

«The Theoretical University»

Anniversary Conference
14–15 November 2019

in the Data Age

Have the great theories become obsolete?



During the anniversary conference «*The Theoretical University*» in the Data Age. Have the great theories become obsolete? on 14 and 15 November, the future of theories and theory formation in the age of Big Data will be discussed.

**Bielefeld
University's
Anniversary
Conference
on 14 and 15
November**



Have the Great Theories Become Obsolete?

Be it relativity theory, systems theory, or game theory: to this day, great theories are the figureheads of science. But are algorithms replacing them with automated data analyses? This is the topic of the conference celebrating 50 years of Bielefeld University on 14 and 15 November. Its title: «The Theoretical University» in the Data Age. Have the Great Theories Become Obsolete?

More than 50 years ago, Helmut Schelsky developed the plan of a «theoretical university» thus laying the intellectual foundation for Bielefeld as a reform university. The title of our anniversary conference commemorates the founding history of Bielefeld university. Moreover we are also asking whether, in times of big data, scepticism about theory – or even a feeling of fatigue regarding theory – has arisen across all disciplines.

How attitude to theories is changing due to big data research

Today's technology makes it possible to store huge amounts of data and analyse them rapidly. This has an effect on academic work. For years, various disciplines have been working increasingly with big data.

Researchers automatically evaluate large amounts of data in order to explain phenomena. It's not just the great theories that have always been questioned, the same applies to mid-range theories as well. However, nowadays, criticism has taken on a completely different quality. Digitalization has the ability to change the foundations of sciences. That is why we are examining the way big data research is affecting the practice of theory formulation and the attitude towards theories across all disciplines. Will the phenomena of our world be explained in future primarily by data analyses instead of theories? Or does big data provide new insights that make the propositions of theories more precise?

Keynote speeches and discussions on the future of theories

In the keynote lectures of the conference, two distinguished scholars from the field of research will explore the question of the future of theories: string theorist Robbert Dijkgraaf (Institute for Advanced Study, Princeton, USA) and philosopher of science Nancy Cartwright (Durham University, England, and University of California, San Diego, USA).

The conference will bring together academics from all disciplines at Bielefeld University.

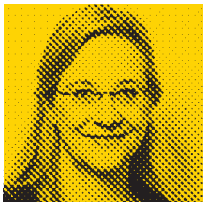
Four parallel panels will deal with theoretical diagnosis of contemporary societies (A), contemporary text cultures (B, in German), machine learning and artificial intelligence (C), and interdisciplinary practices of modelling (D). A concluding panel discussion will explore the role of theory formation in various academic disciplines.

Panel discussion on the governance of academia in the data age

The programme also includes a roundtable debate with representatives from the fields of politics and academia. They will be discussing *Wie die Wissenschaft im Zeitalter der Daten steuern? Good Governance vs. Ökonomisierung* [How should academia be governed in the data age? Good governance vs economization]. We are honored that our keynote speaker Robbert Dijkgraaf (Princeton), Dieter Imboden (research man-

ager and emeritus professor of environmental physics at ETH Zurich), Ada Pellert (rector of FernUniversität Hagen, member of the Digital Council of the Federal Government), Eva Quante-Brandt (Bremen science senator (retired) and long-standing education and science politician) and Gerhard Sagerer (rector of Bielefeld University) have confirmed their participation.

I am looking forward to the discussions and debates and a vibrant anniversary conference.



Professor Dr Angelika Epple
Head of the Scientific Board
for the anniversary academic
programme

Anniversary Conference Programme Overview

Thursday, 14 November 2019

■ 6.15 pm | Audimax

Conference Opening

Welcome address by Gerhard Sagerer, Rector of
Bielefeld University

Introduction by Angelika Epple, Head of Scientific
Board for the anniversary academic programme

Opening Keynote

Robbert Dijkgraaf (Princeton):

*The Usefulness of Useless Knowledge
and the Importance of Basic Research*

Afterwards | Central Hall East

Sparkling wine reception

Friday, 15 November 2019

■ 9.15 am | Audimax

Keynote Lecture

Nancy Cartwright (Durham/San Diego):
Why Big Theories are Here to Stay

■ 10.30 am–1.30 pm | Lecture halls in the
Main University Building (UHG)

Panel A (Lecture hall H1):

Theorizing Contemporary Society. Challenges and Perspectives

Panel B (Lecture hall H12):

Textkulturen der Gegenwart: Theoretische Perspektiven der historischen Textwissenschaften [Contemporary Text Cultures: Theoretical Perspectives of Historical Text Studies]

Panel C (Lecture hall H13):

Big Data: From Machine Learning to Quantum Computing

Panel D (Lecture hall H14):

