASIAN CITIES

With East Asian societies changing rapidly due to economic growth, social innovations have attracted academic attention. Following prevailing concepts in social sciences, social innovations are considered as fundamental, deep and sustainable social changes. Starting from this social approach, the research group explores specifically po-

litical innovations defined as new governance structures or policies. Due to sustainable adaptations of prevailing policies to altered needs, the inventions are recognized as political innovations. Aiming to increase our understanding of the character, causes, and consequences of the political innovations,

their trajectory is scrutinized. In addition, actors' motives and interactions are explored. Beyond this conceptual framework, political innovations in the field of Chinese higher education and Korean eco-cities are investigated. Democratic innovations in Japan and Germany are a further focus of interest.



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## DEMOCRATIC INNOVATION IN SUBNATIONAL ENTITIES: A JAPANESE AND GERMAN COMPARISON

### DR. MOMOYO HÜSTEBECK, RESEARCH GROUP LEADER

In consolidated democracies such as Germany and Japan, citizens have become more disillusioned and critical of representative democracy. To counteract the malaise of representative democracies, a variety of innovative participatory and deliberative instruments have been established. Although democratic innovations have increasingly

attracted attention in political science, systematic or comparative works – with some exceptions – are still limited in number. The research on democratic innovation in German and Japanese subnational entities is intended to meet the need for more in-depth, comparative qualitative research. Against the backdrop of democratic theories, the

postdoctoral project will reveal empirically the trajectory of democratic innovations, the conditions for democratic inventions, and the interactions between actors. In summary, this project investigates the challenge of improving the quality of representative democracies.

## THE POLITICS AND PROCESSES OF CREATING ECO-CITIES IN SOUTH KOREA

### YOUNGAH GUAHK, DOCTORAL RESEARCHER

According to the OECD, more than half of the world's total population now lives in cities and this number is set to increase rapidly. For that reason, innovation has long been an important theme in East Asian development. In particular, innovative cities are seen as essential in addressing challenges such as urbanization, explorative migration

and sustainable growth in this region. South Korea has been at the forefront in addressing this challenge through strategies of green growth and the establishment of eco-cities. The thesis will examine the politics and process of establishing eco-cities in South Korea and its implications for urban governance. The research question is: Under

what conditions are eco-cities being established, and what are the driving forces behind this process? The thesis applies qualitative research methods, and process-tracing methods will be used to identify the eco-cities' formation process in South Korea.

*Supervisor: Prof. Dr. Axel Klein | Japanese Politics / Modern East Asian Studies | Institute of East Asian Studies (IN-EAST) | Faculty of Social Sciences*

## POLITICAL INNOVATIONS OF CHINA'S HIGHER EDUCATION ADMISSION – AN INQUIRY INTO POLICY-MAKING AND IMPLEMENTATION

### WEIJING LE, DOCTORAL RESEARCHER

The dissertation illustrates how the Chinese government employs innovative policies to promote the creative intelligence of the human capital and to reach the ultimate goals of indigenous innovations.

The higher education admission mechanism sheds light on the unbalanced power distribution on both the horizon-

tal and vertical line of the administration system, which fundamentally impacts on admission policy-making and implementation. A thorough investigation of this process will explain why and how admission policies can be implemented in various ways at local levels. It also aims to identify the structural problems in the higher education sec-

tor and to draw conclusions about political developments in contemporary China. Applying the qualitative method of process-tracing, the author will use empirical data from interviews with experts, officials from admission authorities, admissions offices, students and parents to extract the variables that influence the decision-making process.

*Supervisor: Prof. Dr. Axel Klein | Japanese Politics / Modern East Asian Studies | Institute of East Asian Studies (IN-EAST) | Faculty of Social Sciences*

## 03 INSTITUTIONAL INNOVATIONS IN EAST ASIAN ENERGY AND LOW-CARBON MARKETS

Energy serves as the building block of all economies – without it, economic growth is impossible. Yet the inherent tradeoffs in market fundamentals force the public and their representatives in government to struggle with what they value most: energy security,

energy efficiency, or the environmental consequences of their preferred energy choices. Postwar democracies now find themselves fighting with the developing world over a finite supply of natural resources while politicians debate the challenges of defining and pursuing

a sustainable and independent energy future. This group offers their analyses of one of the least explored, but most fundamental questions facing energy market innovations today: what are the drivers of institutional change, and what can we expect in the future?

*Not easy to capture in one photo:  
Advanced School members spend much time abroad  
Dr. Paul J. Scalise,  
Julia Aristova,  
Xiaoli Lin (in the front)*



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## THE POLITICAL ECONOMY OF ENERGY POLICY INNOVATIONS: WHO CONTROLS WHOM?

### DR. PAUL J. SCALISE, RESEARCH GROUP LEADER

Paul Scalise examines the question of institutional change in energy markets by exploring the fundamental conflicts between energy efficiency, deregulation, and the pursuit of low-carbon en-

ergy sources in Japan, Germany, and the UK. This research project intends to understand the problems and prospects associated with the development of low-carbon energy innovations in Ja-

pan, Germany, and the UK by examining the financial, technological and political characteristics of the energy sector in cross-national context over a long period of time.

## THE BUILT-UP ENVIRONMENT'S IMPACTS ON LOW-CARBON TRANSPORT MODE PLANNING: SUSTAINABILITY ASSESSMENT OF CHINESE ECO-CITY PROJECTS SINCE SHANGHAI EXPO 2010

### XIAOLI LIN, DOCTORAL RESEARCHER

Xiaoli Lin examines low-carbon transport mode planning since Shanghai Expo 2010 within chosen eco-city project sites. Many Chinese eco-cities have chosen a new land development for testing different advanced green technologies in order to achieve emission reduction targets. In terms of the transport sector, many efforts have been

made to enhance vehicle electrification in order to meet emission goals. However, due to Chinese cities' massive size and speed of expansion, it seems crucial to investigate different approaches in converting people's mobility choices towards low-carbon transport through urban planning approaches. Within the new land use development

projects, very few empirical studies have revealed the relationship between the Chinese cities' urban form, land use classification and travel behavior. This research investigates how low-carbon transport modes, such as cycling and walking, have been organized in the new land use development projects.

