9th BAA Annual Conference 2007
at Amerika Haus, Karolinenplatz 3, Munich

Scientific Cultures -
Technological Challenges: A Transatlantic Perspective

June 14 - 16, 2007

in cooperation with Deutsches Museum, Munich

The 2007 BAA-annual conference addresses the plurality of scientific cultures and their respective methodologies and discursive practices with respect to the following three areas:

1) The technological challenges that come with recent advancements in life and computer sciences (nanotechnologies, robotics, genetic coding, electronic communication and databases etc.) and their repercussions in the social and political field;

2) New approaches in both the humanities and the hard sciences that may help to bridge the gulf between the two cultures and that open up new perspectives for 'cross-cultural' fertilization; and

3) The regulatory political and institutional mechanisms that determine both the success and the public acceptance and reputation of specific scientific cultures, both in the US and Europe (this includes the crucial issues of scientific ethics and the often invoked 'moral' obligation of scientists, and researchers). With this focus, the following topics will be discussed in two panels:

- The Art of Science: The 'Two Cultures' and Beyond
- Science and Technology in a Posthuman Age

No conference fee, please register for participation by

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The Conference Program

THURSDAY, JUNE 14th, 2007

CONFERENCE OPENING

18.15 Welcome:
Jürgen Gebhardt, Director, BAA
Welcome Address by a Representative of the Ministry of Sciences, Research and the Arts
Awards Ceremony:
2007 BAA Dissertation Award

19.00 Keynote Address
Ursula Heise (Stanford University)
Risk Society and the Literary Imagination

19.50 RECEPTION Lobby, Amerika Haus

FRIDAY, JUNE 15th, 2007

9.30 Panel I: The Art of Science: The "Two Cultures" and Beyond, Session I
Chair | Jochen Achilles (University of Würzburg)
Hanjo Berressem (University of Cologne) | 'The Habit of Saying I:' Eigenvalues and Autopoiesis
Suzanne Nalbantian (University of New York) | The New Alliance of Neuroscience and the Humanities: Interdisciplinarity in the Making

10.50 Coffee Break

11.05 Panel I: The Art of Science: The "Two Cultures" and Beyond, Session II
Chair | Kerstin Schmidt (University of Munich)
Joseph Tabbi (University of Illinois at Chicago) | Electronic Book Review 4.0: Toward a Semantic Literary Web-based Interface
Peter Freese (University of Paderborn) | From Ludwig Boltzmann's H-Theorem to Meatball Mulligan's Party; or How to Fictionalize the Entropy Law

12.25 Lunch Break

14.15 Panel II: Science and Technology in a Posthuman Age, Session I
Chair | Maike Zwingenberger (BAA)
David Nye (University of Southern Denmark) | From Black Box to White Box: Our Changing Relationship to Technology
Helmuth Trischler (Deutsches Museum, Munich) | Science and its Publics: Theories and Practices

15.35 Coffee Break

16.30 BAA Members’ Meeting
Annual Meeting of the Bavarian American Academy - Members only!

SATURDAY, 16 JUNE

9.30 Panel II: Science and Technology in a Posthuman Age, Session II
Chair | Barbara Hahn (University of Würzburg)
Robin Morris Collin (Willamette College of Law) | Science and Equity: The Challenges of Race and Poverty to Scientific Cultures
Heike Mayer (Virginia Tech University) | Constructing Competitive Advantage: The Evolution of State R&D Investment Funds in the United States
10.50 Coffee Break

11.05 Panel Discussion:

Die Amerikanisierung der deutschen Wissenschaftskultur?
Nationale Unterschiede und globale Herausforderungen

Chair | Jürgen Gebhardt (BAA)
Stephan Fuchs (University of Munich)
Harald Lesch (University of Munich)
Ludwig Pfeiffer (Jacobs University Bremen)
Helmuth Trischler (Deutsches Museum, Munich)
Michael Zöller (Council on Public Policy, Bayreuth)

The discussion will be held in German

13.00 End of Conference

Abstracts


Keynote Address

Ursula Heise (Stanford University): Risk Society and the Literary Imagination

Ursula K. Heise is Associate Professor of English & Comparative Literature at Stanford University, where she teaches contemporary literature and literary theory. Her areas of research and teaching include 20th century fiction and poetry, ecocriticism, literature and science, literature and new media, and theories of modernization and globalization. She is the author of Chronoschisms: Time, Narrative, Postmodernism (1997) and Sense of Place and Sense of Planet: The Environmental Imagination of the Global (forthcoming 2008). She is currently working on a book project entitled The Avantgarde and the Forms of Nature.

