



Wissenschaftskolleg zu Berlin

INSTITUTE FOR ADVANCED STUDY

ARBEITSVORHABEN DER FELLOWS
FELLOWS' PROJECTS 2018/2019

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VORWORT

In dieser Broschüre werden die Fellows des Wissenschaftskollegs im akademischen Jahr 2018/2019 vorgestellt. Im Zentrum steht die Beschreibung der Arbeitsvorhaben, denen sie sich während ihres Aufenthaltes am Wissenschaftskolleg widmen wollen. Dazu kommen bibliografische Empfehlungen mit den Titeln einiger Aufsätze oder Bücher, die sie Interessenten zur Lektüre empfehlen, sowie kurze biografische Angaben.

Die meisten Fellows kommen für ein volles akademisches Jahr und verfolgen ein individuelles Forschungsvorhaben. In jedem Jahr gibt es aber auch einige Wissenschaftlerinnen und Wissenschaftler, die in eine Schwerpunktgruppe eingebunden sind. Die Zugehörigkeit zu einer solchen Schwerpunktgruppe sowie gegebenenfalls eine kürzere Aufenthaltsdauer sind jeweils vermerkt.

In der Zeit zwischen dem Redaktionsschluss dieser Broschüre und dem Beginn des akademischen Jahres am 1. September 2018 können sich noch leichte Änderungen ergeben. Aktualisierte Informationen zu den Fellows und ihren Arbeitsvorhaben sowie zu Veranstaltungen mit Fellows und zum Wissenschaftskolleg insgesamt stehen auf der Internetseite des Wissenschaftskollegs – wiko-berlin.de – zur Verfügung.

Berlin, im Juli 2018

Wenn nicht anders angegeben, erstrecken sich die Fellowships vom 1. September 2018 bis zum 30. Juni 2019.

PREFACE

This brochure presents the Fellows of the academic year 2018/2019. Each Fellow provides a short description of the work he or she plans to pursue during the stay at the Wissenschaftskolleg. Also listed are brief biographical notes as well as recommended reading.

The majority of the Fellows come for an entire academic year. The Wissenschaftskolleg invites most of its Fellows on the basis of their individual research plans. Some Fellows, however, are integrated in a Focus Group. Membership in the Focus Group and a shorter planned stay are noted for each Fellow, where applicable.

Between the submission deadline to this brochure and the beginning of the academic year on September 1, 2018, some minor changes may arise. Up-to-date information on the Fellows, their projects, Fellows' events and the Wissenschaftskolleg in general is available on the Wissenschaftskolleg's website wiko-berlin.de.

Berlin, July 2018

If not otherwise indicated, the Fellowships extend from September 1, 2018 to June 30, 2019.

YASSIN AL-HAJ SALEH

Short-term Fellow

Writer

Istanbul

Born in 1961 in Raqqa, Syria

Studied Medicine at the University of Aleppo

MODES OF MASS MURDER: A COMPARATIVE STUDY

In what ways does mass killing in Syria differ from other well-known examples of mass murder in Rwanda, Cambodia, and before them Nazi Germany, Soviet Russia, and the Armenian Genocide? Variables like bureaucratization, the role of labor in concentration camps, and a theory of supremacy (of race or class) are either lacking in the Assadist mode of killing, in contrast to the Holocaust and the Gulag, or they are not systematic. Physical contact between the victims and the perpetrators was almost absent in the Soviet and Nazi killings, but this is not the case in Syria and Rwanda. The Daesh mode of killing preferably involves physical contact between the killer and the killed. What are the roles of religion, sect, and ethnicity in this mode? Can we differentiate between violent violence like what we experienced in Syria at the hands of the regime and Daesh, and the more organized and less violent violence of Israel against Palestinians for instance? Is it possible also to speak of historical progress in modes of killing, the way Marx talked about modes of production in his days? What are the relations between modes of killing and political systems, social structures, and cultural organization in specific countries? Are contemporary modes of killing understandable on the basis of individual countries: Syria, Sudan, Rwanda, Cambodia, etc.? What are the forms of articulation between violent and less violent modes of killing on the global level? Is it possible for us to interpret the contemporary world order (as it is institutionalized in the UN, many other organizations, and especially the UNSC) as a global organization of death, violent death? Finally, is

politics without violence, even organized and legitimately monopolized violence, possible?

Recommended Reading

Al-Haj Saleh, Yassin. *The Impossible Revolution: Making Sense of the Syrian Tragedy*. London: Haymarket Books, 2017.

Bauman, Zygmunt. *Modernity and the Holocaust*. New York: John Wiley & Sons, 2013.

Browning, Christopher R.: *Ordinary Men, Reserve Police Battalion 101 and the Final Solution in Poland*. New York: HarperCollins, 1992.

Arendt, Hannah. *Eichmann in Jerusalem: a Report on the Banality of Evil*. New York: Viking Press, 1963.

DAVID ARMITAGE

Litt.D., Ph.D., Lloyd C. Blankfein Professor of History
Harvard University

Born in 1965 in Stockport, UK

Studied History at the University of Cambridge

TREATY CONSCIOUSNESS: A GLOBAL HISTORY

Treaties may be the most widespread but least well understood elements of the contemporary political and legal order. For the most part unknowingly, we have all become enmeshed in regional and worldwide webs of treaties. Yet just how we became global Gullivers, tangled in treaties, is a question barely touched by recent historians, only intermittently posed by historically minded lawyers, and studied serially mostly by political scientists. “Treaty Consciousness: A Global History” will treat political, legal, and cultural engagement with treaties since the early modern period and across the globe, from Europe and North America to the contemporary Pacific. By treaty consciousness, I mean political, legal, and cultural engagement with treaties by parties affected by their forms, stipulations, and symbolic meanings (for example in art, ceremony, and music). The project aims to expand the understanding of treaties in three main ways: first, by working outwards from the specific agents who created and ratified treaties to the wider publics shaped by the treaties themselves; second, by looking at patterns of treaty-making and their proliferation across time (a *longue durée* of at least five hundred years) and space (globally as well as regionally); and third, by analyzing treaties as a genre of political thought embodied in material forms whose circulation and reception can be traced well beyond the corpora of treaty texts. In short, I will apply the tools of intellectual and cultural history to explore how both individual treaties and treaties in the aggregate have risen and fallen in the political and legal imaginations of peoples around the world. The project compares the rise and fall of treaty consciousness in the West with the persistence of treaty consciousness among Indigenous peoples, in order to contribute

to the critical history of international law, to the history of international society in global context, and to global intellectual history. I hope it might also help to raise consciousness about treaties – their pervasiveness and their provisions – among contemporary democratic publics.

Recommended Reading

Armitage, David. *Civil Wars: A History in Ideas*. New York: Knopf, 2017.

—. *Foundations of Modern International Thought*. Cambridge: Cambridge University Press, 2014.

—. *The Declaration of Independence: A Global History*. Cambridge, Mass.: Harvard University Press, 2007.

RUTH BIELFELDT

Dr. phil., Professorin für Klassische Archäologie
Ludwig-Maximilians-Universität München

Geboren 1971 in Heidelberg, Deutschland

Studium der Archäologie an der Ludwig-Maximilians-Universität München
und der Ruprecht-Karls-Universität Heidelberg

DER KOLOSS VON RHODOS: NEUE PERSPEKTIVEN

283 v. Chr., gut zwei Jahrzehnte nach der erfolgreich abgewehrten Belagerung durch Demetrios Poliorketes, errichteten die Rhodier dem Gott Helios eine gigantische Bronzestatue: den Koloss von Rhodos. Das einstige Weltwunder ist heute eine archäologische Schimäre: der Ort der Aufstellung, das Aussehen der Figur und die Gusstechnik der Figur sind bislang ungeklärt und werden trotz der beharrlichen Bemühungen einiger Archäologen aller Voraussicht nach für immer ungeklärt bleiben.