*Supervisor: Prof. Dr. J. Alexander Schmidt | City Planning and Urban Design | Faculty of Engineering*

## EMERGENCE OF LOW-CARBON STRATEGIES AT SUB-NATIONAL LEVEL IN CHINA

### JULIA ARISTOVA, DOCTORAL RESEARCHER

Carbon dioxide emissions are widely perceived as a key factor in climate change. Cities, being main emitters, play an active role in the development and implementation of low-carbon policies, based on reduction of carbon dioxide emissions and efficient energy use.

This project intends to investigate how

Chinese municipal governments establish low-carbon strategies, how they engage in global environmental design and why some Chinese cities choose to join global city networks to promote low-carbon development, while others do not.

Julia Aristova's PhD work explores the decision-making process at the local

level in China, where actors are engaged in the pursuit of low-carbon development. Socio-economic and technological constraints are analyzed in the context of tradeoffs to the local community. China's participation in international organizations is also investigated.

*Supervisor: Prof. Flemming Christiansen, PhD | Political Sociology of China | Institute of East Asian Studies (IN-EAST) | Faculty of Social Sciences*

## 04 URBAN SYSTEMS IN EAST ASIA

### NARRATIVES OF INNOVATION IN EAST ASIAN CITIES

Cities worldwide are undergoing rapid transformations. The problems experienced and the solutions found may vary, depending on the specific cultural settings. Against this background, it is crucial to understand the impact of cultural practices and perceptions on urban development decisions in order to facilitate a successful transfer and application of innovative knowledge. This group brings together researchers

with a background in planning sciences, humanities and cultural studies and investigates urban East Asia with comparative or paradigmatic approaches regarding space, time, and identity. Bridging the gap between applied approaches employed by fields like urban development, city planning and architecture and the systemic or theoretical approaches supported in the humanities and social sciences, the group

utilizes methods from fields such as ethnology, anthropology, transcultural studies, post-colonial studies, urban semiotics, urban planning, urban cultural studies and global history studies in order to move towards a holistic understanding of urban systems and processes of innovation, cultural adaptation and urban development.



*Katharina Borgmann,  
Dr. Beate Löffler,  
Deirdre Sneeep  
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## EXOTICISM CONSTRUCTED – THE WRITINGS ON JAPANESE ARCHITECTURE AS A MEDIUM OF CULTURAL COMMUNICATION

### DR. BEATE LÖFFLER, RESEARCH GROUP LEADER

The focus of the research project is on mechanisms of collecting, managing and canonizing (popular) scientific knowledge regarding Japanese architecture (1850-1980). The objective

is to reveal the established models in perception and evaluation of a specific non-European tradition in architecture, constituting a sample for the patterns of thinking in the humanities as well as

in the fields of natural sciences and engineering. In the long run, the research will facilitate an understanding of how innovative knowledge is accepted, inhibited, or even rejected by academia.

## CITIES OF CHINA – DECODING CHINESE URBAN STRUCTURES WITH THE TOOLS OF ARCHITECTURAL AND URBAN SEMIOTICS

### KATHARINA BORGMANN, DOCTORAL RESEARCHER

Is it possible to identify metropolitan innovation through traditional urban and architectural semiotics? This research project focuses on urban structures in Chinese mega-cities. By analyzing city components, recurring urban textures and architectural and urban patterns with the tools of urban and architectural semiotics, Katharina Borg-

mann tries to break down the complexity of Chinese cities in order to contribute to a culturally sustainable understanding of them for a non-Chinese audience. The aim of this project is not only to decode the currently fast-growing Chinese cities, but also to take the first steps in understanding the direction of Chinese mega-cities' transformation.

Furthermore, the question whether the Chinese contextuality has ceased in the process of fast-growing urban development is a main focus of discussion within this research project. Using the results of this research, urban challenges, chances, and spheres of influence can be identified.

*Supervisor: Prof. Dr. J. Alexander Schmidt | Urban Design & City Planning | Faculty of Engineering*

## CELLPHONE CITY AND THE CYBORG: JAPAN'S MOBILE REVOLUTION IN THE INFORMATION AGE

### DEIRDRE SNEEP, DOCTORAL RESEARCHER

In Tokyo, mobile phone internet has been flourishing for almost two decades. Making use of methods from anthropology and social sciences, mobile phone behavior in the capital of Japan will be investigated. The end result is a holistic overview of Japan's modern day's mobile phone culture.

Based on the idea that urban space is

an expression of the dominant ideologies in a society, this research project will point out that the current trend in urban areas in Japan is leaning towards the hybridization, of cyberspace and the physical space. Presumably, this will lead to an expansion of individual space, a focus on higher productivity, and a growing emphasis on both of-

line and online consumption. In order to adapt to these cosmopolitan standards, the modern citizen is stimulated to incorporate more technology onto/into its organic body. The result is a semi-virtual layer in urban space in which mobile phone 'cyborgs' interact with cyberspace.

*Supervisor: Prof. Dr. Jens M. Gurr | Anglophone Studies | Faculty of Humanities*

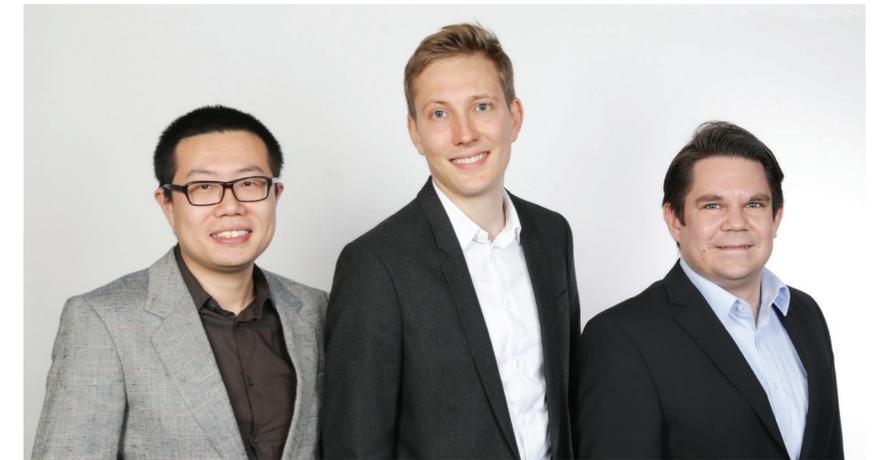
## 05 BEHAVIORAL ECONOMICS AND EAST ASIA

This research group explores individual and group behavior during innovation processes in organizations and markets. Group members tackle different research questions using the tools of experimental economics, applied game theory and econometrics. In its work,

the group harnesses the outstanding facilities and prospects provided by the IN-EAST Institute of East Asian Studies and the Essen Laboratory for Experimental Economics (elfe) to conduct high-level research in the area of behavioral economics. An important aim

of the group is to further establish experimental economics in regional studies and to show how experimental economics can contribute to the latest research questions in this field.