Interdisciplinary Models for a Complex World

Lunch Break

■ 2.45 pm–4.15 pm | Audimax

Panel discussion: *The Role of Theory in Different Disciplines*

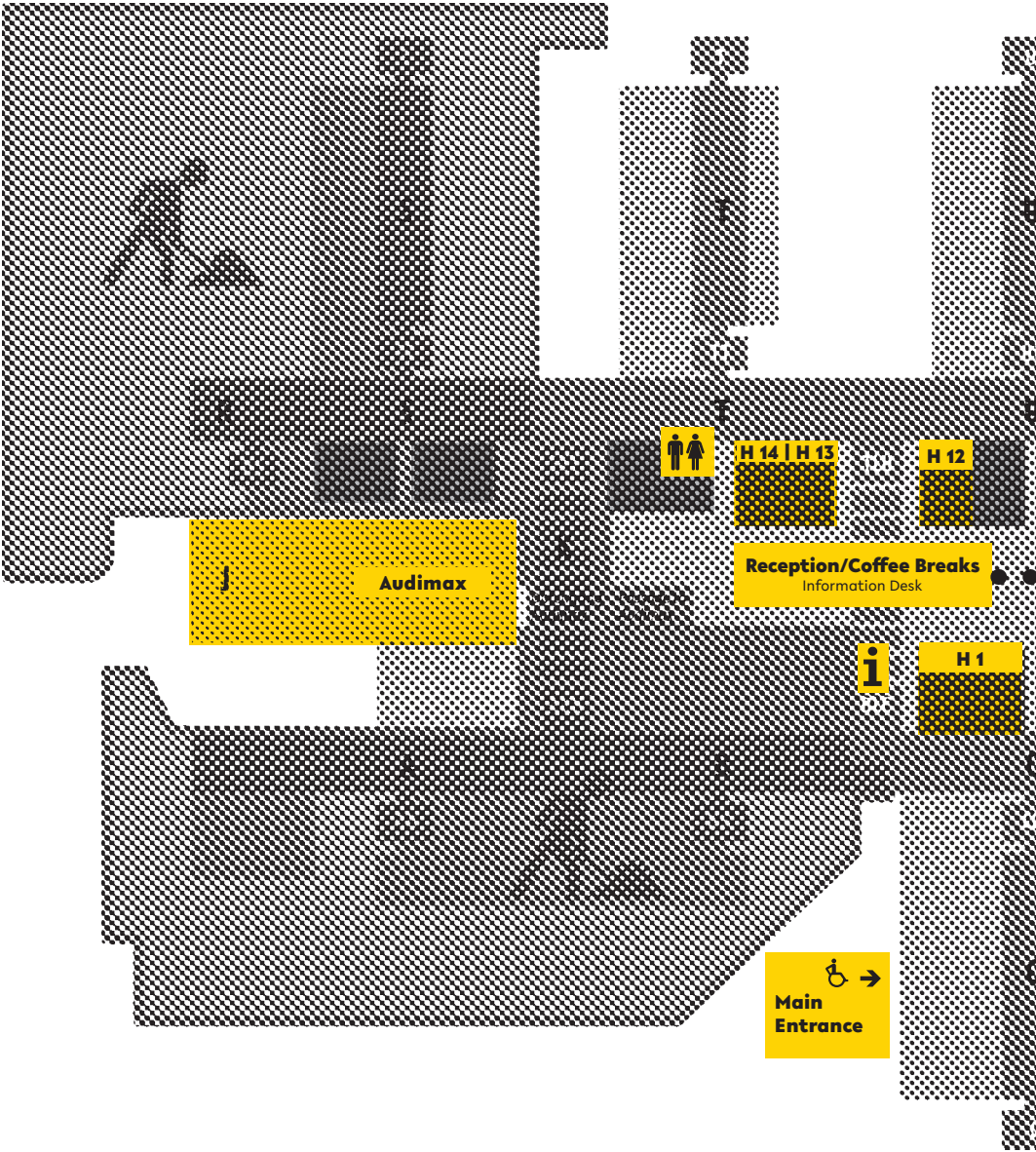
Coffee Break

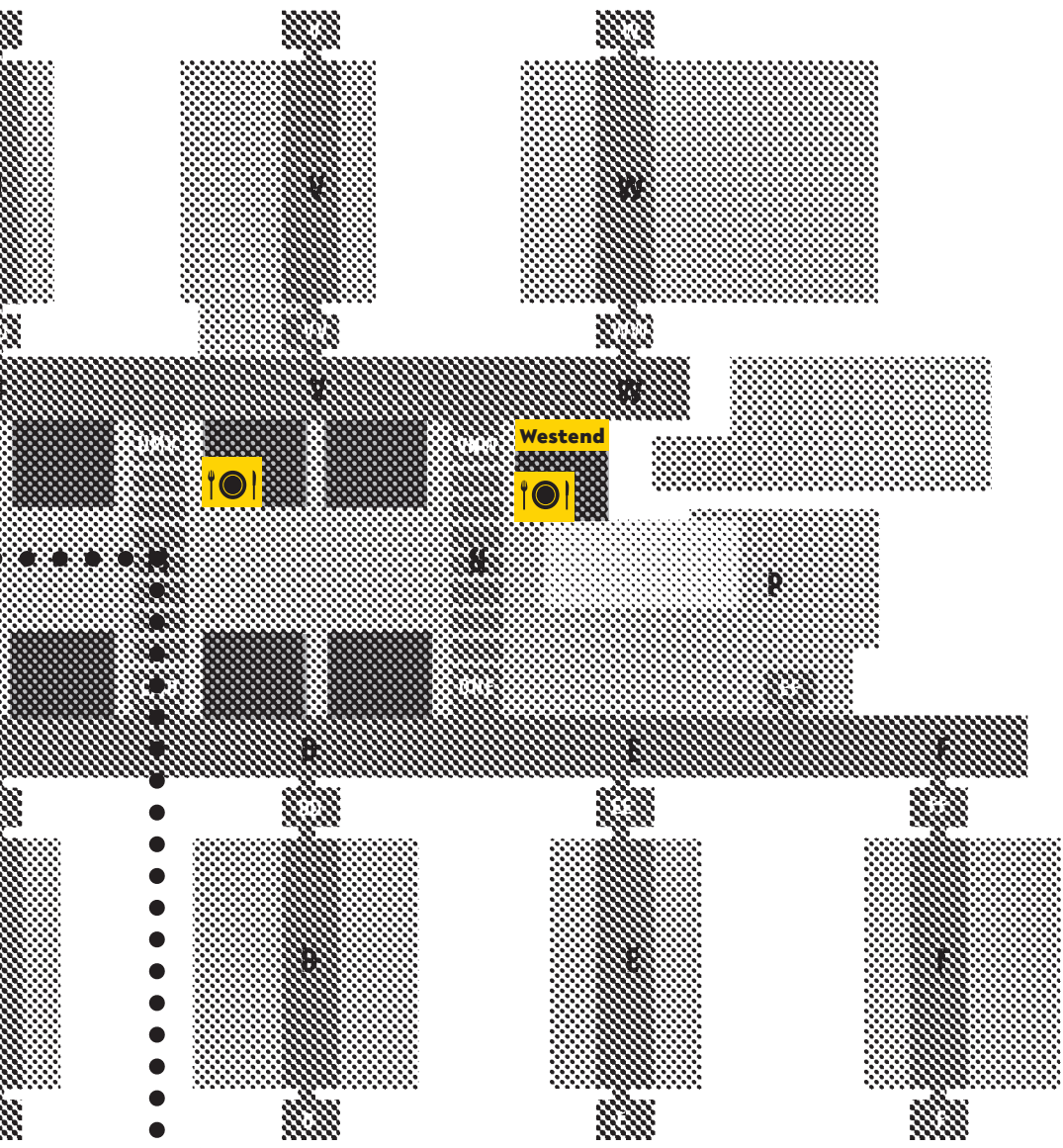
■ 5.00 pm–6:30 pm | Audimax

Politische Diskussionsrunde: *Wie die Wissenschaft im Zeitalter der Daten steuern? Good Governance vs. Ökonomisierung* [Political Roundtable: How Should Academia be Governed in the Data Age? Good Governance vs Economization]

Map

Main Building





Westend

Building X
Canteen / Cafeteria





Opening Keynote

Robbert

Dijkgraaf:

***The Usefulness
of Useless
Knowledge and
the Importance
of Basic Re-
search***

14 November

6.15 pm | Audimax

«We might be entering an era where theory emerges from data»

Mathematical physicist Professor Dr Robbert Dijkgraaf is the director of the Institute for Advanced Study in Princeton, New Jersey, and is renowned for his research on string theory. He is giving the opening lecture of Bielefeld University's anniversary conference. We interviewed him first about the meaning of great theories.

Professor Dijkgraaf, have the great theories become obsolete? This is one of the central questions being raised at Bielefeld University's anniversary conference.

In general, it's dangerous to search for grand theories in any field of science. There is no guarantee that there are simple and universal answers underlying fields of great complexity such as human behaviour, natural ecosystems, or the Earth's climate. However, a search for the fundamental laws of nature has been extremely successful and encouraging in the past. Both at the smallest and largest scales of the universe, current physics is described in terms of elegant mathematical equations with just a handful of particles and forces. So, in this area we have moved from great complexity to great simplicity, although at the cost of introducing very advanced theoretical concepts such as quantum theory and curved space-time. It would be a cruel joke, if at an even deeper level nature turned out to be intractable again.

But in some sense the grandest of grand theories is still doing very well. That's Newton's formulation of modern science. He discovered there is a system of laws describing nature. That reality is, in principle, deterministic, and knowledgeable.

Researchers formulate theories and test them with experiment. This is how science has been perceived for a long time. How is this changing due to ever better information technologies?

I think we now see a complementary approach. Correlations, connections, and theories can «emerge» out of great data sets. Such patterns only become apparent when the scale is really massive, which is facilitated by modern storage and computing capabilities. The latest artificial intelligence methods, such as deep learning and neural nets, enable one to surface these relations. For example, it was a surprise to many that machine translation from one language to another follows deep patterns that were not at all obvious. So, we might be entering an era where theory emerges from data, instead of from human thought. Of course, our own brains have been very good at detecting patterns in massive data sets. One could even argue that's how modern science was born.

String theory is often described as revolutionary and a candidate for universal theory. What hopes do you attach to string theory?

There is a famous saying by one of the great pioneers of string theory, my colleague Edward Witten at the Institute for Advanced Study in Princeton, that if string theory is not describing our universe, we should ask ourselves who is living in the universe described by string theory. It is quite remarkable how this theory is able to bring all the big ideas from modern physics together. But, we have to be honest. We still lack a deep understanding of the fundamental concepts underlying string theory. So, we are not at all close to the state of, say, Einstein's theory of general relativity, which was built on very clear conceptual foundations. I'm very aware of how much we don't understand. Although I think we are most likely moving in the right direction, there might still be a long way to go.