Meine Monografie zum Koloss von Rhodos stützt sich auf eine bisher nicht ausgeschöpfte poetische Quelle: das aller Wahrscheinlichkeit nach zum Koloss gehörige, in der *Anthologia Palatina* und in der *Suda* teilweise überlieferte Weiheepigramm AP 6, 171. Das nur neun Zeilen lange, in dorischem Griechisch verfasste Epigramm ist ein kondensierter poetischer Text, in dem die Rhodier ihre kollektive Autorschaft aussprechen und in dem sie Anlass und Bedeutung der Statue für Rhodos darlegen und ihren Anspruch einer Universalherrschaft markieren. Zugleich aber hat das Epigramm exegetischen Charakter: es liefert Elemente einer Sehanleitung auf die Figur *in* ihrem lokalen Umfeld, ihrer globalen und kosmischen Reichweite. Es thematisiert den divinen Status des in der Figur verkörperten Gottes Helios, die Kolossalität der Figur als dynamische raum-zeitliche Bilddimension, die Beziehung von Figur, Landschaft und Himmelskörper, und nicht zuletzt die geopolitische und politische Situierung des Kolosses als zwischen Ost und West, zwischen Oligarchie und Demokratie.

Zentrales Thema des Projekts ist die Übergröße der rhodischen Statue. Meine Arbeit sehe ich somit als einen ersten Schritt zu einer Hermeneutik des Kolossalen. Kolossalität darf jedoch nicht als festes Maß verstanden werden, das durch ein allgemein validiertes metrisches Messverfahren quantitativ zu bestimmen wäre; vielmehr ist es eine spezifische Bilddimension und damit eine relative, qualitative Größe, deren Erfass- bzw. Nichterfassbarkeit sich allein aus dem spezifischen naturräumlichen, gebauten, bildlichen und konzeptuellen Kontext ergibt, in den das Übergroße hineingestellt ist. Kolossalität, so die Ausgangsvermutung, ist grundsätzlich verknüpft mit der Frage der Kommensurabilität bzw. der Inkommensurabilität des Übergroßen und der ihn umgebenden Welt(en) bzw. der darin enthaltenen Naturdinge und Artefakte. Als Untersuchungsgegenstand verlangt Kolossalität daher weniger arithmetisierte Archäologie denn eine phänomenologische Hermeneutik.

Lektüreempfehlung

Bielfeldt, Ruth, Hg. *Ding und Mensch in der Antike. Gegenwart – Vergegenwärtigung*. Heidelberg: Winter, 2014.

—. „Sight and Light: Reified Gazes and Looking Artefacts in the Greek Cultural Imagination.“ In *Sight and the Ancient Senses*, herausgegeben von Michael Squire, 123–142. London: Routledge, 2015.

—. *Orestes auf römischen Sarkophagen*. Berlin: Reimer, 2005.

STANISŁAW BIERNAT
von September bis Dezember 2018
Dr. Dr. h.c., Professor für Rechtswissenschaft
Jagiellonen-Universität in Krakau

Geboren 1949 in Tarnów, Polen
Studium der Rechtswissenschaft an der Jagiellonen-Universität in Krakau

HERAUSFORDERUNGEN UND GEFAHREN FÜR DIE RECHTSSTAATLICHKEIT IN DER EU

In den letzten Jahren sind in einigen EU-Mitgliedsstaaten systemische Verletzungen der Rechtsstaatlichkeit und besonders der gerichtlichen Unabhängigkeit zu beobachten. Es sei dabei hervorgehoben, dass die Rechtsstaatlichkeit einer der Werte ist, auf die sich die Union gründet. Gegenstand des Forschungsvorhabens sollen der Versuch einer Verifizierung der Bedeutung der Rechtsstaatlichkeit als EU-Wert sowie eine kritische Analyse von Verfahren zum Schutz der Rechtsstaatlichkeit und der Unabhängigkeit von Gerichten sein. Einige dieser Verfahren wurden vor Kurzem erstmals in der Geschichte der EU eingeleitet.

Im Jahre 2018 gewann der Schutz der Rechtsstaatlichkeit neue Perspektiven durch die neue, die Rolle der Unabhängigkeit nationaler Gerichte als unabdingbare Voraussetzung für wirksamen Rechtsschutz in den vom Unionsrecht erfassten Bereichen betonende Rechtsprechung des EuGH. Nationale Gerichte samt EuGH werden allmählich als ein einheitliches, der Wahrung des EU-Rechts dienendes institutionelles System betrachtet. Forschungsgegenstand sollen die durch diese neue Rechtsprechung gebotenen Chancen sein und insbesondere die Methoden zur Verifizierung des Umfangs der Unabhängigkeit nationaler Gerichte sowie der Skala und Formen deren Verletzung. Auf dieser Grundlage werden Schlussfolgerungen hinsichtlich der Grenzen der zulässigen gerichtlichen Zusammenarbeit sowie des Grundsatzes des gegenseitigen Vertrauens und Anerkennung von Entscheidungen formuliert werden können. Des

Weiteren soll die Rolle des Vorabentscheidungsverfahrens in diesem Kontext unter zwei Aspekten untersucht werden: Welchen Voraussetzungen muss ein Organ des Mitgliedstaates genügen, um als zur Anrufung des EuGH befugt angesehen zu werden, und wie ist der Umfang der zulässigen Kontrolle durch den EuGH in dem hier besprochenen Verfahren der Achtung der Unabhängigkeit nationaler Gerichte.

Die letzte Frage gilt der Relation zwischen den politischen und gerichtlichen Instrumenten im hier besprochenen Kontext.

Lektüreempfehlung

Biernat, Stanisław und Dorota Dąbek. „Verwaltungsrecht in Europa: Grundzüge – Polen.“ In *Handbuch Ius Publicum Europaeum, Band V*, herausgegeben von Armin von Bogdandy, Sabino Cassese, Peter M. Huber, 477–559. Heidelberg: C. F. Müller, 2014.

—. „Wpływ prawa Unii Europejskiej na źródła prawa administracyjnego i procedurę prawodawczą“ [Einfluss des EU-Rechts auf die Rechtsquellen des Verwaltungsrechts und das Rechtssetzungsverfahren]. In *System prawa administracyjnego: Europeizacja prawa administracyjnego*, Band 3 [Das System des Verwaltungsrechts: Europäisierung], herausgegeben von Roman Hauser, Zygmunt Niewiadomski und Andrzej Wróbel, 555–616. Warszawa: C. H. Beck, 2014.

—. „Offene Staatlichkeit: Polen.“ In: *Handbuch Ius Publicum Europaeum, Band II: Offene Staatlichkeit – Wissenschaft vom Verfassungsrecht*, herausgegeben von Armin von Bogdandy, Pedro Cruz Villalón und Peter M. Huber, 243–275. Heidelberg: C. F. Müller, 2007.

JACOBUS J. (KOOS) BOOMSMA

Ph.D., Professor of Evolutionary Biology

University of Copenhagen

Born in 1951 in Rotterdam, Netherlands

Studied Biology at the Vrije Universiteit Amsterdam

THE POINTS-OF-NO-RETURN RATCHET TO HIGHER LEVELS OF ORGANISMAL COMPLEXITY

Focus Group *The Major Evolutionary Transitions in Organismality*

I plan to continue exploring the boundaries of the lifetime commitment principle that I developed in previous review papers. My approach elaborates that the origins of major transitions to obligate multicellularity and colonial super-organismality can always be captured in necessary and sufficient conditions that emerge from Hamilton's rule. The lifetime commitment principle, also known as the lifetime monogamy principle for explaining obligate reproductive division of labor in the social insects, appears to have fundamental consequences for how we understand the progression of life's complexity over evolutionary time. Major transitions to higher levels of organic complexity are a ratchet-like process. When the ratchet will click cannot be predicted, but if it does it will produce a major transition that is irreversible. Secondary reductions of complexity may well happen, but genome-wide rewiring of developmental pathways makes reversals to ancestral lower-level complexity impossible. In this view, "coming together" in same-generation chimeras is a fundamentally different starting condition from "staying together" across generations. Only staying together can lead to permanent higher-level adaptive states of complexity via family selection, whereas (non-family) group selection is unable to achieve that for "coming together". George C. Williams rightly acknowledged the fundamental difference between family selection and group selection more than 50 years ago, but the later sociobiology tradition lost sight of this distinction that was in fact also

intuitively clear to Darwin, Weismann, and the key architects of the Modern Synthesis of evolutionary biology. Capturing the lifetime commitment principle in verbal, diagrammatic and simple mathematical terms is an important overarching objective, both for my book project and for additional studies to be pursued during my stay at the Wissenschaftskolleg.