*Guanzhong Yang,  
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Alexander Haering  
(from left to right)*



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## GLOBAL PROCUREMENT OF INNOVATIONS

### DR. TIMO HEINRICH, RESEARCH GROUP LEADER

In his postdoctoral project Timo Heinrich focuses on behavior during the innovation process. This research covers three areas of behavior: Individual decisions, interaction within organizations and interaction between organizations. Methodologically, his research mainly employs laboratory experiments but also cross-cultural comparisons and econometric analyses of field data. With respect to individual decisions

during the innovation process, Timo Heinrich studies the way people make risky decisions necessary to create innovations. How do fundamental risk preferences differ between people and across decision situations? However, research and development are often conducted in teams. With respect to interaction within organizations, the project therefore also considers the behavior of teams in more detail: In which

constellations are they good at solving problems and creating synergies? With respect to interactions between organizations, the focus lies on market design. Procurement auctions are widely used by governments and firms to buy newly developed goods. In his postdoctoral project, Timo Heinrich analyzes how these auctions can be designed so that innovative products can be traded more efficiently.

## INFORMATION, INCENTIVES AND SOCIAL BACKGROUND

### GUANZHONG YANG, DOCTORAL RESEARCHER

Do Germans and Chinese respond differently when it comes to monetary incentives or social reputation? This research project aims to find out more about the influence of cultural background on innovative abilities and the role of different kinds of incentives.

In his research, Guanzhong Yang focuses on four interrelated research questions:

1. How do people react to different kinds of incentives? What is the role of information?
2. How does cultural background (German, Chinese, Japanese, and Korean) in-

fluence the perception of incentives?

3. What is the role of monetary incentives in respect of retirement decisions?
4. How do cultural background (German, Chinese) and social education influence open source innovation?

*Supervisor: Prof. Dr. Jeannette Brosig-Koch | Essener Labor für Experimentelle Wirtschaftsforschung (elfe) | Faculty of Business Administration and Economics*

## A CROSS-CULTURAL COMPARISON OF HIGHER-ORDER RISK PREFERENCES

### ALEXANDER HAERING, DOCTORAL RESEARCHER

Research in economics and psychology has provided evidence of cross-cultural differences in risk aversion. In the framework of expected utility theory, risk aversion is captured by a negative second order derivative of the utility function. More recently, higher-order risk preferences, namely prudence (positive third order derivative) and temperance (negative fourth order derivative), have also become a focus

of interest for economists. In typical life-cycle models of consumption, prudence implies that an individual saves more if the risk of future income increases while temperance implies fewer investments in risky assets. Recent experimental studies reveal that a majority of people are not only risk averse but also prudent and temperate. However, all experiments have been conducted exclusively with people from

Western Europe and the USA. Experimentally eliciting and comparing higher-order risk preferences of subjects with different cultural backgrounds would be a compelling next step. If cross-cultural differences in higher-order risk preferences exist, they might help to explain variations in, for example, the savings rate across regions.

*Supervisor: Prof. Dr. Jeannette Brosig-Koch | Essener Labor für Experimentelle Wirtschaftsforschung (elfe) | Faculty of Business Administration and Economics*

## 06 E-MOBILITY IN ASIA AND EUROPE

Most observers agree that in 100 years' time, cars will not be powered by gasoline. However, there is intense discussion about how fast and in what direction propulsion technology will change from the supply side and what changes are likely to be accepted from the demand side, i.e. by individual consumers.

The reaction to such technological innovations is likely to vary across country markets and regional innovation

systems. Specific regional settings are shaped, e.g. on the demand side, by the amount of local purchasing power, the degree of market saturation, and local product requirements. On the supply side, the degree and type of specialization in supplier networks and preferences for supply chain coordination differ between regions, for example. This results in specific dynamics of regional automotive supplier networks. Lastly, both the supply and demand sides

have to act within the constraints of local regulatory frameworks. How industry structure and consumer mobility patterns in different regional markets will react to technological change in propulsion technology is therefore far from clear. Our research group will analyze data and empirical evidence with a focus on Asian lead markets and contrast the results to European structures.



*Nicole Schleiffer,  
Dr. Roman Bartnik,  
Mira Schüller  
(from left to right)*

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## COORDINATING EXTERNAL AND INTERNAL SOURCES OF INNOVATION IN AUTOMOTIVE SUPPLY CHAINS

### DR. ROMAN BARTNIK, RESEARCH GROUP LEADER

We analyze how technological change affects the coordination of innovation within and between firms in the automotive industry. Aspects of supply chain integration, intra-firm coordination, and R&D and inter-firm negotiation about gain sharing in supply chains are separate topics of study.

Regarding technology development,

firms need to decide how existing structures of coordination, knowledge generation and transfer need to be complemented and adapted to accommodate major technological changes.

How companies react to challenges when developing and sourcing components of both hybrid and fully electric cars will depend in part on region-

al technological specialization. Consequently, such change may be more advanced for Asian suppliers serving lead markets of hybrid technology such as Japan, Korea or China. International comparison with an Asian focus appears promising in this regard.

## TECHNICALLY OPTIMAL ELECTRIC VEHICLE DESIGN FOR USER GROUPS IN CHINA

### MIRA SCHÜLLER, DOCTORAL RESEARCHER

The overall research question is how to design electric vehicles in an optimal way to be suitable for user groups in China.