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Professor Dr Robbert Dijkgraaf from the Institute for Advanced Study and the University of Amsterdam is one of today's leading string theory researchers. His research focuses on the interface between mathematics and particle physics. Dijkgraaf has developed precise formulas that help explain the behaviour of particles in certain black holes. ■

Interview by Jörg Heeren for *BI.research*



Keynote Lecture

**Nancy
Cartwright:
*Why Big The-
ories are Here
to Stay***

15 November

9.15 am | Audimax

«There are no big sweeping answers, but lots of small hard tasks»

Philosopher Nancy Cartwright is investigating the role of theories in science. She is one of the two keynote speakers at the anniversary conference.

Professor Cartwright, have the great theories become outdated? This is one of the questions being raised at Bielefeld University's anniversary conference.

I don't think so. But that depends on what you expect of them. They do not, and never have, laid down fundamental truths about nature and society. They serve, I believe, rather, as general frameworks within which to think, frameworks that provide us with strong positive heuristics and with constraints, with sets of tools, ideas and principles for developing concrete theories and models that then can be used to describe, explain, and predict what happens in the empirical world. Think of the importance of the whole framework of general theory of relativity for the study of gravity waves; or of how Judith Butler's framework of gender as performativity transformed studies in gender and queer scholarship.

What alternative possibilities does science have to meet the challenges of our time?

For problems where grand general theories offer us no leads, we can go for middle-level theories directly—theories that make no claim to wide generality. These are the familiar theories we use all the time to get around in the world, theories that are local, *ceteris paribus*, subject-specific, often using concepts, measures, techniques, and methodologies specific to the problem area or subject matter, like the theory of the laser or of the democratic peace.

With or without the guidance of grand theory recommending where and where not to go and broad indicators of how to get there, we have to get down to the nitty-gritty details, getting on with the

tasks of everyday science. There are no big sweeping answers, but lots of small hard tasks, many of which will accomplish little that holds over great sweeps of nature or society but without which solutions will not be found.

Bielefeld University has been committed to interdisciplinary research since its foundation. What can interdisciplinarity achieve when it comes to theories?

I have mostly been involved not with theory testing or development but with the use of theory. This inevitably calls for a host of disciplines. No problems in the real world lie snugly within any single theoretical domain, nor usually even in a handful.

I first cottoned on to this when I was working at Stanford as a philosopher of physics with a love of quantum theory. I wanted to learn in detail how it was put to use, for instance in designing lasers. It turns out I couldn't do this in the physics department; I had to go to the engineering department. And there I found I knew virtually nothing already that could help in understanding lasers.

Now I look at theories for social interventions, like the use of mobile phones with special apps to improve childhood nutrition. There is a middle-level theory about how this intervention is supposed to work: use of the apps is supposed to produce better calculation of each child's status, which is supposed eventually to result in better recognition of the scale of childhood nutrition problems and pressure for government action. This is a long causal chain, and understanding why and whether it will work at each step requires bringing together a wide range of cross disciplinary and local knowledge and techniques. There is no avoiding the need for true interdisciplinary cooperation if we want good real-world outcomes.

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Professor Nancy Cartwright from the University of California in San Diego (USA) and Durham University (Great Britain) is one of today's leading researchers in the field of theory of science. For many years, she concentrated on philosophical aspects of physics and economics; nowadays, her research focuses particularly on evidence-based policymaking. ■

Interview by Hanna Metzen for *BI.research*

Panel A:

Theorizing Contemporary Society. Challenges and Perspectives

15 November

10.30 am–1.30 pm | Lecture hall 1

Speakers: Stephan Lessenich (Munich) | Julian Go (Boston)
Sina Farzin (Hamburg)

Discussant: Uwe Schimank (Bremen)

Organizers: Sina Farzin | Julian Go | Tobias Werron (Bielefeld)

Moderator: Tobias Werron

Theorizing in the social sciences, particularly in sociology, has always been driven by the aspiration to make sense of contemporary society: What are the main characteristics of our society? How can theory help understand how society shapes our lives? For many reasons, this is a challenging task. One reason is that society is a constantly moving object, and that the theorization of society takes place in society. Each generation of theorists therefore has to reconsider the characteristics of its own contemporary society in light of its own experiences, building on but also reconsidering theoretical traditions. Another reason, and the starting point of this panel, is that the three terms which make up the task «theorizing contemporary society», self-evident as they may appear, are actually quite ambiguous concepts:

First, the exact meaning of «contemporary» can be a matter of debate: It can refer to a historical period with a long history (usually called modernity), the beginnings of which date back to the eighteenth century or even longer, but also to a more limited time-span dating back just a few decades (sometimes called postmodernity). Second, the term «society», as least potentially, is multi-referential: It can refer to national entities, as in «German society» or «American society», or to entities without clear boundaries, like «the western civilization», or to the world at large, as in «world-system» or «world society». Third and finally, «theory» and «theorizing» can be ambiguous, too. Particularly, there are traditions which conceive of social theorizing as a normatively detached scientific activity while others tend to see it as a public activity with normative implications, or even as a political practice.

Contemporary society is likely to look differently depending on how we define its temporal and spatial-cultural boundaries, and depending on our understanding of what kind of activity theorizing is. Against this background, the panel aims to bring together theorists from different traditions in social theory to discuss how to deal with these ambiguities: (1) What distinguishes our contemporary society from past formations? How can we relate our interest in contemporary or even future developments with a more historical perspective on the making of modern society? (2) How global is contemporary society? How can we align our interest in national or western developments with a global perspective? (3) How does our understanding of «theorizing» influence our view on these matters? What is the role, or could be the roles, of theorizing in contemporary society?

Given that concepts such as contemporary and society are rarely explicitly defined: Does our perspective change if we make our choices explicit and discuss them across the usual boundaries of theory camps?

By discussing such questions, the panel not only aims to contribute to the understanding of contemporary society but also to advance a pluralistic understanding of theorizing in the social sciences: one that accepts that there are many ways of «doing theory» that may all turn out to be necessary to grasp the complexities of contemporary society.

Panel Programme

10:30–11:00

Stephan Lessenich (Munich): Relations Matter: World Systems Theory and Beyond

11:00–11:30

Julian Go (Boston): Globalizing Social Theory

11:30–12:00

Sina Farzin (Hamburg): Theorising or Diagnosing the Present? Two Genres of Sociological Thinking

12:00–12:15

Comment on the talks by Uwe Schimank (Bremen)

12:15–1:30

Moderated discussion: Theorizing Contemporary Society: Challenges and Perspectives

Speakers



Stephan Lessenich is professor of Sociology at Ludwig Maximilians University in Munich. His most recent publications include *Grenzen der Demokratie. Teilhabe als Verteilungsproblem* (Reclam 2019); *Living Well at Others' Expense: The Hidden Costs of Western Prosperity* (Polity 2018); *Claus Offe and the Critical Theory of the Capitalist State* (co-authored with Jens Borchert, Routledge 2018). He acted as president of the German Sociological Association (DGS) from 2013 to 2017. ■



Julian Go is professor of Sociology at Boston University. Previously he was an Academy Scholar at the Academy for International and Area Studies of Harvard University. At Boston University, he is also a Faculty Affiliate in Asian Studies and the American Studies/New England Studies programme. He has been a visiting scholar at the London School of Economics and Political Science, the Universitat Pompeu Fabra in Barcelona, Lucerne University in Switzerland, and the Third World Studies Center at the University of the Philippines. His teaching and research areas include comparative-historical sociology; empires, colonialism and post colonialism; social theory; global sociology; and politics & culture. ■

Stephan Lessenich *Relations Matter: World Systems Theory and Beyond*

In theorizing contemporary society, one of the crucial issues - and one of the most controversial topics - is the question of the unit of analysis. Is «society» national or global? While talking of «globalization» has become common sense in the social sciences, sociological studies of social inequalities are still engaged in the analysis of national social structures and their dynamics. Confronting this analytical mainstream, world system approaches point to the fact of interdependent inequalities and highlight global configurations of exploitation - in terms of, both, unequal economic and ecological exchange

Julian Go *Globalizing Social Theory*

Social theory has been trapped by a focus upon the nation-state rather than transnational, international or global social relations. This talk will explore ways in which social theory might be «globalized» to account for social relations across and through societies. Previous attempts include world-systems analysis and «world society» theory. This talk discusses new possible alternative approaches, including field theory, empires, and postcolonial thought.