Recommended Reading

Boomsma, J. J. and R. Gawne (2018). “Superorganismality and caste differentiation as points of no return: how the major evolutionary transitions were lost in translation.” *Biological Reviews* 93: 28–54.

Smith, S. M., D. S. Kent, J. J. Boomsma, and A. J. Stow (2018). “Lifetime monogamous sperm storage and permanent worker sterility in a long-lived ambrosia beetle.” *Nature Ecology and Evolution*. doi: 10.1038/s41559-018-0533-3.

Boomsma, J. J. (2016). “Fifty years of illumination about the natural levels of adaptation.” *Current Biology* 26, R1250–R1255.

Boomsma, J. J. (2013). “Beyond promiscuity: Mate choice commitments in social breeding.” *Philosophical Transactions of the Royal Society London* 368: 20120050.

THOMAS C. G. BOSCH
Dr. Dr. h.c., Professor of Zoology
Christian-Albrechts-Universität zu Kiel

Born in 1955 in Augsburg, Germany
Studied Biology at the Ludwig-Maximilians-Universität München and at
University College Swansea, UK

THE INDIVIDUAL AS METAORGANISM: NOVEL PERSPECTIVES FOR BIOLOGY, MEDICINE AND THE HUMANITIES

From protists to humans, all animals and plants are inhabited by microbial organisms. There is an increasing appreciation that these resident microbes influence the fitness of their hosts, ultimately forming a metaorganism consisting of a uni- or multicellular host and a community of associated microorganisms.

The objective of my research is to address key gaps in our current understanding of metaorganisms (synonym: holobionts) and to analyse and formulate new directions in explaining microbiota-host associations. My project will synthesize previous work on the evolution of immune systems and on host-microbe interactions over the past ten years and ask questions like: Are there unexplored developmental interactions between microbiota and host? Can a holobiont employ strategies unavailable to any one species alone? What does it mean to think of humans as part of a metaorganism – composed of human as well as of trillions of non-human cells? My goal is hence to integrate the different aspects of animal, plant and medical host-microbe research and to investigate how philosophy and anthropology can shape and change the way we look into the complexity of metaorganisms.

I do hope to engage colleagues from both the natural sciences and the humanities and also the public in the excitement of understanding how organismal complexity comes into being.

Recommended Reading

Rees, T., T. C. G. Bosch, and A. E. Douglas (2018). “How the microbiome challenges our concept of self.” *PLOS Biology* 16, 2: e2005358.

Bosch, T. C. G. and D. Miller (2016). *The holobiont imperative: perspectives from early emerging animals*. New York: Springer.

Bosch, T. C. G. (2014). “Rethinking the role of immunity: lessons from Hydra.” *Trends in Immunology* 35, 10: 495–502.

JUDITH BRONSTEIN

from January to March 2019

Ph.D., University Distinguished Professor of Ecology and Evolutionary Biology
University of Arizona, Tucson

Born in 1957 in Delaware, USA

Studied Independent Studies in Environmental Science at Brown University
and Ecology and Evolutionary Biology at the University of Michigan

DOES CRIME PAY? THE BENEFITS OF CHEATING, THE COSTS OF BEING CHEATED, AND THE PERSISTENCE OF INTERSPECIFIC COOPERATION

Focus Group *Syngonomics: Evolution – from Conflict to Cooperation to Mutualism*

How can cooperation persist in the face of a persistent, ubiquitous temptation to cheat? While at the Wissenschaftskolleg, I intend to critically examine evidence for our current interpretation of the conflicts that underlie interspecific cooperation (mutualism). Taking a broad conceptual perspective developed over thirty years of studying the ecology and evolution of mutualism, I will synthesize, for the first time, widely dispersed empirical evidence surrounding three critical issues. (1) Do individuals with options to either cheat or cooperate choose to cheat when they can? (2) Does “crime pay” – that is, does cheating confer fitness benefits to individuals that could alternatively cooperate? (3) Is it indeed costly to be cheated by one’s partner? Current cooperation theory is built on the belief that the answer to all three questions is yes. However, there is plenty of evidence to suggest that this assumption is fundamentally flawed. My research program intersects with the broader goals of Michael Wade’s Focus Group about Syngonomics: to create new evolutionary theory designed to advance our understanding of how cooperation can persist in the face of conflict. This is one of the central mysteries in biology today. It is one whose solution holds the promise of

helping us to envision and perhaps even design more smoothly functioning human societies.

Recommended Reading

Barker, J. L., J. L. Bronstein, M. L. Friesen, E. I. Jones, H. K. Reeve, A. G. Zink, and M. E. Frederickson (2017). "Synthesizing perspectives on the evolution of cooperation within and between species." *Evolution* 71: 814–825.

Díaz-Muñoz, S., A. Boddy, G. Dantas, C. Waters, and J. L. Bronstein (2016). "Contextual organismality: Beyond pattern to process in the emergence of organisms." *Evolution* 70: 2669–2677.

Jones, E. I., M. E. Afkhami, E. Akcay, J. L. Bronstein, R. Bshary, M. E. Frederickson, K. D. Heath, J. Hoeksema, J. H. Ness, S. Pankey, S. S. Porter, J. L. Sachs, K. Scharnagl, and M. L. Friesen (2015). "Cheaters must prosper: reconciling theoretical and empirical perspectives on cheating in mutualism." *Ecology Letters* 18: 1270–1284.

ELIZABETH E. BRUCH

Ph.D., Associate Professor of Sociology and Complex Systems
University of Michigan

Born in 1977 in Berkeley, Cal., USA

Studied Sociology at the University of California at Los Angeles

MATE MARKETS: HOW POPULATIONS AND BEHAVIOR SHAPE ONLINE DATING EXPERIENCES

Both academia and popular culture recognize that romantic relationships are pursued within a market. The language laypeople use to talk about mate search – “he’s a hot commodity”; “she’s out of your league” – implies scarcity, competition, and a hierarchy of desirability. Classic works in economics and mathematics provide models of how mate preferences aggregate into observed matches. But these studies treat relationship markets as abstract, undifferentiated entities. This project uses a rich trove of activity data from multiple online dating sites to understand why dating experiences among men and women vary markedly across cities.

Building on theoretical and empirical work in behavioral ecology, I focus on two distinct classes of behavior: mate choice (i.e., preferences and choosiness) and various forms of competition. My study reveals how dating markets shape men and women’s online romantic experiences. They do so both directly, by constraining the type and number of people one is exposed to, and indirectly, through the dynamic interplay between users’ behavior and experience. I propose a general framework for understanding how social contexts interact with human behavior.

Recommended Reading

Bruch, Elizabeth and Mark Newman (2018). “Aspirational Pursuit of Mates in Online Dating Markets.” *Science Advances*, forthcoming.

Bruch, Elizabeth and Fred Feinberg (2017). “Decision-Making Processes in Social Contexts.” *Annual Review of Sociology* 43: 207–227.

Bruch, Elizabeth, Fred Feinberg, and Kee Yeun Lee (2016). “Extracting Multi-stage Screening Rules from Online Dating Activity Data.” *Proceedings of the National Academy of Sciences of the United States of America* 113, 38: 10530–10535.