Abstract

In 1986, sociologist Ulrich Beck argued that the concept of "postmodernity" should be replaced by the term "risk society" because the global society of the late 20th and early 21st centuries is moving into a phase of modernity in which social differences will no longer be articulated around the distribution of wealth but the distribution of technological and ecological risks. While this claim may, at least for the moment, be somewhat too sweeping, risk scenarios have indeed become a crucial arena of social conflict over the last four decades, both nationally and internationally. In these conflicts, differing perceptions and assessment of risk have played a central role, and the analysis and theorization of risk experiences have become a rapidly expanding field of research at the intersection of the natural sciences, social sciences and humanities. This presentation aims to convey an outline of the interdisciplinary profile of this field and the questions of scientific and cultural knowledge and decision-making it raises. It will explore the implications of such questions in the context of studies of contemporary visual culture and literature in the United States.
Panel I, Session I: The Art of Science: The "Two Cultures" and Beyond

Chair: Jochen Achilles (University of Würzburg)

Jochen Achilles has been Full Professor and Head of American Studies at the University of Würzburg since 1999. He taught at Mainz University for many years and was Visiting Professor at Georgia State University, Atlanta, Georgia, in 1992/93. His book publications include *Drama als problematische Form* (1979), a study on the development of Sean O’Casey’s plays in the context of modern drama and *Sheridan Le Fanu und die schauer romantische Tradition* (1991), a book on the interface between the gothic tradition and psychological fiction focussing on Sheridan Le Fanu. He co-edited *Irische Dramatiker der Gegenwart* (1996), a volume on contemporary Irish playwrights, (Trans) *Formations of Cultural Identity in the English-Speaking World* (1998), and *Global Challenges and Regional Responses in Contemporary Drama in English* (2003). He published numerous articles in American, Irish, and German journals on aspects of American and Irish fiction and drama, the development of modernist aesthetics, and on a host of individual authors. His research interests are the development of cultural identities in short fiction, American spaces, and modern drama.

Hanjo Berressem (University of Cologne): "The Habit of Saying I:" Eigenvalues and Autoapoiesis


Abstract

The essay traces the migrations of the term 'Eigenvalue' [*Eigenwert*] and its derivatives (such as 'Eigenspace,' 'Eigenoperation' or 'Eigenorganisation') between the 'cultures' of mathematics (Hilbert), physics (Hamilton, Schrödinger), systems theory (von Foerster, Luhmann), literary studies (Dilthey), philosophy (Hume, Deleuze), and literature (Pynchon), showing how each of them incorporates the term (as well as the terminological cluster around it) into its specific operative logic. The essay develops from the creation of the complex field of conceptual resonances around the term a new understanding of conceptual passages between a multiplicity of cultures understood as 'resonant fields' (Serres, Deleuze).

Suzanne Nalbantian (University of New York): The New Alliance of Neuroscience and the Humanities: Interdisciplinarity in the Making

Suzanne Nalbantian is Professor of Comparative Literature at Long Island University and an interdisciplinary scholar. Her specialization is in modern Western literature, memory study, and links to neuroscience. Her books include *Memory in Literature: From Rousseau to Neuroscience* (2003), *Aesthetic Autobiography: From Life to Art in Marcel Proust*, James Joyce, Virginia Woolf, and Anaïs Nin (1994), *Anaïs Nin: Literary Perspectives* (1997), *Seeds of Decadence in the Late Nineteenth-Century Novel* (1983), and *The Symbol of the Soul from Hölderlin to Yeats* (1977). She holds a Ph.D. from
Columbia University and is a permanent member of Columbia’s Society of Fellows in the Humanities. She is the winner of the TASA Award for Lifetime Scholarly Achievement at Long Island University. She has been the recipient of a National Endowment for the Humanities Fellowship for Independent Study and Research. She has lectured widely on the subject of memory at universities in the U. S. and Europe, including Yale, Stanford, Columbia, Indiana, Carnegie-Mellon, University of Pittsburgh, and Sorbonne-Paris IV as well as, most recently, at labs such as the Cold Spring Harbor Laboratory on Long Island, the Max-Planck Institute in Tuebingen, Germany, and the Collège de France and the Pasteur Institute in Paris.