The empirical research includes a driving data analysis in China to investigate local mobility characteristics. The re-

sults can be compared to similar investigations in Germany. In combination with the results of consumer studies, driving behavior leads to important parameter characteristics of an electric vehicle, e.g. packaging, aerodynamics, powertrain, weight and costs from a us-

er perspective. In addition, the technical solution area must be analyzed and optimized for the targeted user group. This allows for the technical design of optimized vehicle concepts, meeting the users' needs.

*Supervisor: Prof. Dr. Dieter Schramm | Mechatronics | Faculty of Engineering*

## CONFIGURATION OF THE VALUE PROPOSITION FOR INNOVATIVE SERVICES OF AUTOMOBILE MANUFACTURERS TO IMPROVE CUSTOMER VALUE

### AN EMPIRICAL INVESTIGATION IN GERMANY AND CHINA ON THE TRANSITION TO ELECTRIC MOBILITY

#### NICOLE SCHLEIFFER, DOCTORAL RESEARCHER

The acceptance of electric vehicles is low in both Germany and in China. A key task for automotive firms is to create new value to improve the perceived tradeoff between benefits and cost and to overcome the numerous perceived barriers. Moreover, companies need to make sure that their value offer is sub-

jectively perceived as valuable by the customer. Therefore, the intention of the research is to analyze theoretically and empirically the configuration of value propositions of automotive manufacturers for innovative product bundles (products and services) that lead to an improvement in customer value.

This requires an integrated approach to the companies' and the consumers' perspectives on value dimensions. The project will include an empirical investigation in Germany and China, which are two important markets in the transition to electric mobility.

*Supervisor: Prof. Dr. Heike Proff | International Automotive Management | Faculty of Engineering*

## IDENTIFYING LINKS

### IDENTIFYING LINKS AND ESTABLISHING JOINT RESEARCH PROJECTS

#### MARCUS CONLÉ, RESEARCH FELLOW

The Advanced School is an international, multidisciplinary research program with eighteen individual research projects. An important part of the work at the Advanced School is for every research group to define its profile and

for all scientists to outline their individual project. However, another intellectual challenge is to link the individual research projects up to a greater, overarching theme.

To support this undertaking, Marcus

Conlé, research fellow at the Advanced School, assists the six research groups in identifying common ground and establishing joint research projects.

*Marcus Conlé  
Research Fellow*



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# 03

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# 04

## INNOVATING LOW-CARBON FUTURES

### THE SCIENTIFIC CONTEXT

#### KEYNOTE SPEECH GIVEN BY JOHN URRY AT THE INAUGURATION OF THE ADVANCED SCHOOL

##### ABOUT PROFESSOR JOHN URRY

Professor John Urry is Distinguished Professor of Sociology at Lancaster University. The founding Co-Editor of the journal *Mobilities*, he is an expert on innovation in the automotive industry. In his current position as Director of the Lancaster Centre for Mobilities Research (CeMoRe), he leads a team of scholars from various disciplines who

are working on the study of new mobilities. He was invited to give a keynote speech at the inauguration of the IN-EAST School of Advanced Studies, embedded in the 30th EAMSA Annual Conference on „Innovation in Asia and Europe – Approaches and Answers to New Challenges“.



##### KEYNOTE SPEECH

Thank you very much for inviting me here, I'm very pleased to be at the inauguration of this new research project. What I want to do today is to address some issues to do with innovation and apply some notions in the context of developing post-carbon societies.

In particular, I'm concerned with the problem of energy. Energy lies at the back of society, lies at the back of economies, and is in many ways relatively under-examined. Schumacher once said that there is no substitute for en-

ergy, the whole of modern society is built on it, it's not just any old commodity, but its precondition. And the way in which contemporary societies have come to be organized has generated exceptional levels of energy use, or what we should see as the burning of energy over the last 2-3 centuries, but especially since 1900. John McNeill, the environmental historian notes: "We humans have deployed more energy since 1900 than all the hundreds of centuries before 1900". And that had many un-

intended consequences, including climate change and the probable peaking of the world's oil supply, both of which are 'market failures'.

Now I'm interested in how one might innovate to a post-carbon, and specifically, a post-oil future. And oil for me is particularly significant. It's a brilliant commodity. It produces all sorts of potential affordances, it has enabled the mobile modern societies of the 20th century to develop and spread across all 200 or so countries. And it has en-

abled that though providing at least 95 percent of the energy that transports people and objects. And both of those are of course very fateful for the ways in which societies developed. It also enabled what I like to call not just food miles, but colleague mile, we're participating in that today, friendship miles and family miles. But oil is also found in most manufactured goods, in most forms of food and so lies behind, hidden from view, yet is highly significant. And I also believe that there has been something of a peaking of the oil supplies. Certainly, there's the peaking of oil per person in the world. It is estimated that maybe only 40 or so years of oil, or at least of easy oil, remain. According to the chief economist of the International Energy Authority, the conventional oil supplies peaked in 2006 and the ratio of barrels consumed to barrels used may soon go up to 10:1. And even allowing for so-called shale oil, tar sands and possible oil fields under the Arctic, the peak discovery of oil was during the 1960s.

I could also refer the issue of changing climates and in some ways it's very good to be speaking in Germany which has addressed in a more sustained way, the issue of how to deal with climate change.

One thing that I'm also interested in is what kinds of thinking might be helpful to developing innovation in a post-car-

bon fashion. In much public discourses it is believed that there are economic models and procedures and if it were possible to change market signals, then consumers might be induced to behave differently and possibly in a lower carbon direction. But I've been noting in your introduction here the significance that institutions play in all of this. So that there are the institutions of the large corporations which of course have huge interests in 'business as usual' - how to overcome some of that 'business as usual' thinking and procedures will be difficult and problematic. There is also here the significance of what I like to call social habituation, the forming of habits that spread through a society, involving the role of media, advertising, of cultural studies, the ways in which habits are formed which become embedded and embodied. Certain kinds of social practice are hard to reverse. But of course it's not true that habits never change and all of us in this room here will have either on their body or in the bag next to them a small electronic device, essentially a clever computer, that does various things, that if we would have been in this room twenty years ago none of us would have had next to our body. So there are habits that do change and of course new habits can take over and so it becomes impossible to imagine what life would be like without those changed

habits. I think it's reasonable to say that low-carbon innovations will only become significant if they become fashionable. Hence it's a matter of changing cultures and changing fashion. The kinds of innovation to do with people's movement will only become significant unless they are in some ways fun and fashionable, rather than involving a sense of loss.