FRIEDEMANN BUDDENSIEK

Dr. phil., Professor für antike Philosophie

Johann Wolfgang Goethe-Universität Frankfurt am Main

Geboren 1967 in Wolfsburg, Deutschland

Studium der Fächer Philosophie, Alter und Neuerer Geschichte, Slawistik

und Griechisch an der Friedrich-Alexander-Universität Erlangen-Nürnberg

ARISTOTELES' *EUDEMISCHE ETHIK* – ÜBERSETZUNG UND KOMMENTAR

Mein Projekt besteht in der Arbeit an einem Kommentar und einer Übersetzung zum überlieferten Teil von Aristoteles' *Eudemischer Ethik*. In diesem Teil, nämlich *EE* I–III und VII–VIII, erarbeitet Aristoteles eine erste Konzeption des besten Lebens (der *eudaimonia*). Ein Hauptteil seiner Ausführungen ist einer Untersuchung des Gut-Seins des Charakters gewidmet, ein weiterer einer Untersuchung der Freundschaft (*philia*). In der *Nikomachischen Ethik*, die vermutlich die jüngere Schwester der *EE* ist, entwickelt Aristoteles die Konzeption der *eudaimonia* und ihrer Teilaspekte weiter, und es ist dieser Text, der seit der Antike dann zum Hauptbezugspunkt für Untersuchungen zu Aristoteles' Ethik geworden ist. Die *EE* ist demgegenüber erst in jüngerer Zeit und dann oft vor allem als Vergleichstext zur *NE* intensiver rezipiert worden. Im Kontrast dazu nehmen die neue Übersetzung und der neue Kommentar, die am Wissenschaftskolleg erarbeitet werden sollen, die *EE* als Werk eigenen Rechts ernst.

Die Übersetzung soll auf einer sorgfältigen Prüfung der Lesartvarianten des schlecht überlieferten griechischen Originals beruhen, sie soll den Gedanken des Textes so präzise wie möglich wiedergeben und soll zugleich, auch angesichts von Aristoteles' sehr knappem Stil, möglichst gut lesbar sein. Der Kommentar soll – durch Argumentanalyse und Berücksichtigung des gedanklichen und historischen Hintergrunds – den Gedankengang des Textes, die Gründe für

Aristoteles' Vorgehen, seine Argumente und Begriffe und die Theorien, die er entwickelt, erörtern und in ihrer Differenziertheit transparent machen.

Insgesamt geht es darum, die Konzeption der *eudaimonia*, der Tugend und der Freundschaft, die wir in der *Eudemischen Ethik* finden, unter Berücksichtigung der bisherigen Forschung aktuell greifbar zu machen, und zwar für die Diskussion innerhalb der Forschung zur antiken Philosophie, als Bezugspunkt für systematische Interessen und schließlich auch für Leserinnen und Leser, die keine Fachphilosophinnen/en sind.

Lektüreempfehlung

Buddensiek, Friedemann. "Thales Down the Well: Perspectives at Work in the Digression in Plato's *Theaetetus*." *Rhizomata* 2 (2014): 1–32.

—. *Die Einheit des Individuums: Eine Studie zur Ontologie der Einzeldinge*. Berlin, New York: de Gruyter, 2006. (Quellen und Studien zur Philosophie. Bd. 70).

—. *Die Theorie des Glücks in Aristoteles' Eudemischer Ethik*. Göttingen: Vandenhoeck & Ruprecht, 1999. (Hypomnemata. Untersuchungen zur Antike und zu ihrem Nachleben. Heft 125).

BEATRIZ COLOMINA
Ph.D., Professor of Architecture
Princeton University

Born in 1952 in Madrid
Studied Architecture and Architecture History and Theory at the Escuela
Técnica Superior de Arquitectura, Universitat Politècnica de Catalunya

THE ILLNESS OF MODERN ARCHITECTURE

Architecture and medicine have always been tightly interlinked. If classical theories of the Greek polis followed theories of the four humors, contemporary ideas of health organize design theories today. Architectural discourse weaves through theories of the body and brain, constructing the architect as a kind of doctor and the client as patient.

Vitruvius launched Western architectural theory in the first century BC by insisting that all architects needed to study medicine: “Healthfulness being their chief object.” Just as Renaissance schools of medicine used casts of body parts, design schools used cast fragments of historical buildings for teaching, and anatomical dissection was a central part of the training.

As medical representations changed, so did architectural representations. In the twentieth century, the widespread use of X-rays made a new way of thinking about architecture possible. Modern buildings even started to look like medical images, with transparent glass walls revealing the inner secrets of the building. Indeed, modern architecture cannot be understood apart from tuberculosis. The symptoms, if not the principles, of modern architecture seem to have been taken straight out of a medical text on the disease.

Every age has its signature afflictions and each affliction has its architecture. The age of bacterial diseases gave birth to modern architecture, to white buildings detached from the “humid ground where disease breeds”, as Le Corbusier put it. The discovery of antibiotics put an end to that age. In the postwar years, attention shifted to psychological problems. The architect was not

seen just as a doctor but also as a psychoanalyst, the house not just as a medical device for the prevention of disease, but also as providing psychological comfort, “mental health”.

The twenty-first century is the age of neurological disorders: depression, ADHD, borderline personality disorders, burnout syndrome, and allergies – the “environmentally hypersensitive” unable to live in the modern world. What is the architecture of these afflictions? What does it mean for design?

Recommended Reading

Colomina, Beatriz. *Privacy and Publicity: Modern Architecture as Mass Media*. Cambridge, Mass.: MIT Press, 1994.

—. *Domesticity at War*. Cambridge, Mass.: MIT Press, 2007.

Colomina, Beatriz and Mark Wigley. *Are We Human? Notes on an Archeology of Design*. Zurich: Lars Müller, 2016.

LORRAINE J. DASTON

Permanent Fellow of the Wissenschaftskolleg
Ph.D., Director, Max Planck Institute for the History of Science, Berlin
Professor, Committee on Social Thought, University of Chicago

Born in 1951 in East Lansing, Mich., USA
Studied History, Philosophy of Science, and History of Science
at Harvard University and at Cambridge University

THE LAWS AND RULES OF NATURE

Why do we call the regularities of nature “laws”? Ever since the metaphor was coined in the seventeenth century, even its proponents, including Descartes, Boyle, and Newton, have been uncomfortable with either its anthropomorphic or its theological associations or both. Leibniz wondered how brute, passive matter knew enough to obey laws as sentient beings did; scientists since Laplace wondered whether God the divine legislator was necessary to promulgate the laws of nature.

To complicate matters still further, during the seventeenth and eighteenth centuries, especially in French and English, the law of nature (*lex naturalis* in Latin, *Naturgesetz* in German) investigated in natural philosophy became strategically conflated with natural law (*ius naturale*, *Naturrecht*) studied in jurisprudence and political theory. Especially for Enlightenment reformers and revolutionaries, the equation of universal human rights with the laws of nature (both underwritten by God or at least by God’s viceroy Nature) offered irresistible rhetorical advantages – as in the ringing appeal to the “Laws of Nature and of Nature’s God” as the highest authority in the American Declaration of Independence of 1776.

Historians of science, philosophy, and jurisprudence have wrestled with these problems for decades. My aim is to figure out, *first*, why the metaphor of “laws of nature” won out over its early modern rivals (especially the “rules” but also the “customs” of nature); *second*, how the choice of the metaphor of law not only

shaped the idea of what a natural regularity, but also of what a law should be; and *third*, how the relationship between the laws and rules of nature has served as a model for the laws and rules that ought to govern society – and particularly for the status of exceptions to laws and rules. In the case of the laws of nature, exceptions counted as miracles; in the case of natural law, as crimes *contra naturam* (e.g. parricide or incest). What happened to the exceptions to rules, in both the human and natural spheres? And how do both the sciences and governments deal with the undeniable fact of variability in both spheres?

Recommended Reading

Daston, Lorraine. *Gegen die Natur*. Berlin: Matthes & Seitz, to appear in November 2018.

—. “The History of Science and the History of Knowledge.” *KNOW* 1 (2017): 1–25.

Daston, Lorraine and Michael Stolleis, eds. *Natural Laws and Laws of Nature in Early Modern Europe: Jurisprudence, Theology, Moral, and Natural Philosophy*. Aldershot: Ashgate, 2008.