Abstract
Interdisciplinarity it is at the heart of intellectual pursuit in our age. We are in an era of the integration of disciplines, in what might be called a new age of Enlightenment which is gradually producing thinkers, rather than scholars or even philosophers. The loudest call for such cross-disciplinary exchange between the sciences and the humanities is coming from a group of eminent scientists. Some neuroscientists today are attempting to explain in very concrete terms topics that were traditionally in the domain of the humanities, even to the point of adapting their own established scientific theories to this larger perspective. Among those who are crossing the divide between the disciplines are such leading researchers as Jean-Pierre Changeux, Joseph LeDoux, Endel Tulving, Semir Zeki, Antonio Damasio, and Steven Pinker. A whole variety of “neuro” fields and concerns are developing in relation to all major disciplines from economics to music. The most established of these fields is “neuroaesthetics,” which received its formal definition in 2002. Such diverse studies offer serious challenges to a whole heritage of literary criticism, as well as to the field of aesthetics, philosophy, psychoanalysis, and finally literary theory itself. Although there are inklings of a movement in this direction among some literary critics and in some institutions in Europe and the U. S., it is surprising to say that there are few in the holistic field of comparative literature who are bridging literature and the sciences. My own research on the subject of memory in literature and neuroscience offers a model for neural literary criticism as I have reconsidered the most commonly treated writers like Proust, Joyce, Woolf, and Faulkner in an entirely new perspective. If science is on its way to being enhanced by recourse to the humanities, it also follows that science can bring new objectivity to studies in literature and in other branches of the humanities. Successful interdisciplinary interaction necessitates a shared methodology and a “third discourse” of mutually comprehensible language to create fruitful dialogue on perennial intellectual issues.

PANEL I, Session II:

Chair: Kerstin Schmidt (University of Munich)

Kerstin Schmidt is Assistant Professor of American Studies at the Amerika-Institut of the University of Munich. She has published on contemporary American drama, ethnicity and diaspora, African-American literature, and the Harlem Renaissance as well as on media studies and has lectured on a variety of topics in Europe and North America. She co-edited the essay collection America and the Sea (2004) and has edited and contributed to Space in America: Theory History Culture (2005) and Re-Reading McLuhan (2008). She is also a founding member and former editor of the women's studies journal Freiburger FrauenStudien. In 2005, she published a book-length study called The Theater of Transformation: Postmodernism in American Drama. She is currently writing a book on Negative Space: Concepts of Space in American Literature, Architecture, and Photography 1850-1920.

Joseph Tabbi (University of Illinois at Chicago): Electronic Book Review 4.0: Toward a Semantic Literary Web-based Interface
Joseph Tabbi is the author of Cognitive Fictions (2002) and Postmodern Sublime (1995), books that examine the effects of new technologies on contemporary American fiction. He edits the electronic book review and has edited and introduced William Gaddis's last fiction and collected non-fiction. His essay, "The Processual Page," appears in the Journal of New Media and Culture. Also online (the Iowa Review Web) is an essay-narrative, titled "Overwriting," an interview, and a review of his recent work. He is a director of the Electronic Literature Organization and Professor of English at the University of Illinois at Chicago.

Abstract
During the course of its development, Electronic Book Review 4.0 has situated itself at the intersection of the research interests of the site's editor, database and application designer, and interface designer. In keeping with this cross-disciplinary approach and the vocabulary of running threads, folds, and textures that emerged early in the development of the "web," Editor Joseph Tabbi presents this ebr not as an independent or free-standing project. Connections are not defined by the "hot link" but grounded in keywords and metadata, while entire essays can be brought into a single, 'all over writing space.' In some ways, "ebr's" development is similar to the original vision of the web presented by Ted Nelson and Vannevar Bush (Web 2.0); in other ways, the ebr interface can be seen in combination with the current (and similarly halting) development of semantically driven content on the Internet (e.g., The Semantic Web, or Internet 2.0).