Sina Farzin is Junior professor of Sociology at Hamburg University and Mercator Research Fellow at KWI Essen. Previously she was a Post Doc researcher and PhD Fellow at Bremen University. She received her MA in European Culture and Economy and her MA in German Literature from Ruhr-University Bochum. Her research and teaching areas include sociological theory, cultural sociology and sociology of literature. ■

Sina Farzin

Theorising or Diagnosing the Present? Two Genres of Sociological Thinking

Until the 1980s general theorizing and diagnosis of contemporary social dynamics were an intertwined sociological task. During the last decades theorising and diagnosis of society became two accentuated modes of knowledge production: while theorizing turned into an increasingly specialized and abstract endeavour, diagnosing evolved into the most popular form of sociological writing. Yet, the conjunction of both genres of sociological thought never ceased to exist completely and the presentation will map out their present constellation.



Discussant

Uwe Schimank

Uwe Schimank is professor of Sociology at Bremen University. His research topics are Social and societal theory, organizational sociology, economic sociology and science and university research. ■



Moderator

Tobias Werron

Tobias Werron is professor of Sociological Theory and General Sociology at Bielefeld University. His current research topics are Sociological Theory and Globalization Studies, Sociology of Competition, Rankings and Violent Conflicts. ■

Panel B:

Textkulturen der Theoretische Perspektiven der historischen Schichten

15 November

10:30–13.30 Uhr | Hörsaal 12

Vortragende: Michael N. Forster (Bonn)

Bernhard Jussen (Frankfurt/Main) | Andrea Rapp (Darmstadt)

Organisation: Franz-Josef Arlinghaus (Bielefeld) | Lars Deile (Bielefeld)

Silke Schwandt (Bielefeld) | Carlos Spoerhase (Bielefeld)

Véronique Zanetti (Bielefeld)

Moderation: Silke Schwandt (Bielefeld)

Die Gegenwart: Perspektiven Textwissen-

Die Gegenwart stellt an die Textwissenschaften große Herausforderungen, weil unser Umgang mit Texten sowohl innerhalb als auch außerhalb der Geisteswissenschaften aktuell tiefgreifenden Transformationen unterliegt. Das bringt Verunsicherungen mit sich: Können die Geisteswissenschaften angesichts der Digitalisierung ihrer Gegenstände einfach an ihren hergebrachten Textumgangspraktiken festhalten? Sind die liberalen Demokratien möglicherweise abhängig von einer ›bürgerlichen‹ Textkultur, die von neuen sozialen Medien untergraben wird? Und in welches Verhältnis sollen die disziplinären Textbegriffe und Textumgangspraktiken überhaupt zu den weitaus weniger normierten außerakademischen Textumgangsformen gesetzt werden?

Angesichts der sowohl politischen und gesellschaftlichen als auch technologischen und infrastrukturellen Veränderungen stellt sich die drängende Frage, wie die Textkulturen der Gegenwart historisch und theoretisch anspruchsvoll beschrieben werden können. Die grundlegende ›Theoriebedürftigkeit‹ (Reinhard Koselleck) einer ambitionierten geisteswissenschaftlichen Forschung steht dabei außer Zweifel.

Fraglich ist aber doch, wie dieser Theoriebedarf heute befriedigt werden soll. In den letzten Jahrzehnten des 20. Jahrhunderts wurde der Theoriebedarf der Textwissenschaften weitgehend gestillt durch Theorieangebote wie die erneuerte Hermeneutik, die reaktualisierte Historik, den Poststrukturalismus, die Textlinguistik, die Diskursanalyse oder die Kritische Theorie der Gesellschaft. Noch immer arbeiten die Textwissenschaften verbreitet mit jenen alten Theorie-Paradigmen. Welche Innovationen sind an der Tagesordnung, um sich mit dem historischen Wandel der Textkultur in theoretisch fundierter Weise auseinanderzusetzen?

Wie können ferner die Praktiken der Geisteswissenschaften angemessen theoretisiert werden? Die alltägliche Praxis der Geisteswissenschaften besteht weiterhin in der sorgfältigen Lektüre und kritischen Analyse von Texten: In den Rechtswissenschaften werden Texte als normative Quellen verwendet, in den Geschichtswissenschaften werden sie als Dokumente benutzt, in den Literaturwissenschaften werden sie als ästhetische Werke interpretiert, in der Philosophie werden die in Texten niedergelegten Argumente analysiert und in der Soziologie die darin vorfindlichen diskursiven Strukturen untersucht. Erfordern die aktuellen Veränderungen, dass die von diesen Praktiken vorausgesetzten Konzeptionen von Textualität selbst kritisch historisiert werden? Deuten neue technische Möglichkeiten (Big Data und Digital Humanities) nicht darauf hin, dass sich »Texte« in strukturierte Datenmengen auflösen und den Geisteswissenschaften ihr bisheriger Gegenstandsbezug abhandenkommt?

Diese Fragen, die das Fundament unserer universitären Textkultur betreffen, zeigen, dass die Theoriebedürftigkeit der Textwissenschaften heute so groß ist wie selten zuvor. In unserem Panel zu aktuellen theoretischen Perspektiven der historischen Textwissenschaften möchten wir deshalb Kosellecks Diktum der »Theoriebedürftigkeit« der Geisteswissenschaften vor dem Hintergrund neuerer Entwicklungen und mit konkretem Bezug zu unserem Gegenstand, der Geschichte und Gegenwart von Texten und Textkulturen, pointiert diskutieren.

Panel Programm

10:30–11:00

Michael N. Forster (Bonn): Humboldts Modell der Universität im digitalen Zeitalter

11:00–11:30

Bernhard Jussen (Frankfurt/Main): Philologische Sozialisation und die Zumutungen des »Digital«. Probleme eines (vielleicht) Paradigmenwechsels in den »Humanities«

11:30–12:00

Andrea Rapp (Darmstadt): Materialität - Digitalität - Textualität. Kategorien modellieren

12:00–12:30

Kaffeepause

12:30–13:30

**Diskussion der Gäste mit dem Publikum
Moderation: Silke Schwandt (Bielefeld)**

Vortragende



Bernhard Jussen ist Professor für Mittelalterliche Geschichte mit ihren Perspektiven in der Gegenwart an die Goethe-Universität Frankfurt. Zuvor war er Professor für Geschichte des Spätmittelalters und der frühen Neuzeit in Bielefeld. Nach der Promotion mit einer historisch-anthropologischen Arbeit zu frühmittelalterlichen Verwandtschaftspraktiken (*Spiritual Kinship as Social Practice*) war er Mitarbeiter am Max-Planck-Institut für Geschichte in Göttingen. Hier habilitierte er 1999 mit einer historisch-semantischen Arbeit (*Die Witwe denken. Zur Semantik der mittelalterlichen Bußkultur*). Er war Gastprofessor an der UMich, Ann Arbor und der ENS in Paris, visiting scholar am Dept. of Art History in Harvard und Fellow am Wissenschaftskolleg zu Berlin.