GYÖRGY DRAGOMÁN

Writer, translator

Budaörs, Hungary

Born in 1973 in Marosvásárhely (Tirgu Mures), Romania

Studied English and Philosophy at Eötvös Loránd University, Budapest

SHRAPNEL (NOVEL)

While working on my novels I have started writing stories about a civil war-torn city. It started off as a one-off, a story of a veteran of the conflict working as a guard manning an elevator in a church tower. This was based on one of my visits to Wrocław, where indeed there is a rather industrial looking socialist style elevator mounted inside the cathedral. I finished the story, but kept returning to the location and realized that more and more of the stories were developing into intertwining mini-cycles featuring the same protagonists set in this fictional town, a mix of Wrocław, Marosvásárhely, Munkačevo, Zagreb and Sarajevo.

It took a while until I realized that yet again, I am working on a novel, a novel exploring the complexity and fragility of peace and the different avenues of coping with the aftermath of a brutal ethnic conflict in which the warring factions have all committed crimes against humanity and the conflict is too complex and all too recent for historic consensus or even a shared narrative of the events to have developed.

In the book I will try to tell these manifold stories from conflicting perspectives shaped by very different views and experiences of the conflict, looking at it not just through the eyes of victims and perpetrators, but also acknowledging that the line between the two positions can often be muddled, while the trauma of the conflict and the psychological aspects of survival can lead to brutalization and self-brutalization, often creating circles of passion and self-hatred, where even reflection on the past may be hugely problematic and the possibility of reconciliation might be minuscule or bordering on the impossible.

Shrapnel will be a novel blown to pieces, a shattered narrative of a city frozen in explosion, exploring the long moment when the broken pieces are in the air and the consequence of the detonation is not yet wholly visible.

Recommended Reading

Dragomán, György: *A fehér király* (novel). Budapest: Magvető, 2005. (English: *The White King*, 2008; German: *Der Weiße König*, 2008.)

— *Máglya* (novel). Budapest: Magvető, 2014. (English: *The Bone Fire*, 2019; German: *Der Scheiterhaufen*, 2015.)

— *Oroszlánkórus* (novel). Budapest: Magvető, 2015. (German: *Löwenchor*, forthcoming.)

DIETER EBERT

Permanent Fellow of the Wissenschaftskolleg
Dr. phil., Professor of Zoology and Evolutionary Biology
University of Basel

Born in 1961 in Saarburg, Germany
Studied Biology and Chemistry at the Technische Universität München, the
University of South Alabama, and the University of Basel

THE PROCESSES GOVERNING ANTAGONISTIC COEVOLUTION

My research interest is in understanding biological diversity, i.e., the evolution of traits that make organisms look and function differently. In particular, I am interested in how processes of coevolution contribute to this. In my project, I will focus on a review of the population genetic and biological concepts that underlie coevolution in antagonistic relationships, mainly the coevolution of hosts and parasites. During coevolution, hosts evolve to minimize the costs associated with parasitism, for example by evolving mechanisms to avoid parasites, by resisting parasites, or by tolerating parasites. In contrast, parasites (including pathogens) evolve to maximize transmission to the next host as well as reproduction and survival within a host. The parasite's means of maximizing its fitness usually causes costs for the host, which forms the core of host-parasite conflict, the driving element of antagonistic coevolution. In the last 40 years, simple models have been developed to describe this reciprocal process, but empirical work is still in its beginnings. Existing models are, however, metaphors of the actual process and do not go beyond the minimal concept. In the last few years, a number of new findings, technologies, and concepts have appeared, which have moved the field forward and allow us to refine the existing models. These refined models allow for more specific tests of hypotheses, by making testable predictions possible. In my project, I will introduce the new developments in the field and show how they contribute to moving it forward. I

will then incorporate these concepts in the existing models and derive specific predictions and hypotheses. This project will incorporate aspects of

- infection biology: the infection process is a series of steps, each regulated by different genes, some of which are directly involved in coevolution;
- next-generation-sequencing: high throughput sequencing technology allows us to find the genes underlying adaptive processes much faster;
- population genetics: coevolutionary interactions leave traces of the evolutionary history in the genome, which can be analyzed with statistical genomic tools;
- ploidy level: models assume simple genetic systems with simple (haploid) genomes, while most host organisms we are concerned with are diploid (have two sets of all genes).

With my project, I hope to gain a better understanding of how coevolution works and which models can explain the process best. I want to explore whether there are general rules determining the coevolutionary processes and whether they result in patterns we can predict and observe in natural systems. Furthermore, I want to explore whether coevolution is a universal process that happens everywhere and in each system, or if it is specific to a limited set of conditions. Answering these questions would be a major step forward in understanding biodiversity.

Recommended Reading

Ebert, D., D. Duneau, M. D. Hall, P. Luijckx, J. P. Andras, L. Du Pasquier, and F. Ben-Ami (2016). “A population biology perspective on the stepwise infection process of the bacterial pathogen *Pasteuria ramosa* in *Daphnia*.” *Advances in Parasitology* 91: 265–310. doi: 10.1016/bs.apar.2015.10.001.

Ebert, Dieter (2005). “Ecology, epidemiology, and evolution of parasitism in *Daphnia*.” Bethesda (MD): National Library of Medicine (US), National Center for Biotechnology Information. Open access source: www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Book.

SIMON ELSÄSSER

from March to June 2019

Fellow of the College for Life Sciences

Ph.D., Chemical and Synthetic Systems Biology

Karolinska Institutet, Stockholm

Born in 1981 in Stuttgart, Germany

Studied Biochemistry at the Eberhard Karls Universität Tübingen and

Biophysics at Harvard University

MODELING CHROMATIN DYNAMICS AND CELLULAR MEMORY

Animal genomes contain the blueprint for developing an extremely complex organism. The genome can be described as an entire library of books, in which the letters of DNA form genes or “chapters”. In any given cell and at any given time, only a specific set of relevant volumes and chapters are read and interpreted. Just like errors in the genetic language itself, reading from the wrong pages of the book can be the cause of human disease, such as developmental disorders or cancer. This is why cells use so-called epigenetic information, encoded “on top” of the genetic language to keep track of which chapters are relevant to every given cell at every given point in development. How the cell manages to organize the vast genetic information present in every cell in a way that allows it to translate transient signals from the outside world into long-lasting cellular memory is an unresolved issue.

A family of proteins termed histones dynamically package the genome into the so-called chromatin structure. Chromatin integrates a multitude of signals to control gene expression, some of which have the propensity to be maintained through replication and cell division. In my laboratory, we are developing quantitative methods to study the molecular circuits that underlie epigenetic gene regulation and inheritance. For example, we have established a method to capture genome-wide dynamic changes in chromatin resolved over a period of

time ranging from minutes to days. We are particularly interested in Polycomb group proteins, which are evolutionarily conserved master regulators of cell identity and differentiation and have long been a paradigm for epigenetic gene regulation.

Building on my experience with experimental and computational epigenomics, I will focus my stay at the Wissenschaftskolleg on developing mathematical models that integrate our multidimensional quantitative data into accurate mechanistic descriptions of epigenetic processes. To this end, I am looking forward to interacting with Wiko Fellows and experts at the Max Planck Institute for Molecular Genetics and the Berlin Institute for Medical Systems Biology.

Recommended Reading

Elsässer, S. J., R. J. Ernst, O. S. Walker, and J. W. Chin (2016). “Genetic code expansion in stable cell lines enables encoded chromatin modification.” *Nature Methods* 13, 2: 158–164.

Elsässer S. J., K. M. Noh, N. Diaz, C. D. Allis, and L. A. Banaszynski (2015). “Histone H3.3 is required for endogenous retroviral element silencing in embryonic stem cells.” *Nature* 522, 7555: 240–244.