Peter Freese (University of Paderborn): From Ludwig Boltzmann's H-Theorem to meatball Mulligan's Party; or How to Fictionalize the Entropy Law

Peter Freese is Professor emeritus of American Studies at Paderborn University. He was visiting professor at universities in Britain, the U.S. and Hungary and Fellow in Residence at the Claremont Colleges, holds honorary doctorates from Lock Haven University of Pennsylvania and Dortmund University, and is the recipient of the Bundesverdienstkreuz am Bande. Among his 40 books are Die Initiationsreise (1971; rpt. 1998), 'America': Dream or Nightmare? (1990; 3rd rev. ed., 1994), The Ethnic Detective (1992), From Apocalypse to Entropy and Beyond (1997), and Teaching 'America': Selected Essays (2002). He has contributed 180 articles to journals and anthologies and is the editor of the monograph series Arbeiten zur Amerikanistik and of the VIEWFINDER series for the advanced EFL-classroom. He is currently working on a monograph on Kurt Vonnegut's novels.

Abstract
The paper briefly traces the complex history of the Second Law of Thermodynamics from Carnot's first speculations through Clausius's definition and Boltzmann's move from macroscopic thermodynamics to statistical mechanics to Shannon's and Brillouin's takeover of the entropy notion into information science, and then asks how the forbiddingly abstract and threatening concept can be related to individual human lives and thus be made fruitful for literature. To answer this question, a close reading of Thomas Pynchon’s short story “Entropy” (1960) is offered, in which the apprentice writer translates his reading of Henry Adams and Norbert Wiener into a fugue-like plot and a complex net of metaphors and thus manages to fictionalize the workings of the Second Law and make it accessible to lay readers.

PANEL II, Session I: Science and Technology in a Posthuman Age

Chair: Meike Zwingenberger (Bayerische Amerika-Akademie)

Meike Zwingenberger is Executive Director of the Bavarian American Academy in Munich.
and teaches American and Canadian History at the Amerika-Institut of the University of Munich. Her doctoral work focused on social capital and the meaning and importance of social networks in US society. She has published on social capital in information society, transnational social spheres and related topics. She recently co-edited the essay collection *Europe and America: Cultures in Translation* (Heidelberg: Winter, 2006).

**David Nye (University of Southern Denmark): From Black Box to White Box: Our Changing Relationship to Technology**

David E. Nye is the author or editor of 18 books on American history and society, most of which deal with technology and culture. His most recent book is *Technology Matters; Questions to Live With* (2006). German and French translations will appear in the autumn of 2007. In 2005 he received the Leonardo da Vinci Medal from the Society for the History of Technology, the highest award of that organization. He is Professor of American Studies at the University of Southern Denmark.

**Abstract**

Historians of technology have long used the term “black box” to describe an attitude toward technology. This paper will explore how the public perception of communication technologies has changed during the past 100 years, relying primarily on American examples. The paper will deal with the phonograph, telephone, radio, and television, all of which were classic examples of “black box” technologies for generations. The advent of digitalization and its concomitant miniaturization, however, made possible entirely new forms of material culture. The paper proposes that these new portable, miniaturized and interconnected devices should be called “white boxes” and focus on the contrasts between them and the earlier generation of devices. The paper will focus less on what these devices are used for, in other words, than on these devices as forms of material culture.

**Helmuth Trischler (Deutsches Museum, Munich): Science and its Publics: Theories and Practices**

Helmuth Trischler is Director of Research at the Deutsches Museum in Munich and Professor for Modern History and History of Technology at the University of Munich. His main fields of research are national innovation systems and innovation cultures, history of knowledge societies, and transport history. He has published and edited 23 books and about 80 articles. His most recent publication is: "'Made in Germany' : Die Bundesrepublik als Wissensgesellschaft und Innovationssystem", in *Modell Deutschland. Erfolgsgeschichte oder Illusion?* (2007).