Im Jahr 2007 erhielt er den Leibniz-Preis der Deutschen Forschungsgemeinschaft. Er ist PI des Exzellenzclusters *The Formation of Normative Orders* und Gründungssprecher des *Forschungszentrum für historische Geisteswissenschaften* (FzHG) der Goethe-Universität. Seit 2016 ist er als Leiter des Mittelalterzentrums der Berlin-Brandenburgischen Akademie der Wissenschaften u.a. verantwortlich für den Aufbau des LTA – Latin Text Archive.

Seine Forschungsschwerpunkte sind: (1) Verwandtschaft im vormodernen Europa, (2) Computational Historical Semantics, (3) Geschichtswissenschaft nach dem Eurozentrismus, (4) Ikonologie der Geschichtswissenschaft – Bildliche Formierung historischer Narrative, (5) Gegenwartskunst und Erinnerungspolitik. ■

Bernhard Jussen *Philologische Sozialisation und die Zumutungen des »Digital«.* Probleme eines (vielleicht) Paradigmenwechsels in den »Humanities«

Geschichtswissenschaft ebenso wie Literaturwissenschaften haben inzwischen fast 30 Jahre lang eine schwierige Beziehung zu digitalen Verfahren hinter sich. Dies liegt zwar auch daran, dass diese Geisteswissenschaften tief tradierten akademischen Qualitätskategorien verhaftet sind. Es liegt aber auch daran, (1) dass die Wissenschaftskulturen der Geisteswissenschaften und der Informatik weit auseinanderliegen, (2) dass Digital Humanities über lange Zeit im wesentlichen Versprechen waren, (3) dass viele geisteswissenschaftliche Errungenschaften computergestützter Arbeit eher im Bereich von Convenience anzusiedeln sind als von Methode, (4) dass die methodische Entwicklung digital gestützter Geisteswissenschaften und die technische Entwicklung neuer Möglichkeiten nicht leicht zu harmonisieren sind, und einiges mehr. Welche Möglichkeiten gibt es, weiterzukommen?



Andrea Rapp ist Professorin für Germanistik – Computerphilologie und Mediävistik – an der TU Darmstadt. Bei ihren Forschungen zur Sprache, Literatur und Kultur des Mittelalters ist die digitale Transformation Teil der Fachlichkeit, so dass traditionell-philologische und digitale Verfahrensweisen integrativ verbunden werden. Dies umfasst sowohl die Entwicklung digitaler Analysetechnologien, die Erstellung digitaler Editionen und Wörterbücher, aber auch den nachhaltigen Aufbau von Forschungsinfrastrukturen sowie die Reflexion von Digitalität in der philologischen Forschung und im Bereich des Kulturellen Erbes. ■

Andrea Rapp ***Materialität - Digitalität - Textualität. Kategorien modellieren***

Die Praxis des wissenschaftlichen Annotierens bietet eine produktive Schnittstelle für die Auseinandersetzung mit den Kategorien, die die Eigenschaften von Texten ausmachen. Diese Produktivität auch für die theoretische Arbeit zeigt sich auf verschiedenen Ebenen: Ein aufgrund bestimmter Vorannahmen entwickeltes Kategorienschema (Metadatenschema) muss an allen entsprechenden Textstellen eingebracht werden, d.h. es müssen eindeutige Entscheidungen getroffen werden bzw. Mehrdeutigkeiten expliziert werden, so dass die Kategorien geschärft und intersubjektive Nachvollziehbarkeit unterstützt werden. Auch die Vielschichtigkeit bestimmter Kategorien bzw. ihre Interdependenzen werden expliziert. Aus den Annotaten lassen sich vielfältige Aktionen ableiten bzw. herstellen, die zu einer Modellierung von Kategorien des Textbegriffs beitragen, z.B. Encodieren und Rendern unterschiedlicher Fassungen, Einbinden von ›Archiven‹ in Dokumentarischen Editionen, Taggen von unterschiedlichen Sichten und Perspektiven, Multimedialität und Multimodalität, Social Editions.

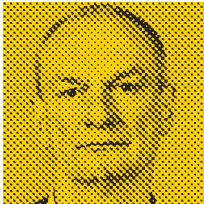


Michael N. Forster ist Alexander von Humboldt-Professor, Inhaber des Lehrstuhls für Theoretische Philosophie und Co-Direktor des Internationalen Zentrums für Philosophie an der Universität Bonn. Zuvor lehrte er an der University of Chicago, wo er zehn Jahre lang als Vorsitzender des Philosophy Department tätig und Glen A. Lloyd Distinguished Service Professor war. Zu seinen Forschungsinteressen gehören die antike Philosophie und insbesondere die deutsche Philosophie. Systematisch konzentriert er sich vor allem auf die Epistemologie (insbesondere Skepsis) und die Sprachphilosophie. Er hat zahlreiche Bücher über deutsche Philosophie geschrieben, darunter *Hegel und Skepsis* (1989), *Hegels Idee eines Phänomens des Geistes* (1998) sowie *After Herder: Sprachphilosophie in der deutschen Tradition* (2010). Darüber hinaus ist er Autor zahlreicher wissenschaftlicher Artikel, darunter mehrere über Nietzsche. ■

Michael N. Forster *Humboldts Modell der Universität im digita- len Zeitalter*

Dieser Vortrag geht der Frage nach, ob Wilhelm von Humboldts Bildungstheorie noch Ideen enthält, die für die Gestaltung von Bildung im digitalen Zeitalter hilfreich sein können. Die Antwort ist positiv: seine Schriften über Bildung implizieren sowohl in Bezug auf die Entwicklung von den »digital humanities« als auch in Bezug auf einen gerechten Zugang dazu wichtige Hinweise.

Panel Organisation



Franz-Josef Arlinghaus

Franz-Josef Arlinghaus ist Professor für Allgemeine Geschichte unter besonderer Berücksichtigung des Hoch- und Spätmittelalters an der Universität Bielefeld. Seine Forschungsschwerpunkte umfassen Stadtgeschichte, Rechtsgeschichte, Geschichte des Individuums und der Individualität im Hoch- und Spätmittelalter, Pragmatischer und symbolisch-ritueller Gebrauch von Schrift im Hoch- und Spätmittelalter, Neue Medien und Geschichtswissenschaft (in Forschung und Didaktik) sowie Sakralkönigtum im Hochmittelalter. ■



Lars Deile

Lars Deile ist Professor für Didaktik und Theorie der Geschichte an der Universität Bielefeld. In seiner Forschung beschäftigt er sich mit Geschichtstheorie, mit Didaktik der Geschichte, mit Geschichtskultur und Agency sowie mit Kultur- und Bildungsgeschichte der Moderne. ■



Silke Schwandt

Dr. Silke Schwandt ist Akademische Rätin auf Zeit an der Universität Bielefeld. An der Fakultät für Geschichtswissenschaft, Philosophie und Theologie arbeitet sie in der Abteilung Geschichte im Bereich Geschichte des Hoch- und Spätmittelalters. Darüber hinaus ist sie Teilprojektleiterin im Sonderforschungsbereich (SFB) 1288 Praktiken des Vergleichens im Projekt INF - Dateninfrastruktur und Digital Humanities. ■



Carlos Spoerhase

Carlos Spoerhase ist Professor für Germanistische Literaturwissenschaft an der Fakultät für Linguistik und Literaturwissenschaft der Universität Bielefeld. In seiner Forschung beschäftigt er sich mit textueller Materialität und Formaten der Literatur, mit der Ästhetik der Skalierung und der Theorie des Textumfangs, mit Historischer Praxeologie der Philologie sowie mit Literaturforschung und Gesellschaftstheorie. ■



Véronique Zanetti

Véronique Zanetti ist Professorin für Politische Philosophie an der Universität Bielefeld. Ihr Forschungsschwerpunkt liegt auf dem Gebiet der Philosophie der internationalen Beziehungen. Mit Fragen unter anderem zu Migration, Sezession, globaler Armut, Rechtfertigung militärischer Gewalt und den daraus sich ergebenden normativen Dimensionen der moralischen Rechte und Pflichten der Staaten oder anderer internationaler Akteure unterhält dieses Gebiet der Philosophie einen engen Kontakt zu anderen Wissenschaften. ■

Panel C:

«Big Data: From Machine Learning to Quantum Computing»

15 November

10.30 am–1.30 pm | Lecture hall 13

Speakers: Kristian Kersting (Darmstadt) | Christian Bauckhage (Sankt Augustin) | Carlo Beenakker (Leiden)

Organizers: Dario Anselmetti (Bielefeld) | Barbara Hammer (Bielefeld)

Science, healthcare, media, telecommunications, finance, industrial processes and the Internet of Things - we live in the age of digital data. The volume of this dataset grows exponentially, doubling approximately every two years. How do we deal with that? How can we extract useful information from this data worm? The term «big data» refers to the huge amount of structured and unstructured data that floods us day after day. The taming and analysis of these data sets is now developing more technologically advanced tools, programmes, and new computing technologies.