A couple of theoretical frameworks are helpful here. One is the idea that there are system transformations, that there are multi levels of change that need to take place in order that one system may come in and in some sense replace another. That there are countless niches, such as hybrid cars, plug-in cars, hydrogen fuel cell cars and so on but the question is under what circumstances it will be possible to scale up one or more of those into a new socio-technical regime. And so this involves thinking through the process of system transformation and how to develop niches that may turn into new regimes.

But a second kind of perspective is very important and that is what's often called in British literature 'Social Practices' - the significance of everyday practices. How these are formed through materials, meanings and competences. And how these lock in people into various kinds of activities that seem obvious, natural and the way to

behave. And some of those high-carbon practices are things we all in this room routinely do. But none of them are in a way natural, they're all have come to be organized, made possible by high-energy, high-carbon systems. So there are two things I've tried to say so far, one is the significance of socio-technical organization and the other is the importance of social practices. But I also think that there is something else about systems, which connects social science and some of the physical sciences, seeing systems as dynamic, involved in process, relatively unpredictable, open rather than closed and in which the interactions between elements are utterly significant and often involved in generating non-linear changes and transformations. The systems can pass a threshold and suddenly the kind of the world is overturned and so the normal state is not one of balance, there are positive feedbacks which take systems dramatically away from points of equilibrium. A new order can develop. There is a very interesting new book by Al Gore who deployed some of this thinking to talk about such a post-carbon innovative future.

So systems of course can be stabilized for long period through various lock-ins, but it is possible for small causes to prompt the emergence of a new path. I'm also taken by some of the writings of Brian Arthur, who is proba-

bly an influential figure in some of your discussions here. In his book on the nature of technology he talks about the significance of combining elements over lengthy periods to form a new socio-technical system, but basically where it's the combination that makes the difference. And this involves innovation processes which are very much more combinatorial, non-linear, and often unpredictable.

Systems get locked in over decades, habits are elements of those systems, and also, one thing I also think interesting, is the way in which systems get clustered together. So in the first part of the 20th century in the United States, as David Nye says, there is a forming of a high-energy regime of fabrics, food, suburbs, travel, fuels, climate control, limitless growth. So for me, in order to develop low-carbonism, what is important is how to imagine a cluster of low-carbon systems that feed in and reinforce each other in a productive and reinforcing way.

Some of that involves reversing what the members of a society have got used to and embodied and embedded. And I think it's an extraordinary difficult task to bring about, whereby a whole array of systems goes in the opposite direction.

There is moreover a shortage of time because of how emissions are already in the atmosphere and stay there for

hundreds of years.

The US National Intelligence Council for example says it is inevitable that fossil fuels will be replaced by some other fuel system, energy system. It is inevitable, but it will only happen at some time during this coming century. So it's a very long-term thing to imagine happening. And Buckminster Fuller<sup>1</sup> notes that you never change anything by fighting the existing reality. What you do to change something, you build a new model, a new system or set of systems, that somehow then has the effect that the existing model, such as land line telephones, become over time obsolete.

Brian Arthur said that any new significant system takes three or four decades to bring about and of course there may not be sufficient time before different climate, economic, social and political consequences unfold. So I've likened this to the combining of isolated islands of an archipelago, that somehow need to be brought together and then the archipelago gets revealed. So there are many problems here in system change, and that's partly because technology is always embed-

<sup>1</sup> American architect, system theorist, author, designer, inventor and futurist: "You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete".

ded in economic, social and political life. I like to describe this as not only the business model that is necessary for new systems to come about, but also the sociological model, the kinds of social practices into which some new system or set of systems are embedded and in which people's social practices are reorganized around this new technology. And that's never a question of simple substitution, but a much more complex process.

I'm going to finish with low-carbon in particular. So if we were imagining a low-carbon cluster, not only would it involve some of the new technologies that we might want to research, new kinds of engine systems, new kinds of materials for making vehicles, new kinds of battery development and so on, but probably other things as well. That GDP would not be only measure of well-being in a society, probably low-carbonism requires a fair degree of equality and less inequality. It probably involves reengineering what it is to be a successful person. It would not be the sort of celebrity jetsetter, whatever traveling the world, but a much more localized, in which friendships and families would be more local; friends chosen from down your street rather than a kind of supermarketization of friends from around the world; the transformations of agriculture based upon a much lower input of oil, which inter-

estingly happened in Cuba in the early 1990s and some people say Cuba provided in an early 1990s a kind of model of a post-oil agriculture; the localizing of work and education; the process of democratizing innovation, and some reduction in the scale of financialization. In 'After the Car' Kingsley Dennis and I argue that 'The post-car vehicle system' would need a series of innovations to do with policy, technology, charging systems, new social practices, new kinds of innovation, that would hopefully fit together, to form and reproduce an alternative system and very much moving away from the idea of technology as itself being the central transforming process. This emphasizes the circular independent character of such a post-car development.

I've so far talked about innovation without much reference to place, in fact I'm not making any real reference to places, except to refer to what I call 'synchronization'. And here I draw on an interesting book called 'Sync' by the physicist Steve Strogatz<sup>2</sup>. He is interested in how synchronization may take place around the world between many different elements, in which a new order comes to be created out of apparent chaos. This links to Brian Arthur

<sup>2</sup>American mathematician's book 'Sync' was named Best Book of 2003 by *Discover Magazine*.

and the combination of elements. How does synchronization and the combining of different elements occur between different agents and entities located at various positions within what I call an international division of innovative labor? How are, over time, innovations synchronized and interconnected with each other?

I'm interested in the innovation of what we know called the motor car in the late 19th early 20th century, where there all sorts of bits of innovation came over time to be synchronized and form what became the 20th century's most fateful innovation. And so apparently unconnected innovations initiated at geographically distant locations, came to beat to the same drum. And so Strogatz maintains that a network may appear highly stable, but another element comes along seemingly indistinguishable from others, yet this one triggers a cascade and there's a tipping point. When this happens there can be gigantic synchronized actions.