**Abstract**

In recent years, the social sciences have developed a number of theories on the place of science in (post)modern societies and its interconnectedness with other parts of society. The paper will firstly discuss these theories from a historical perspective with the emphasis on science and its different publics. Secondly, the paper refers to the recent move of the sciences (and the humanities) to go public. It will finally discuss the challenges and opportunities resulting from this move for museums of science and technology as public spaces – museums as a place where science and the public meet.

**PANEL II, Session II:**

**Chair: Barbara Hahn (University of Würzburg)**
Barbara Hahn is Professor of Economic Geography at Würzburg University. She received her university education 1973 to 1979 at Ruhr University Bochum; Ph.D. in geography with a dissertation on Cyprus in 1982 at Bochum University. Since the mid-1980s her main research focus is on North America. In 1990 habilitation at Mannheim University with a thesis on Canadian Cities. Since then several projects in the United States e.g. on poverty and public housing in New York City, public spaces in American Cities, Shopping Centers in the United States, and the internationalization of retailers (Wal-Mart in Germany, Aldi in the United States). From 1994 to 2000 she was professor for economic and social geography at Lüneburg University. 1993 Fulbright summer school at New York University and winter term 1999 visiting professor at the University of Chicago.

**Robin Morris Collin** (Willamette College of Law): Science and Equity: The Challenges of Race and Poverty to Scientific Cultures

Professor Robin Morris Collin currently teaches law on the faculty of Willamette University College of Law which she joined in 2003 after a distinguished career teaching law at the University of Oregon, Washington & Lee College of Law, and Tulane University among other schools. She and her husband, Robert W. Collin, have published numerous works exploring the themes of the Environmental Justice Movement in the United States, and the International Movement Toward Sustainability. These include "Forever Wild, Forever Free: Sustainability and Equity" in From Landscape to Technoscape: Concepts of Space in American Culture (2005), "Environmental Reparations for Justice and Sustainability" in The Quest for Environmental Justice Human Rights and the Politics of Pollution (2005), "The Role of Communities in Environmental Decisions: Communities Speaking for Themselves" in Journal of Environmental Law And Litigation 13 (1998), and "Where Did All the Blue Skies Go: Sustainability and Equity: The New Paradigm" in Journal of Environmental Law and Litigation 9 (1994). She was the first professor of law to teach a course on Sustainability in Law and Policy in the United States, and she was awarded the David Brower Lifetime Achievement Award for Environmental Activism in 2002.

**Abstract**

The problems that we have created as the result of our industrial development policies threaten the fundamental systems on which all life depends. This is the contemporary challenge of sustainability. The search for answers to these problems challenges the limits of traditional scientific and technological thinking because of their inherent epistemological uncertainty, problems of complexity, scale, and contested values. In order to serve a contemporary role as problem solver for these challenges, scientific and technological cultures must evolve their methodologies and ethical cultures to include values designed to engage policy decisions especially where science is working at the limits of its knowledge base and expertise. This means incorporating qualitative factors often excluded by scientific models, and engaging nonscientific influences such as race, age, gender, class, and world view. Today's solutions must inescapably encounter unresolved conflicts of the past including discredited values underlying colonialism, racism, and gender subordination. Two models of partnership between scientific and technological expertise for policy and legal judgements will be compared: the Environmental Justice models of public participation and community-based science, and the evolving discipline of risk perception.

**Heike Mayer** (Virginia Tech University): Constructing Competitive Advantage: The Evolution of State R&D Investment Funds in the United States

Heike Mayer is an assistant professor in the Urban Affairs and Planning program at Virginia Tech's Alexandria Center. She studied at the University of Konstanz and received her master's degree and Ph.D. in Urban Studies from Portland State University. Her doctoral work focused on the evolution of Portland’s high-technology industry – also known as Silicon Forest – in the absence of a major, world class research university such
as MIT or Stanford. Her research interests are in regional economic development, high-technology regions, entrepreneurship and innovation. She is currently working on a variety of research projects. One examines the evolution of second-tier high-tech regions in the absence of world-class universities. The second project focuses on women high-tech entrepreneurs in Silicon Valley, Boston, Portland, and Washington D.C. She is also working on a study of Slow Cities in Europe (with Paul Knox). Her work has been published in the *Journal of the American Planning Association*, *Journal of Urban Affairs*, *Economic Development Quarterly*, *Economic Development Journal*, and by the *Brookings Institution*.