By «big data» we mean the collective term for digital technologies, which should make it possible to collect and analyse these data volumes. The scope of the data volume analysed, its processing speed, its bandwidth, validity and informative value play a central role.

By «machine learning» we mean the system-driven generation of insights from sample data. After a learning phase in which the system recognizes patterns and laws in the learning data, it can later apply them to unknown data and judge them. Exemplary applications include medical diagnostics, stock market analysis or autonomous driving systems.

In «quantum computing», a machine does not operate on the basis of the laws of classical physics with individual information units («bits»), but rather on the basis of quantum mechanical states (quantum bits - «qubits»). The processing of these states is based on quantum mechanical principles and should enable the processing of complex problems in the future with extremely high speed. In the future, huge databases, climate or financial data will be analysed better and more efficiently, and the (quantum) computer-aided development of new biomedical drugs will be realized more extensively and faster.

In this panel, we would like to familiarize an interested (not) specialized group of people with the concepts mentioned above and - based on the current state of affairs - convey the opportunities as well as the limits of the procedures.

Panel Programme

10:30–10:40

**Brief Panel Introduction
(Barbara Hammer, Dario Anselmetti)**

10:40–11:30

**Kristian Kersting (Darmstadt): Data
Science & Machine Learning**

11:30–11:50

Coffee Break

11:50–12:40

**Christian Bauckhage (Sankt Augustin):
Will Quantum Computing Disrupt Ma-
chine Learning ?**

12:40–1:30

**Carlo Beenakker (Leiden): Artificial In-
telligence and Machine Learning**

Speakers



Kristian Kersting *Data Science & Machine Learning*

Overcoming the Reproducibility Crisis in Sciences using AI?

Have you ever tried to stand on another ML/AI researcher’s work and not been able to repeat their empirical finding? Most likely, you are not alone. A 2016 survey presented in the journal *Nature*¹ argues that about «70% of researchers have tried and failed to reproduce another scientist’s experiments.» And reproducing ML and AI results is seldom straightforward either, as noted e.g. by Henderson et al. at AAAI 2018.²

Thus, the democratization of ML and AI

does not mean dropping the data on everyone’s desk and saying, «good luck!» It means making ML and AI methods usable in such a way that people can easily instruct machines to have a «look» at data and help them to understand and act on it.

This is the vision of high-level programming languages for ML and AI. High-level features such as relations, quantifiers, functions, and procedures provide clarity and succinct characterisations of the machine learning problem at hand. What is even more important, high-level descriptions improve the credibility of past and future ML and AI research. By making easier-to-understand code available, researchers can more easily reproduce and verify the results claimed in scientific publications. High-level ML and AI code also makes it easier for engineers to transition academic research to industrial applications. Together web-based platforms and containerization, it paves the way to creating more easily reproducible, lightweight ML and AI environments. By putting deep probabilistic learning onto the stack, it may even help the domain expert to solve the task at hand with minimal expert input.

1 M. Baker: 1,500 scientists lift the lid on reproducibility. *Nature*, 2016 May 26;533(7604):452-4. doi: 10.1038/533452.

2 Peter Henderson, Riashat Islam, Philip Bachman, Joelle Pineau, Doina Precup, David Mejer: *Deep Reinforcement Learning That Matters*. In *Proceedings of the Thirty-Second AAAI Conference on Artificial Intelligence (AAAI)*, 2018.



Christian Bauckhage is professor for computer science (pattern recognition) at the University of Bonn and Scientific Director of the Fraunhofer Center for Machine Learning at Fraunhofer IAIS in Sankt Augustin. After studying Naturwissenschaftliche Informatik (computer science and physics) at Bielefeld University, he worked as a postdoctoral researcher in Bielefeld and Toronto. He then joined Deutsche Telekom Laboratories in Berlin before he was appointed to the University of Bonn in 2008. His research addresses theory and practice of artificial intelligence and machine learning and one of his current major interests are quantum computing algorithms for these fields. As a proponent of open science and open education, Christian is a frequent public speaker and advisor to politics and industry. ■

Christian Bauckhage ***Will Quantum Computing*** ***Disrupt Machine Learning?***

Having been an academic topic for many decades, machine learning now attracts widespread public interest. This is well justified as it recently made tremendous progress mainly driven by artificial neural networks and deep learning. Another topic that has long been a purely academic endeavor but now makes rapid strides is quantum computing. Should we therefore expect quantum computing to soon attract the kind of excitement machine learning enjoys right now?

In this talk, we argue that we should. To back this up, we briefly discuss what neural networks can and cannot do, how certain neural networks are closely linked to quantum computing, and how quantum computers may boost and revolutionize what we can expect from machine learning.



Carlo Beenakker

Artificial Intelligence and Machine Learning

Quantum computing in the 2020's

Carlo Beenakker received his Ph.D. in 1984 from Leiden University and then worked for six years at the Philips Research Laboratories in Eindhoven. Since 1991 he is professor in Leiden, working at the Lorentz Institute for theoretical physics. Beenakker is a recipient of the Spinoza award and the AKZO/Nobel Science award and a member of the Royal Netherlands Academy of Arts and Sciences. He received an ERC Synergy grant for the development of a quantum computer based on superconducting qubits and he is a member of the steering committee of the Dutch National Agenda for Quantum Technology. ■

As expressed by the EU Quantum Flagship and various national initiatives, the 2020's can be the decade in which the promise of quantum computing becomes a reality. Our ability to manipulate quantum entanglement has increased dramatically since the turn of the century and we can now envisage real-world applications of quantum information processing. In this talk I hope to present a realistic and optimistic discussion of the quantum technology prospects for the 2020's.

Panel Organizers



Barbara Hammer

Barbara Hammer is professor of Machine Learning at the Faculty of Technology at Bielefeld University and Head of the research group *Machine Learning* at the CITEC at Bielefeld University. ■



Dario Anselmetti

Dario Anselmetti is professor of Experimental Biophysics and Applied Nanoscience in the Department of Physics at Bielefeld University. ■

Panel D:

Interdisciplinary Complex World

Breaking Confines (BreaCon) is a highly interdisciplinary cooperation group at ZIF. The participants come from physics, chemistry, biology, computer science, social science, economics, history and philosophy. Together they combine modeling as a central knowledge-oriented activity with the study of this activity. The BreaCon contribution to the general topic «theory: its nature, role, limitations, and possible replacement» will address «theories, models, and the phenomena». More specifically, it looks like science is in the process of switching into a data-driven mode and the universal accounts and grand schemes have declined in reputation and allure. On the one hand, this is due to the competition with data-driven models, but on the other hand, the whole approach of deductive systematization and unifying explanation seems to look ahead to a lusterless future. Is time running out for grand-scale explanations? Does the rise of computational power shift data-driven models to center stage? Do features of transformation and emergence unhinge theoretical unification? What is the role of universal frameworks such as evolutionary theory in stimulating concrete and empirically rich models?