GORDON FELD

from September 2018 to February 2019

Fellow of the College for Life Sciences

Dr. rer. nat., Psychology

University College London

Born in 1983 in Lauterbach, Germany

Studied Psychology at the Johannes Gutenberg-Universität Mainz

TOWARDS REPRODUCIBILITY: ADAPTING PAST AND FUTURE PROJECTS IN SLEEP AND MEMORY TO A TRANSPARENT AND SUSTAINABLE MODEL OF SCIENCE

In the biomedical and social sciences, published findings have recently been found to be far less robust than many scientists had thus far believed. A systematic attempt to replicate several key studies in psychology estimates that fewer than half of the effects reported in the literature are true effects. This reproducibility crisis has cast doubt on psychology as a science. Too much flexibility in the way data are handled and reported has been identified as one of the key causes of this low reproducibility. The open science movement attempts to induce new trust by making methods and data more openly available, which restricts such flexibility and makes it more traceable. At the Wissenschaftskolleg, I will pursue three goals to transform my research pipeline according to these principles. First, I will prepare all of the data that I have used in published manuscripts for their publication online. These data have been collected from adult participants after receiving their informed consent and include bio-physiological information (such as blood analyses and sleep EEG). At the time of collection, these participants did not consent to an online publication of their data, therefore, I will evaluate to which extent their anonymous data can be shared online by conferring with the appropriate ethics committees. Second, for my next study I will prepare a detailed record of the methods and submit it to a journal before

any data is collected, also documenting any statistical analyses I will run. This registered reports format is being adopted by more and more research outlets and guarantees publication irrespective of the achieved results. Third, I will perform a meta-science survey to assess the prevalence of flexible methods and the adoption of open science principles in the fields of biological psychology and neuroscience. This will allow an informed discussion about the incentive structure that is needed to improve psychology as a science.

Recommended Reading

Feld, G. B. and J. Born (2017). "Sculpting memory during sleep: concurrent consolidation and forgetting." *Curr Opin Neurobiol* 44: 20–27.

Feld, G. B., L. Besedovsky, K. Kaida, T.F. Münte, and J. Born (2014). "Dopamine D2-like receptor activation wipes out preferential consolidation of high over low reward memories during human sleep." *J Cogn Neurosci* 26, 10: 2310–2320.

Feld, G. B., T. Lange, S. Gais, and J. Born (2013). "Sleep-dependent declarative memory consolidation – unaffected after blocking NMDA or AMPA receptors but enhanced by NMDA coagonist D-cycloserine." *Neuropsychopharmacology* 38, 13: 2688–2697.

BEAT FURRER

Professor für Komposition, Komponist und Dirigent

Universität für Musik und darstellende Kunst Graz und Klangforum Wien

Geboren 1954 in Schaffhausen, Schweiz

Studium der Komposition an der Universität für Musik und darstellende Kunst Wien (damals Hochschule für Musik)

ENTWICKLUNG EINER NEUEN OPERNIDEE

Mein Ziel ist es, in Berlin meine Opernsprache weiterzudenken und einen Entwurf für ein nächstes Werk auszuarbeiten. Meine aktuelle Oper *Violetter Schnee* – in ästhetischer Hinsicht ein großer Sprung im Vergleich mit der Vorgängerin *La Bianca Notte* – wird im Januar an der Staatsoper Berlin uraufgeführt werden. *Violetter Schnee* ist in meinem sehr abgeschiedenen Haus in den österreichischen Bergen entstanden. Für die nächste Arbeit will ich dagegen gerne mit der reichen Berliner Kulturszene in Austausch treten und dadurch neue Impulse und Ideen generieren. Neben den Kontakten mit der Musikstadt Berlin möchte ich insbesondere die Nähe zur Philosophie und zur Literaturszene suchen und aus dem Kontrast zur Abgeschiedenheit in Österreich schöpfen. In der Zeit in Berlin sollen Konzepte für Dramaturgie und Libretto, aber auch schon für ganz konkrete musikalische Fragen entwickelt werden. Im Idealfall könnten während der Fellowship bereits kurze Studienstücke entstehen, in denen ich die neuen Ideen anwende.

Geplant ist überdies eine intensive Arbeits- und Probenphase mit dem *Quatuor Diotima*, das im Winter 2019 für einen Monat am Wissenschaftskolleg residieren wird.

Hörempfehlung

Furrer, Beat. *Streichquartett Nr. 3*. KNM Berlin. KAIROS, 2010.

—. *Konzert für Klavier und Orchester. Invocation, Spur, Fama, Retour an dich, Lotófagos I*. KAIROS, 2008.

—. *Begehren*. Musiktheater. Libretto nach Texten von Ovid, Vergil, Hermann Broch, Cesare Pavese und Günter Eich. KAIROS, 2006.

Lektüreprüfung

Tadday, Ulrich, Hg. *Beat Furrer*. München: edition text + kritik, 2016.

Ender, Daniel. *Metamorphosen des Klanges: Studien zum kompositorischen Werk von Beat Furrer*. Kassel u. a.: Bärenreiter, 2014.

Jungheinrich, Hans-Klaus, Hg. *Stimmen im Raum: Der Komponist Beat Furrer*. Mainz: Schott 2011. (Neue Zeitschrift für Musik.)

RAGHAVENDRA GADAGKAR

Permanent Fellow of the Wissenschaftskolleg

Ph.D., Professor of Ecology, Centre for Ecological Sciences and Chairman,

Centre for Contemporary Studies, Indian Institute of Science, Bangalore

President, Indian National Science Academy (INSA)

Born in 1953 in Kanpur, India

Studied Zoology and Molecular Biology in Bangalore

INTERROGATING AN INSECT SOCIETY

Insect societies, such as those of ants, bees, and wasps, consist of one or a small number of fertile queens and a large number of sterile or nearly sterile workers. While the queens engage in laying eggs, workers perform all other tasks, such as nest building, acquisition and processing of food, and brood care. How do such societies function in a coordinated and efficient manner? What rules do individuals follow? How are these rules made and enforced? These questions are of obvious interest to us as fellow social animals, but how do we interrogate an insect society and seek answers to these questions? During the next few years, I plan to write a book-length monograph describing some 35 years of my research, which was designed to seek answers from an insect society to a series of such questions of obvious interest to us. I have chosen the Indian paper wasp *Ropalidia marginata* for this purpose, a species that is abundantly distributed in peninsular India and serves as an excellent model system. An important feature of this species is that queens and workers are morphologically identical and physiologically nearly so. How then does an individual become a queen? How does the queen suppress worker reproduction? How does the queen regulate the non-reproductive activities of the workers? What is the function of the aggression shown by different individuals? How and when is the queen's heir decided? I will attempt to show how such questions can indeed be investigated and answered. I will emphasize that to do so we will need a whole range of techniques of observation, experimentation, and inference.

Recommended Reading

- Gadagkar, Raghavendra (2016). “Evolution of social behaviour in the primitively eusocial wasp *Ropalidia marginata*: do we need to look beyond kin selection?” *Phil. Trans. R. Soc. B.* 371: 20150094.
<http://dx.doi.org/10.1098/rstb.2015.0094>
- (2015). “The family system of a social wasp.” In *The family emotional system – an integrative concept for theory, science and practice*, edited by R. J. Noone and D. V. Papero, 161–183. Boulder: Lexington Books.
- (2009). “Interrogating an insect society.” *Proc. Natl. Acad. Sci. USA.* 106: 10407-10414.
- (2001). *The social biology of Ropalidia marginata: toward understanding the evolution of eusociality*. Cambridge, Mass.: Harvard University Press.
- (1997). *Survival strategies: cooperation and conflict in animal societies*. Cambridge, Mass.: Harvard University Press.

AMANDA KYLE GIBSON

from September to December 2018

John Maynard Smith Prize Fellow

Ph.D., Biology

University of Virginia, Charlottesville

Born in 1985 in Miami, FL, USA

Studied Biology at Amherst College and Evolution and Ecology at Indiana

University Bloomington

DOES GENETIC DIVERSITY REDUCE THE RISK OF INFECTION?