So the interesting question then would be: "Is there in the contemporary world in relationship to mobility that potential synchronization about to happen?" I have no idea how to answer that, but there are interesting shifts in mobility systems occurring in the first world such that some writers are now talking about the peaking of travel. For example, in the United States, which still ac-

counts for nearly a quarter of all oil consumption, there is an interesting plateauing of travel actually starting before 2007/2008.

So is it possible that we are at this moment of transition, of the potential synchronization of a new mobility system? And that would have many implications for the research program being developed here. Or it might be that such a new system will not develop, that there will be profoundly catastrophic resource wars around water, food, energy and particularly around oil, as in 'Mad Max II'. So I hope you get your program of work going well, or resource wars may be the future!

## 05

# SOCIAL AND INTERNATIONAL FORCES IN CHINESE TECHNOLOGICAL DEVELOPMENT

## THE SCIENTIFIC CONTEXT

### KEYNOTE SPEECH GIVEN BY ANDREW TYLECOTE AT THE INAUGURATION OF THE ADVANCED SCHOOL

#### ABOUT PROFESSOR ANDREW TYLECOTE



Professor Andrew Tylecote is Emeritus Professor of the Economics and Management of Technological Change at Sheffield University Management School. His research interests span management and economics, with a general focus on technological change. Tylecote has strong ties to East Asia, having recently served as Visiting Professor at the Center for Research on

Technological Innovation at Tsinghua University in Beijing and the National Institute for Innovation Management at Zhejiang University, Hangzhou. He was invited to give a keynote speech at the inauguration of the IN-EAST School, embedded in the 30th EAMSA Annual Conference on „Innovation in Asia and Europe – Approaches and Answers to New Challenges“.

#### KEYNOTE SPEECH

I am going to try to explain some of the main themes in a book on China that I'm writing with Jiajia Liu. I've had to work hard to fill in all the pieces of the jigsaw puzzle that compose the argument. There was one large last piece left... and suddenly, at lunch in Beijing a few months ago, my host produced the last piece and put it in. I'll tell you when we get there.

Let me just begin with what everyone thinks has been happening in China

these last 33 years. The general view is that there has been one reform process in China, since 1980: a gradual move towards capitalism, but government keeps a guiding role. It's not what I think has been happening in China. No: there was a radical reform process, 1978-89; and a 'conservative reform' process since 1992. In the 'conservative reform' old inequalities of power and privilege have surfaced, and been joined by new ones. In consequence,

there are too few green shoots of technological dynamism for Chinese development to be sustained.

Of course I'm criticizing something which is almost beyond criticism, because China is so successful. I don't mean that the economy is going to go flat any time soon. But real catch-up isn't on the cards with the present regime. That's what I'm going to argue, and to sustain my argument I shall give 400 years of history – for two reasons:

first, I'm a historian; and second, history matters. History matters in China tremendously. And people are always talking about it: 'It was different under the Ming', or 'Things were better under the Song'. But I will focus on the last fifty years.

Let me now give a little theoretical background on institutions, growth and technological development. What does economic success require? There is a kind of mainstream consensus answer developing on this question. Robinson and Acemoglu's "Why Nations Fail" argues that success requires inclusive rather than extractive societies. All developed societies are inclusive. What sets inclusive societies apart, in economic terms? First, freedom to sell one's labour and one's produce – even for the lowest and poorest. Second, security of property – ditto. So, let's look at China from this point of view. Start at the top: the emperor's word is law. He may at any moment annul anyone's freedom to do anything. So may his local officials. Security of property in China was always limited.

It is a traditional problem in China that there has never been anything that one could call limited government. In Germany, in Holland, in England we have limited government: "Be you never so mighty, the law is above you." We had limited government in Holland, in England, 500 years ago. (I mention Hol-

land first, because they had their industrial revolution first, even if the British so to speak took it away from them.) The Dutch were first, because they were the first inclusive society: they had freedom of commercial activity. Not in China. In China commercial activity was circumscribed by guilds and cartels of all kinds, sanctioned (and milked) by government officials.

You know the old American saying 'Build a better mouse trap, and the world will beat a path to your door'. In China, the first person who will beat a path to your door is a local official who wants to squash you. So as Fairbanks put it: 'The tradition in China had not been to build a better mouse trap but to get the official mouse monopoly' (Fairbanks, China: a new history, p. 181).

I laid some emphasis in my introduction on the importance of inequalities of power. Let me give an example of why inequality of power matters, and mattered: the position of young women in pre-modern China. I will summarise the fate of women in pre-modern China – any time before about 1900, maybe later:

- Girl's age at first marriage: about 14. No right to choose. Patrilocal: lives with the husband's family: mother-in-law rules.

- Education? Female literacy was very low. 女子无才便是德. Which translates as: 'Lack of talent is a virtue in a wom-

an.' Apparently a traditional saying in China.

Now let's compare. The average age of first marriage of women in England in the year 1600 was not 14, not 16: 26. Holland's average was 24. Why did this matter, economically? The Chinese were remarkably innovative, as all the world since Joseph Needham knows, they were first with printing, with gunpowder, with the compass, with a whole gamut of tremendous innovation, but they did not lead on watermills and windmills, they didn't even use them – while late medieval Europe was moving far and fast ahead, the Dutch with windmills, for obvious reasons, the English with watermills. Why?

In Northwest Europe, labor was more scarce and expensive, because the birthrate in China was higher than in northwest Europe; since the girls were getting married at 14 rather than at 26. Capital was cheaper, that is rates of interest in Northwest Europe were lower – because in Northwest Europe people were saving for their old age. Even then, in 1500, they could not count on their children to look after them in their old age. And their children in their teens and early twenties were saving to get married. Not in China. In consequence it did not pay to invest in labour-saving equipment such as windmills and watermills. And we see the consequences in the per capita GDP figures of Mad-

dison: in 1500 China 600, Japan 500, W Europe 771 (Maddison, Contours...); in 1700 China 600, Japan 570, WE 997. And in Maddison's population figures, on the other hand: from 1500-1820 China's more than tripled, while Western Europe's only just doubled. In short: the fate of young women mattered economically.