The BreaCon cooperation group stages its first conference from 13 to 15 November in connection with the fiftieth anniversary celebrations of Bielefeld University. Four conference sections on November 13 and 14 are devoted to the topics: big data, modelling climate change, idealized models and theoretical and empirical models in life and social science, respectively. The fifth section of the conference on November 15 is part of the university anniversary conference. The section on this day is devoted to «interdisciplinary models for a complex world», i. e. the role of theories in building models and explaining phenomena.

Models for a

15 November

10.30 am–1.30 pm | Lecture hall 14

Speakers: Paul Humphreys (Charlottesville) | **Kurt Kremer** (Mainz)
Franjo Weissing (Groningen)

Organizers: Martin Carrier (Bielefeld) | **Armin Gölzhäuser** (Bielefeld)
Marie I. Kaiser (Bielefeld)

Panel Programme

10:30–10:40

Brief Panel Introduction

**Martin Carrier, Armin Gölhäuser,
Marie I. Kaiser**

10:40–11:30

Paul Humphreys (Charlottesville)

**Transdisciplinary Templates, Machine
Learning, and the Prospects for Theory-
free Models**

11:30–11:50

Coffee Break

11:50–12:40

Kurt Kremer (Mainz)

**Random Walks: The Role of Topological
Constraints in Physics and Beyond**

12:40–1:30

Franjo Weissing (Groningen)

**The Causes and Consequences of
Individual Differences**

Speakers



Paul Humphreys is Commonwealth professor of Philosophy at the University of Virginia where he is also co-Director of the Human and Machine Intelligence Group and former co-Director of the Center for the Study of Data and Knowledge. He is the author of *Emergence: A Philosophical Account*, which was awarded the 2019 Mercier Prize for International Philosophy; *Extending Ourselves: Computational Science, Empiricism, and Scientific Method*; and *The Chances of Explanation: Causal Explanation in the Social, Medical, and Physical Science*. His principal current research interests lie in the epistemology of machine learning, computational science, and emergence. ■

Paul Humphreys *Transdisciplinary Templates, Machine Learning, and the Prospects for Theoryfree Models*

In this talk I shall explore how models can be used across disciplines by comparing the great generality of deep neural nets as representation devices with specific models that have transdisciplinary applications. Some remarks will also be made about possible differences between transdisciplinary techniques and transdisciplinary models.

Kurt Kremer *Random Walks: The Role of Topological Constraints in Physics and Beyond*

Starting from Brownian motion the physics of random walks, especially random walks subject to specific constraints, plays an important role in many fields of research. Here I want especially focus on topological constraints and illustrate their relevance for polymer physics, biology and even food. They dominate complex viscoelastic properties of many technologically important materials and at the same time provide an immediate explanation, why chromosomes in the interphase nucleus should be organized in territories. However, on a very practical side, also the tenderness of food can directly be related to the problem of topological constraints.



Kurt Kremer joined the Max Planck Institute for Polymer Research in September of 1995, heading the newly established theory group. After studying physics he received his PhD in 1983. He performed computer simulations for dynamic and static properties of polymers in bulk and near surfaces. He moved for a post-doctoral stay to Exxon Research and Engineering Corporation, Annandale, New Jersey, USA, working on polymers and on charge stabilized colloids. Being back in Germany he obtained his Habilitation in 1988 at the University of Mainz and joined the solid state laboratory of the KFA Jülich as senior scientific staff. He spent several extended visits as visiting professor/scientist at Exxon Research, UC Santa Barbara, University of Minnesota and New York University. Kurt Kremer received several awards and recognitions and is member of the German National Academy of Science, Leopoldina. ■



Franjo Weissing studied Mathematics and Biology at Bielefeld University. In 1990, he received a doctorate in Mathematics from Bielefeld University for a thesis on the dynamics of evolutionary games that was supervised by Nobel laureate Reinhard Selten. During the research year on *Game Theory in the Behavioural Sciences* at the Centre for Interdisciplinary Research (ZiF) Weissing was Selten's assistant. In collaboration with Nobel laureate Elinor Ostrom, he developed the first generation of models introducing «evolutionary thinking» in the political sciences. Since 1990, Weissing is at the University of Groningen (The Netherlands), where he is now Professor of Theoretical Biology (since 2005). His group uses mathematical and computational models to study a broad spectrum of research questions in ecology, evolution, and the behavioural sciences. By studying phenomena like speciation, competitive coexistence, social evolution, division of labour, and gene-culture co-evolution, Weissing hopes to shed light on the causes and consequences of «adaptive diversity» (variation shaped by selection and/or competition) at all levels of organisation. He prefers to develop mechanistic models whose predictions can be tested in close collaboration with empirical researchers. Throughout his career, Weissing was strongly involved in creating an optimal environment for graduate-level research. For example, he was the funding director of award-winning initiatives like the Groningen Graduate School of Science and the Erasmus Mundus Joint MSc Programme Evolutionary Biology. ■

Franjo Weissing

The Causes and Consequences of Individual Differences

No two individuals are alike. Even individuals of the same sex, age, size and social background tend to differ consistently in temperament, motivation, cognition, and behaviour. In humans, such consistent differences are typically referred to as «personalities». As every pet owner or farmer knows, dogs, cats, cows, sheep or canaries also have a well-developed «individuality». In virtually all species studied, ranging from spiders to sticklebacks and from octopuses to chimpanzees, animals differ systematically in the way they cope with their environment. Even the genetically identical cells in a bacterial culture exhibit pronounced differences in morphology, physiology, and behaviour. Until recently, ecologists and evolutionary biologists tended to consider individual variation as «noise» that was largely neglected in their analyses. In the last decade, this view is changing radically, largely because of modelling studies that revealed how strongly the dynamics of ecology and evolution can be affected by even a small degree of individual variation. For example, variation in cooperativeness is crucial for understanding the evolution of cooperation.

In my talk, I will present a spectrum of models that illustrate causes for the emergence of «patterned» individual variation and the eco-evolutionary consequences of such variation. In particular, I will demonstrate how models that are solely based on population averages can lead to wrong and misleading conclusions. I will conclude with the discussion of the pros and cons of different modelling approaches and a plea for model pluralism.

Panel Organizers



Martin Carrier

Martin Carrier is professor of Philosophy at Bielefeld University and Head of the Institute for Interdisciplinary Studies of Science (i²SoS) since 2013. In 2008 he received the Leibniz Prize of the *Deutsche Forschungsgemeinschaft* (DFG). ■



Armin Gölzhäuser

Armin Gölzhäuser is professor of Physics at Bielefeld University. His research focuses on the fabrication, characterization and application of low dimensional nanostructures and functional materials. He also has a strong interest in the technological application of nanostructures. ■



Marie I. Kaiser

Marie I. Kaiser is professor of Philosophy of Science at the Department of Philosophy, at Bielefeld University. Her areas of specialization are the Philosophy of Biology, Philosophy of Science and Metaphysics of Scientific Practice. ■

Panel Discussion:

The Role of Theory in Different Disciplines

What role do theories play in the various disciplines? What are the similarities and differences? What changes can be identified and what drives them? In the panel discussion, the results of the previous panels will be compiled and analysed in order to critically question the talk of the end of theory. Does the collection and evaluation of large amounts of data really make theories obsolete or do they perhaps become all the more important to guide these analyses?