What do bananas, potatoes, and Tasmanian devils have in common? They are all alleged victims of the “monoculture effect”. According to this idea, parasites spread readily between closely-related individuals, resulting in large outbreaks of infectious disease in genetically homogenous groups of hosts. The idea presents an obvious solution: increasing genetic variation between individuals within a group should impede parasite transmission, lowering the risk of infection. The link between diversity and disease has become conventional wisdom. We even have “software monocultures”, which purportedly enabled the 2017 WannaCry ransomware attack. Yet we lack a sense of how general the monoculture effect is (reviewed in King and Lively 2012, *Heredity*). Does genetic diversity reduce the risk of infection in natural populations? Or do we see this phenomenon only in artificial environments, like agricultural fields, where host diversity is very low and host density is very high? I will conduct a meta-analysis of existing studies of the relationship between genetic diversity and disease. My approach will provide an estimate of the average direction and magnitude of the impact of genetic diversity on disease spread. I will also compare the size of the effect in agricultural vs. natural settings and in controlled vs. field tests. This work will evaluate the significance of genetic diversity for the health of natural

populations and characterize the dynamics of infectious diseases in heterogeneous host populations.

Recommended Reading

Gibson, A. K., L. F. Delph, and C. M. Lively (2017). “The two-fold cost of sex: experimental evidence from a natural system.” *Evolution Letters* 1, 1: 6–15.

Gibson, A. K., J. Y. Xu, and C. M. Lively (2016). “Within-population covariation between sexual reproduction and susceptibility to local parasites.” *Evolution* 70, 9: 2049–2060.

Gibson, A. K. and J. A. Fuentes (2015). “A phylogenetic test of the Red Queen Hypothesis: outcrossing and parasitism in the Nematode phylum.” *Evolution* 69, 2: 530–540.

LUCA GIULIANI

Permanent Fellow des Wissenschaftskollegs
Rektor des Wissenschaftskollegs (2007–2018)
Dr. phil., Professor (em.) für Klassische Archäologie
Humboldt-Universität zu Berlin

Geboren 1950 in Florenz
Studium der Klassischen Archäologie, Ethnologie und
Italienischen Literaturwissenschaft an der Universität Basel
und an der Ludwig-Maximilians-Universität München

AUFKOMMEN UND GESELLSCHAFTLICHE FUNKTION NARRATIVER BILDER IM ALTEN GRIECHENLAND

In der frühen griechischen Ikonografie kann man zwei Sorten von Bildern unterscheiden: Die einen zeigen habituelle menschliche Verhaltensweisen, wie sie ihrem Publikum vertraut sind, die anderen außergewöhnliche Konstellationen, die nur dann verständlich werden, wenn man sie auf eine bestimmte Geschichte bezieht. Bilder der ersten Kategorie bezeichne ich als *deskriptiv*, die der zweiten als *narrativ*. Für deskriptive Bilder gab es in Griechenland eine alte Tradition: Die ganze Ikonografie des zweiten und frühen ersten Jahrtausends, bis zum Ende des 8. Jahrhunderts v. Chr., war ausschließlich deskriptiv gewesen. Narrative Bilder hingegen kommen erst um 700 v. Chr. auf. Was hat zu dieser Neuerung geführt? Narrative Bilder verlangen sowohl von den Bild-Produzenten wie von deren Rezipienten einen Mehr-Aufwand, der nur dann geleistet wird, wenn ihm ein entsprechender Mehr-Wert entspricht. Ich versuche zu klären, worin der kulturelle und gesellschaftliche Mehrwert narrativer Bilder bestanden haben könnte.

Lektüreempfehlung

Giuliani, Luca. „The Emergence and Function of Narrative Images in Ancient Greece.“ *Res: Anthropology and Aesthetics* 67/68 (2016/17): 193–206.

CHRISTOPH GRABENWARTER

Dr. iur., Dr. rer. soc. oec., Professor für Öffentliches Recht, Völkerrecht und
Wirtschaftsrecht

Wirtschaftsuniversität Wien

Vizepräsident des österreichischen Verfassungsgerichtshofs

Geboren 1966 in Bruck an der Mur, Österreich

Studium der Rechtswissenschaften an der Universität Wien und der

Handelswissenschaft an der Wirtschaftsuniversität Wien

FUNKTIONSBEDINGUNGEN DER VERFASSUNGS- GERICHTSBARKEIT

Die rechtsstaatliche Demokratie ist heute in den meisten Staaten Europas von unabhängigen und effektiven Verfassungsgerichten bestimmt. Sie wahren die Grundrechte des Einzelnen, wachen über die Gewaltenteilung und sichern so Demokratie und Rechtsstaat gleichermaßen. Besorgniserregende Entwicklungen in einer Reihe von Staaten sind geeignet, die Verfassungsgerichtsbarkeit zu schwächen – mit gravierenden Folgen für den Rechtsstaat insgesamt.

Rechtliche Rahmenbedingungen bilden die Voraussetzung für die Unabhängigkeit und Effektivität der Verfassungsgerichte. Diese sind notwendige, aber nicht hinreichende Bedingung einer funktionierenden Verfassungsgerichtsbarkeit. Aus der Untersuchung von Fehlentwicklungen in einzelnen Staaten, gemessen an europäischen Normen mit rechtsstaatlichen Gehalten, lassen sich Rahmenbedingungen für das Funktionieren bestimmen. Im Projekt wird untersucht, wie die Unabhängigkeit der Verfassungsgerichtsbarkeit und die Effektivität ihrer Rechtsprechung im komplexen Zusammenwirken von rechtlichen und außerrechtlichen Bedingungen gesichert werden können.

Verfassungsgerichte in den Mitgliedstaaten der Europäischen Union und des Europarates erfüllen die ihnen von der staatlichen Verfassung übertragenen Aufgaben im Verbund mit Höchstgerichten in anderen Staaten und den europäischen Gerichtshöfen („Verfassungsgerichtsverbund“). Untersucht wird daher

im Besonderen, inwieweit die europäische Integration und das Zusammenwirken der Verfassungsgerichte gegenüber Gefährdungen und Anfechtungen zur Sicherung der Unabhängigkeit einzelner Gerichte und damit zur Sicherung und Stärkung der Institution insgesamt beitragen können.

Lektüreprüfung

Bogdandy, Armin v., Peter M. Huber und Christoph Grabenwarter. „Verfassungsgerichtsbarkeit im europäischen Rechtsraum.“ In *Handbuch Ius Publicum Europaeum: Band VI: Verfassungsgerichtsbarkeit in Europa: Institutionen*, herausgegeben von A. v. Bogdandy, P. M. Huber und C. Grabenwarter, § 95. Heidelberg: C. F. Müller, 2016.

—. *Europäische Menschenrechtskonvention: ein Studienbuch*. München: Beck, 1. Auflage 2003; 6. Auflage 2016; seit der 5. Auflage gemeinsam mit Katharina Pabel.

Pernice, Ingolf, Peter M. Huber, Gertrude Lübke-Wolff und Christoph Grabenwarter. „Europäisches und nationales Verfassungsrecht.“ In *Die deutsche Staatsrechtslehre in der Zeit des Nationalsozialismus*, 290–349. Berlin: de Gruyter, 2001 (Veröffentlichungen der Vereinigung der Deutschen Staatsrechtslehrer, VVDStRL 60.)

ASHLEIGH GRIFFIN

from April to June 2019

Ph.D., Professor of Evolutionary Biology

University of Oxford

Born in 1972 in Dundee, Scotland

Studied Zoology at the University of Edinburgh

DEVELOPING A NEW MODEL SYSTEM FOR RESEARCH INTO THE MAJOR EVOLUTIONARY TRANSITION TO MULTICELLULARITY

Focus Group *The Major Evolutionary Transitions in Organismality*

Research on the evolution of multicellularity has focused on organisms that retain the ability to survive and reproduce as single cells, such as slime moulds and algae. In this sense, they have not undergone a major evolutionary transition to obligate multicellularity. Complex multicellular organisms, such as ourselves, have evolved life histories that promote harmony of purpose between our cells. This is why we lack examples of adaptation to genetic conflict within complex multicellular organisms.

Planarian flatworms are obligate, multicellular organisms that cannot survive and reproduce independently as individual cells. Evolutionary processes that promote alignment of interest between cells are nevertheless absent. First, planarians are not necessarily clonal. Each worm is comprised of genetically distinct stem cell lineages. Asexual reproduction is achieved by “ripping apart”: each worm is, therefore, a composite of cells derived from the parent. Neither is the germ line irreversibly determined – stem cell lineages can compete to form the germ line. How then is the integrity of the individual organism maintained?