So China failed and all hell was let loose after 1840, when the foreigners became strong enough to feast upon failure. But the foreigners brought something of value: they forced the Chinese economy open, they got control of 92 'treaty ports', in which they brought freedom of enterprise and the rule of law. Foreign law, forced on the Chinese, but law. This increased the difference between the coast, where the development was, in the Yangtze valley, and inland. Another damaging inequality; though when the railways came, they evened it up somewhat. In the rest of China, stagnation turned to disorder. The Chinese concluded that they needed strong reforming rule. They must learn from foreigners so as to evict them and restore order and unity. In 1949 order and unity were indeed restored under Mao.

In some respects Mao improved on the Ming. He favoured female education and employment, with the reservation that he wanted high fertility as well. Unfortunately, with Mao and his reform-

ing rule came a system for squeezing the last drop out of the peasantry called the hukou, the residence permit. : 'the peasantry are a backward class' (K Marx); hukou would hold them to the land, where they could be squeezed to build up the urban proletariat...'. So one inequality was reduced, but another one introduced. And one was restored: the Party's word is law. It may at any moment annul anyone's freedom to do anything. So may its local officials. Security of property in China is still limited.

What did this do to technology? There were two stages of modernization under Mao. When the Soviet Union was a great friend of China, up to 1958, there was a remarkable scheme of technology transfer – mainly to the areas developed already. Then there was the great split, and Mao had to manage without Moscow. He was afraid the Americans would take the opportunity to attack and so he moved a lot of high technology inland – good news for the underdeveloped west. There were two styles of management which went with the two stages. The Russians taught a tough, top-down Taylorist style. Then in stage two after 1958 there started to be countercurrents. There was what was called the Angang Constitution, a set of arrangements which was much more bottom-up, much more creative, very largely in desperation, because the

Russian uncle had gone. And then nobody was helping the Chinese to develop the hydrogen bomb or go into space, so they had to do it for themselves. And then there was the Cultural Revolution, which interfered with hierarchy.

Now the reforms. Deng Xiaoping, shortly after he took over, said something quite extraordinary: 'We must give the country people the power to make money.' He let loose rural entrepreneurship. And if you let loose any Chinese anywhere as entrepreneurs..... And the rural entrepreneurs were protected during this period, from the tyranny of the little dictators among the local officials. (Rather reminiscent of Taiwan in the 1950s and '60s.) This was very good news for China; wonderful news for the country people; but very bad news for the old state-owned enterprises of the cities. Privileged people don't lie down. So two factions emerged: Zhaoist Reform versus Jiangist Conservatism. Zhao Ziyang, prime minister from 1980-87, then party leader 1987-89, the hero of the rural entrepreneurs; Jiang Zemin, the Shanghai party secretary, representing the cities. The political convulsion of spring 1989 brought Jiang to power.

Jiang Zemin took over, and for a time reform stopped. When it restarted in 1992-3 it was a very different sort of reform; a city-led reform, where the big city state-owned enterprises,

some of them in particular owned by the central government, were selected to win high-technology ground for China. They were pumped full of money, given every possible privilege. It didn't work. The easiest way for the officials who were running these forced enterprises, much the easiest way to impress their superiors, was to arrange with foreign frontier firms to buy or rent technology so their masters could see shiny new products made with shiny new foreign machinery. And the Volkswagen-Shanghai Automotive joint-venture, the bitter Chinese slogan was: 'Not a single screw'. That's what VW said: 'Don't change a single screw of our design'. That is called dependent innovation. More dependent than innovative.

Meanwhile, the private sector has its uses. They can do the heavy lifting: earn foreign currency by exploiting rural migrants in coastal sweatshops. The hukou strictly speaking says 'You mustn't move', but the government will look the other way, if you are going to work in a coastal sweatshop and you leave your children behind with grandma. But there was more reform of a kind. The reforming prime minister Zhu Rongji committed China to WTO entry, phased, from 2001-5. In most industries, import tariffs were to be minimal, foreign direct investment to be largely unrestricted. It was more comfortable

for the privileged SOE's to open to the world than to open to rural competition. And we were told with great excitement in the mid-2000s, that there was a massive amount of Chinese high-tech exports coming through. Look again: there was little but assembly, and most of that was owned by 'foreign-invested enterprises'. Higher-class sweatshops! And hukou remains...

So, not much changed and Chinese firms were still not conquering the high ground. But there was a political change. Jiang Zemin handed over to Hu Jintao in 2002-3; Wen Jiabao took over as Prime Minister. Wen Jiabao was (and is) the leader of the Zhaoist faction. (That was the last piece in my jigsaw puzzle.) Wen sounded the alarm over the lack of, and need, for 'indigenous' innovation. The result was the 2006-20 Medium and Long-term Science and Technology Plan. A key element of it was support for new small (mostly private) innovative firms, notably by preferential public procurement. It failed. It failed, because the privileged opposed it. It failed also because the United States opposed it. The announcement that this support of the central government for small innovative firms was going to be dropped, was made at a meeting of the US-China Business Council. Formidable opponents, the United States combined with Jiang Zemin. The SOEs, particularly

centrally-owned ones, are to lead the charge almost alone.

What role, then, are international firms playing in China's development?

As with the treaty ports, foreign connections mean relative freedom for private or semi-private firms. Lenovo for example is registered in Hong Kong, and that has given Lenovo freedom that they wouldn't have if they were registered in Shanghai or Beijing. BYD, the battery firm, is an example of private entrepreneurship, which has flourished largely because it sells abroad, mostly to Sony, and because Warren Buffett has 10 percent of the equity. 'Don't mess with a private firm that has a famous American shareholder'.

For pampered central SOEs, relationships with foreign frontier firms mean freedom to be dependent. The latest lazy way to buy technological advance is: buy foreign firms. Thus Shanghai Automotive bought a majority stake in Ssangyong, allegedly 'stole' SUV technology from it; and then sold it. With little gain. Meantime foreign brands were steadily strengthening their grip on China's car market.

In conclusion: I fear a historic opportunity has been lost. The centre is trying to make the SOE elephants dance – innovate. They duly do R&D, take out patents – but few shake off dependence on FFFs. And few non-SOEs have broken through in hi-tech (Huawei, Lenovo...)