**Abstract**

State governments in the United States are actively promoting research and development efforts at universities and in industries. Governors and policymakers are hoping that the investments create economic development benefits in the form of job creation, innovation and entrepreneurship. Unlike other countries (especially Japan), the United States are not known to have formal industrial policies. However, at the state level, R&D investments are characterized by a strong focus on specific industries - primarily life sciences, alternative energy, high-technology - advancing research and development, and university-industry collaborations. The paper focuses on the ways in which state R&D investment funds have evolved since the 1980s. During the 1980s, several states initiated programs aimed at strengthening their research capacities. During the 1990s, there seemed to have been a pause in state efforts. Beginning in 2000, states became pro-active again. This time, funding programs began to target certain scientific disciplines, primarily in the areas of bio-, info-, and nanotechnology. In addition, some states have moved from merely building supply side capacities (i.e. university research) to funding research and development efforts that complement the new corporate model of so-called ‘open innovation.’ The presentation will provide an overview of R&D investment efforts in a select number of states. The study is part of a larger research project undertaken by the Pew Center on the States and the National Governors Association (NGA), which seeks to understand the state’s role in supporting research and development. A final report, tentatively titled *A Governor’s Guide on State Investment Funds to Support Innovation-Based Economic Development* (July 2007) will be published.

**PANEL Discussion:**

**Die Amerikanisierung der deutschen Wissenschaftskultur? Nationale Unterschiede und globale Herausforderungen**

**Chair:** Jürgen Gebhardt (Bayerische Amerika-Akademie)

Jürgen Gebhardt is Professor Emeritus of Political Science at the Erlangen-Nürnberg University. His research focuses on political theory, political philosophy and the history of ideas. His publications include the volumes *Die Krise des Amerikanismus* (1976) and *Americanism* (1992) as well as numerous articles on the history of political ideas, systematic political theory and comparative politics. He is a member of the board of directors of the BAA.

**Stephan Fuchs (University of Munich)**


**Statement**
"Die Amerikanisierung der deutschen Wissenschaftskultur? Nationale Unterschiede und globale Herausforderungen"


**Harald Lesch (University of Munich)**


**Statement**

**Ludwig Pfeiffer (Jacobs University Bremen)**


**Statement**

Helmuth Trischler

Helmuth Trischler is Director of Research at the Deutsches Museum in Munich and Professor for Modern History and History of Technology at the University of Munich. His main fields of research are: National innovation systems and innovation cultures, history of knowledge societies, and transport history. He has published and edited 23 books and about 80 articles. His most recent publication is: „Made in Germany “: Die Bundesrepublik als Wissensgesellschaft und Innovationssystem (2007).

Statement


Michael Zöller (Council on Public Policy, Bayreuth)

Michael Zöller is Professor of Political Sociology at Bayreuth University and president of the American-European think tank Council on Public Policy. He was educated at the Universities of Frankfurt a.M., Würzburg and Munich. After receiving his Ph. D. from the University of Munich he first was a junior editor with a broadcasting corporation and a national newspaper and then returned to academic life. He has been a visiting professor and/or visiting scholar at Notre Dame, the University of Chicago, the Hoover Institution, the Catholic University of America (where he is also an adjunct ordinary professor of government), the International Center of Economic Research (ICER) in Torino and the Woodrow Wilson Center, Washington D.C.; he has also served as a founding director at the new University of Erfurt and its Max Weber Kolleg. He is a member of the Mont Pelerin Society.

Statement

Im Mittelpunkt steht der Unterschied im Verhältnis zwischen Politik und Wissenschaft. Zentral dabei ist die Frage, von welcher Beziehung zwischen Staat, Universitäten und außeruniversitären Forschungsinstituten und Think Tanks die jeweilige Forschungs- und Technologiepolitik ausgeht und welche ökonomischen Theorien (v. a. welche Annahmen über Wissen und Wachstum) dabei zugrunde gelegt werden.