15 November

2.45–4.15 pm | Audimax

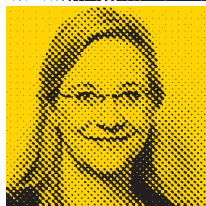
Discussants: Carlo Beenakker (Leiden) | Angelika Epple (Bielefeld)
Armin Gölhäuser (Bielefeld) | Carlos Spuerhase (Bielefeld)
Tobias Werron (Bielefeld) | **Moderation:** Manuela Lenzen (Bielefeld)

Discussants



Carlo Beenakker (Leiden)

Carlo Beenakker is professor of Theory of condensed matter at Leiden University. Within the anniversary conference he holds a presentation in Panel C to the topic *Artificial Intelligence and Machine Learning*. ■



Angelika Epple (Bielefeld)

Angelika Epple is professor of History (with particular focus on the History of 19th and 20th Century) at Bielefeld University, Spokesperson of the Collaborative Research Center (CRC) 1288: Practices of Comparing: Ordering and changing the world and Head of the scientific board for the university anniversary and the academic programme. ■



Armin Götzhäuser (Bielefeld)

Armin Götzhäuser is professor of Physics at Bielefeld University. His research focuses on the fabrication, characterization and application of low dimensional nanostructures and functional materials. He also has a strong interest in the technological application of nanostructures. ■



Carlos Spoerhase (Bielefeld)

Carlos Spoerhase is professor of German Literature at Bielefeld University. His focal points are the History of literature from the 17th century to the present, the history of science and methodology of the humanities. ■



Tobias Werron (Bielefeld)

Tobias Werron is professor of Sociological Theory and General Sociology at Bielefeld University. His current research topics are Sociological Theory and Globalization Studies, Sociology of Competition, Rankings and Violent Conflicts. ■



Moderation Manuela Lenzen (Bielefeld)

Manuela Lenzen is academic assistant at the Center for Interdisciplinary Research of Bielefeld University (ZiF) and science journalist. She has published numerous journalistic articles for newspapers and science magazines. ■

Politische Diskussionsrunde: Wie die Wissenschaft im Zeitalter der Daten Governance vs. Ökonomie

Autonomie und Abhängigkeit – zwischen diesen Polen bewegt sich die Debatte über die richtige Hochschulführung seit den 90er Jahren. Doch die Wissenschaft ist inzwischen eine andere geworden: Die Analyse großer Datenmengen ist mehr und mehr an die Stelle von Theoriebildung getreten. Damit ändern sich Perspektive auf und Anspruch an die Wissenschaft in der Gesellschaft. Aber ändert sich auch der Anspruch an die Führung einer Hochschule? Muss die Hochschule »anders« gelenkt werden? Anders gefragt: ist der Paradigmenwechsel durch Big Data ein Paradigmenwechsel in den Präsidien und Rektoraten deutscher Hochschulen?

15. November

17:00–18:30 Uhr | Audimax

mit Robbert Dijkgraaf (Princeton) | Dieter Imboden (Zürich)

Ada Pellert (Hagen) | Eva Quante-Brandt (Bremen)

Gerhard Sagerer (Bielefeld)

Moderation: Benedikt Schulz (Köln)

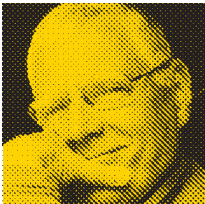
**chaft im Zeit-
steuern? Good
Ökonomisierung**

Teilnehmende der Diskussionsrunde



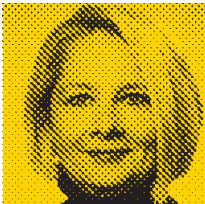
Robbert Dijkgraaf (Princeton)

Robbert Dijkgraaf ist Stringtheoretiker und Direktor des Institute of Advanced Study (IAS) in Princeton, New Jersey. Das IAS ist ein 1930 gegründetes privates Forschungsinstitut. ■



Dieter Imboden (Zürich)

Dieter Imboden ist ein Schweizer Umweltphysiker und Wissenschaftsmanager. Er war von 2005 bis Ende 2012 Präsident des Schweizerischen Nationalfonds (SNF). Von September 2014 bis Januar 2016 leitete Imboden im Auftrag der Gemeinsamen Wissenschaftskonferenz (GWK) die Internationale Expertenkommission zur Evaluation der Exzellenzinitiative (IEKE). Die Kommission wurde teilweise auch Imboden-Kommission genannt. ■



Ada Pellert (Hagen)

Ada Pellert ist Rektorin der FernUniversität in Hagen. Zuvor war die Wirtschaftswissenschaftlerin im Hochschulmanagement verschiedener Universitäten im deutschsprachigen Raum sowie als Professorin für Organisationsentwicklung und Bildungsmanagement tätig. Seit September 2016 ist Ada Pellert Vorsitzende der Kooperationsplattform Digitale Hochschule NRW (DH-NRW), seit August 2018 Mitglied des Digitalrates der Bundesregierung. ■



Eva Quante-Brandt (Bremen)

Eva Quante-Brandt ist Abgeordnete der Bremischen Bürgerschaft. Sie war Direktorin der Akademie für Arbeit und Politik an der Universität Bremen. Von 2012 bis 2019 war sie Wissenschaftssenatorin in Bremen sowie alternierende Vorsitzende der GWK bis 2019. Eva Quante-Brandt war Mitglied im Senat der Leibniz-Gemeinschaft, im Kuratorium des Alfred-Wegener-Instituts und ist Mitglied des Wissenschaftsforums der Sozialdemokratie (SPD). ■



Gerhard Sagerer (Bielefeld)

Gerhard Sagerer ist Rektor der Universität Bielefeld. In der akademischen Selbstverwaltung der Universität Bielefeld ist Gerhard Sagerer seit 1993 aktiv, zunächst als Dekan, später als Prorektor für Studium und Lehre. Von 2015 bis 2018 war Gerhard Sagerer Vorsitzender der Landesrektorenkonferenz von Nordrhein-Westfalen. Im Juni 2019 wurde Gerhard Sagerer für eine dritte Amtszeit als Rektor der Universität Bielefeld bestätigt. ■



Benedikt Schulz (Köln)

Benedikt Schulz ist freier Journalist aus Köln mit Schwerpunkt Hörfunk. Seit 2014 moderiert er regelmäßig Campus & Karriere, das Bildungsmagazin des Deutschlandfunks. Als Experte für Bildungsthemen ist er auch in anderen DLF-Sendungen zu hören. Seit Januar 2018 ist er im Vorstand von *journalists.network e.V.* engagiert und setzt sich dort für die Förderung des journalistischen Nachwuchses und der Auslandsberichterstattung in Deutschland ein. ■



The Scientific Board for the university anniversary

Herbert Dawid

Herbert Dawid is professor and chair for Economic Theory and Computational Economics at the Department of Business Administration and Economics at Bielefeld University. In his research he focuses on Economic Dynamics, Agent-based Computational Economics, Economics of Innovation, Evolutionary Game Theory and Dynamic Optimization. ■

Angelika Epple

Angelika Epple is professor of History (with particular focus on the History of 19th and 20th Century) at Bielefeld University, Spokesperson of the Collaborative Research Center (CRC) 1288: Practices of Comparing: Ordering and changing the world and Head of the scientific board for the university anniversary and the academic programme. ■

Kai Kauffmann

Kai Kauffmann is professor of Modern German literature at Bielefeld University. His main areas of research are literary and cultural history, literature of the 18th century, around 1900 and after 1945. ■

Britta Padberg

Dr Britta Padberg is the Managing Director of the Center for interdisciplinary Research (Zentrum für interdisziplinäre Forschung ZIF). ■

Günter Reiss

Günter Reiss holds a chair for Thin Films and Nanostructures at Bielefeld University. The main activities comprise ultrathin magnetic film systems, nanopatterning and device prototyping for sensor- and datastorage technologies. ■



The Scientific Board: Kai Kauffmann | Herbert Dawid | Angelika Epple | Britta Padberg | Günter Reiss

Imprint

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Prof. Dr. Günter Reiss

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