Wen Jiabao – and Robinson/Acemoglu etc. – are right: there will be no real development without economic inclusion; no economic inclusion without political inclusion. For 11 years China was heading towards economic and political inclusion. This was generating real social, economic and technological innovativeness. Now 'reform' must proceed without disturbing entrenched social inequalities. China's technological ascent to the top rank will be delayed.

## 06

DIE ADVANCED SCHOOL  
AUF EINEN BLICK**EIN MULTIDISZIPLINÄRES FORSCHUNGSPROJEKT**

Die IN-EAST School of Advanced Studies ist ein gemeinsames Projekt von WissenschaftlerInnen am Institut für Ostasienwissenschaften (IN-EAST) und KooperationspartnerInnen an verschiedenen Fakultäten der Universität Duisburg-Essen (UDE). In ihr forschen WissenschaftlerInnen von den Gesellschafts- und Wirtschaftswissenschaften über die Geisteswissenschaften bis in die Technik- und Naturwissenschaften an einem gemeinsamen Thema und schlagen in dieser Zusammenarbeit Brücken zwischen ihren Heimatdisziplinen.

**INNOVATIONSFORSCHUNG – DIE GESELLSCHAFTLICHE EINBETTUNG IM FOKUS**

Unter dem Oberthema „Innovation in Ostasien“ analysieren die WissenschaftlerInnen, welche Formen des Zusammenspiels von multi-dimensionalen Rahmenbedingungen und Kräften Innovationen hervorbringen und wie sich diese Neuerungen in den Gesellschaften und Ökonomien Ostasiens durchsetzen bzw. auch scheitern. Die konkreten Forschungsarbeiten fokussieren in ihrer empirischen Arbeit auf Innovationsprozesse in großen urbanen Agglomerationen und – damit verbunden – auf neue Formen der Mobilität, wie etwa Elektromobilität.

**NACHWUCHSGRUPPEN ALS FORSCHUNGS- UND QUALIFIZIERUNGSKONZEPT**

Auch die Advanced School selbst präsentiert eine Innovation insofern als erstmalig in den Regionalstudien (Area Studies) das Konzept der Forschungsgruppen eingeführt wird. Fünf PostdoktorandInnen und einem Juniorprofessor wurde die Leitung einer eigenen Nachwuchsgruppe mit jeweils zwei Doktoranden übertragen, in der sie komplexe Projektdesigns selbstständig durchführen und lernen, selbst junge Nachwuchswissenschaftler zu betreuen. Damit bietet die Advanced School die Möglichkeit, sich umfassend für die Übernahme weiterführender Aufgaben in der Forschungsgemeinde zu qualifizieren. Unterstützt werden die ForscherInnen der Arbeitsgruppen von einem Mentorenteam, das sich aus ProfessorInnen der beteiligten Disziplinen zusammensetzt.

**STÄRKUNG UND WEITERENTWICKLUNG DER REGIONALSTUDIEN (AREA STUDIES)**

Das Bundesministerium für Bildung und Forschung (BMBF) fördert die IN-EAST School of Advanced Studies als eines von sechs Projekten im Rahmen der zweiten Förderlinie zur „Stärkung und Weiterentwicklung der Regionalstudien (Area Studies)“ für vier Jahre mit 4,5 Mio. Euro. Durch die feste Verankerung ihrer Arbeiten in den Fachdisziplinen und die interdisziplinäre Kooperation über ein breites Spektrum von Disziplinen trägt die Advanced School dazu bei, die Regionalstudien in ihrem analytisch-methodischen Zugang zu bereichern und zu erweitern. Mit dem Pilotversuch der Forschungsgruppen wird zudem ein neues Qualifizierungskonzept für die Regionalstudien vorgestellt.

## INTERNATIONALISIERUNG VON WISSENSCHAFT UND FORSCHUNG

Der globale Wettbewerb bringt besondere Herausforderungen für das Wissenschafts- und Innovationssystem in Deutschland mit sich. Die Bedeutung von fundiertem Wissen über andere Weltregionen wächst, geistes- und sozialwissenschaftliche Expertise ist gefragt. Die Bundesregierung begegnet dieser Nachfrage mit ihrer Strategie zur Internationalisierung von Wissenschaft und Forschung. Mit dem Förderschwerpunkt "Stärkung und Weiterentwicklung der Regionalstudien (Area Studies)" knüpft das BMBF an die Internationalisierungsstrategie der Bundesregierung und die Empfehlungen des Wissenschaftsrates zu den Regionalstudien an. Durch eine erste Förderlinie 2009/2010 wurden innovative Formen der universitätsübergreifenden Zusammenarbeit der Regionalstudien untereinander vorangebracht. Ziel der zweiten Förderlinie 2012/2013 ist die Förderung inneruniversitärer Strukturbildung und Vernetzung. Im Fokus stehen die Kooperation der Regionalstudien mit den systematischen Disziplinen oder der Regionalstudien untereinander sowie die inhaltliche und methodische Weiterentwicklung der Regionalstudien. Zusammen mit seinen Schwesterprojekten möchte die IN-EAST School of Advanced Studies hierzu einen Beitrag leisten.

## DIE PROJEKTE DER ZWEITEN FÖRDERLINIE

### Bayreuth Academy of Advanced African Studies

Universität Bayreuth  
www.bayreuth-academy.uni-bayreuth.de

### Die Amerikas als Verflechtungsraum

Universität Bielefeld  
www.uni-bielefeld.de/cias/entangled\_amerikas

### IN-EAST School of Advanced Studies

Universität Duisburg-Essen  
www.uni-due.de/in-east/school

### Africa's Asian Options (AFRASO)

Universität Frankfurt  
www.afraso.org

### CETREN – Transregional Research Network

Universität Göttingen  
www.cetren.de

### Centrum für Nah- und Mitteloststudien (CNMS)

Universität Marburg  
www.uni-marburg.de/cnms

# PUBLISHING INFORMATION

## PUBLISHER/RESPONSIBLE

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A nighttime photograph of a dense city skyline, likely Hong Kong, with numerous skyscrapers illuminated by warm yellow and white lights. A prominent building on the right has a distinctive green neon outline. A white rectangular box is centered in the lower half of the image, containing text and a QR code.

**IN-EAST SCHOOL  
OF ADVANCED STUDIES**

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