I intend to use my Wissenschaftskolleg Fellowship to design a research programme to address these questions. The challenge is partly technological – how can we experimentally manipulate levels of conflict between cells within organ-

isms or measure the consequences of conflict for cell lineages and the fitness of individual worms? – and partly theoretical – to what extent can we consider stem cell lineages to be distinct selective units; how can we explain species diversity in the levels of conflict? These two sets of challenges are intertwined – understanding the precise evolutionary questions relevant to this system will be key to designing appropriate experiments and maximize the opportunities arising from this extraordinary organism to advance our understanding of multicellular life forms.

Recommended Reading

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Cornwallis, C. K., S. A. West, K. Davis, and A. S. Griffin (2010). “Promiscuity and the evolutionary transition to complex societies.” *Nature* 466, 969–972.

DIETER GRIMM

Permanent Fellow des Wissenschaftskollegs

Rektor des Wissenschaftskollegs (2001–2007)

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Studium der Rechtswissenschaft und Politikwissenschaft in Frankfurt/Main,

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VERFASSUNG UND VERFASSUNGSGERICHTSBARKEIT

Mehrere hundert Jahre lang war öffentliche Gewalt identisch mit Staatsgewalt. Dementsprechend entstand die Verfassung, die die öffentliche Gewalt organisiert, legitimiert und limitiert, als Staatsverfassung. Die Identität von öffentlicher Gewalt und Staatsgewalt ist mittlerweile entfallen. Öffentliche Gewalt wird auch jenseits des Staates von supranationalen Organisationen ausgeübt. Die Staatsverfassung erfasst daher die auf dem Territorium des Staates wirkende öffentliche Gewalt nur noch teilweise. Äußerlich seit der säkularen Wende von 1989/90 auf ihrem Höhepunkt angekommen, ist die Verfassung innerlich einer Erosion ausgesetzt. Zentrale Begriffe und Funktionen der Verfassung müssen daher neu definiert werden. Zugleich stellt sich die Frage nach der Legitimierung und Limitierung derjenigen öffentlichen Gewalt, die von supranationalen Organisationen ausgeübt wird. Ist sie ebenfalls nach Art der Verfassung regulierbar oder müssen in Bezug auf sie neue Formen rechtlicher Begründung und Begrenzung entwickelt werden? Darüber besteht alles andere als Klarheit. Auch insoweit gibt es also Klärungsbedarf, ebenso wie hinsichtlich des Verhältnisses von traditioneller Staatsverfassung und neuartigen Regulierungen der nicht staatlichen öffentlichen Gewalt.

Zugleich mit der weltweiten Verbreitung der Verfassung hat sich in der zweiten Hälfte des 20. Jahrhunderts auch die Verfassungsgerichtsbarkeit als Mittel zur Gewährleistung der Verfassung gegenüber der Politik weltweit

durchgesetzt. Verfassungsgerichtsbarkeit ist heute ein integraler Bestandteil des Konstitutionalismus. Beide müssen zusammen gesehen werden. Über Erfolgsbedingungen der Verfassungsgerichtsbarkeit ist allerdings noch wenig bekannt. Auch ihre Bewertung differiert stark. Während sie in den USA vornehmlich unter dem Gesichtspunkt der Bedrohung von Demokratie diskutiert wird, gilt sie in den jüngeren Demokratien als Garant von Demokratie. Zudem ist mit der Internationalisierung öffentlicher Gewalt auch ein Anteil der Verfassungsgerichtsbarkeit auf internationale Gerichte übergegangen. Im Unterschied zu nationalen Gerichten operieren sie jedoch unter anderen Bedingungen und in einem anderen Kontext. Ihre Einbindung in einen kontinuierlichen Diskussionszusammenhang und ihre Rückkopplung an die Gemeinschaft, für die sie Recht sprechen, ist wesentlich geringer als bei staatlichen Gerichten. Welche Folgen hat das für die Ausübung der richterlichen Funktion auf supranationaler Ebene?

Die Antworten auf diese Fragen verlangen eine vergleichende Verfassungslehre, die aber erst in ihren Anfängen steht. Darum geht es mir bei den Forschungen am Wissenschaftskolleg.

Außerdem arbeite ich an einer kleinen Studie, welche Rolle Verfassung und Verfassungsrechtsprechung in den Darstellungen der Geschichte der Bundesrepublik spielen.

Lektüreprüfung

Grimm, Dieter. *Constitutionalism: Past, Present, and Future*. Oxford: Oxford University Press, 2016.

—. *Souveränität: Herkunft und Zukunft eines Schlüsselbegriffs*. Berlin: Berlin University Press, 2009 (Englisch: *Sovereignty: The Origin and Future of a Political Concept*. New York: Columbia University Press, 2015).

SILJA HÄUSERMANN

Dr. phil., Professor of Political Science
University of Zurich

Born in 1977 in Lucerne, Switzerland

Studied Political Science and Economics at the University of Geneva and the
University of Lausanne

SOLIDARITY UNDER PRESSURE: SOCIAL POLICY PRIORITIES, POLICY TRADE-OFFS, AND REFORM OPPORTUNITIES IN EUROPEAN WELFARE STATES

European welfare states face tremendous challenges: fiscal constraints require cutbacks to existing benefits, while at the same time new needs and demands for social protection emerge. In such times of austerity, the distributive politics of the welfare state involve tough choices and trade-offs: whose risks should benefit from social solidarity in a context of shrinking resources? Should the welfare state prioritize the needs of the elderly or those of the young? Those of people in the workforce or outside of the workforce? Of natives or of immigrants?

How countries answer these questions depends on the welfare state priorities of citizens and elites. However, political science research still holds very few theoretical and empirical insights on these priorities and their determinants. My ongoing ERC research project theorizes the key distributive conflicts in current welfare politics and policy priorities, as well as potentials and avenues for social solidarity and inclusive welfare state reforms. I empirically study the politics of welfare trade-offs by means of comparative content analysis, experimental and observational public opinion surveys, and elite surveys. The goal is to identify how and why conflicts about priorities differ between countries and which mechanisms foster support for social policies among those actors who are unlikely to benefit directly from these policies.

During my year at the Wissenschaftskolleg, I will be working on the theoretical framework of both conflict and coalition potentials in current welfare politics. I

will also be in the midst of conducting and analyzing surveys among citizens and elites in eight European countries.

In addition – and related to the welfare state project both theoretically and empirically – I will be working on a longstanding book project on electoral voter realignment in Europe and its impact on the electoral performance and political program of social democratic parties.

Recommended Reading

Beramendi, Pablo, Silja Häusermann, Herbert Kitschelt, and Hanspeter Kriesi. *The Politics of Advanced Capitalism*. New York: Cambridge University Press, 2015.

Gingrich, Jane and Silja Häusermann. “The decline of the working class vote, the reconfiguration of the welfare support coalition and consequences for the welfare state.” *Journal of European Social Policy* 25 (2015): 50–75.

Häusermann, Silja. *The Politics of Welfare State Reform in Continental Europe: Modernization in Hard Times*. Cambridge: Cambridge University Press, 2010.

AMR HAMZAWY

Ph.D., Senior Researcher

Center on Democracy, Development, and the Rule of Law, Stanford University

Born in 1967 in Cairo

Studied Political Science at Cairo University and at the Freie Universität Berlin, and Development Studies at the International Institute of Social Studies, The Hague

SOCIAL ACTIVISM AND AUTHORITARIAN POLITICS IN CONTEMPORARY EGYPT

Since 2013, four forms of anti-authoritarian platforms have shaped social activism in Egypt: (1) single-cause initiatives that oppose specific human rights abuses and advocate for the rights and freedoms of the victims, (2) professional associations that defend freedoms of expression and association, (3) student groups that are challenging the systematic interference of the security services in their affairs and the permanent presence of security forces on campuses, and (4) the labor movement that is galvanized by deteriorating economic and social conditions and by the government's repression of labor activists. In addition, spontaneous eruptions of popular anger in response to human rights abuses have become politically significant.

Young activists, students, and human rights groups have taken the helm of numerous single-cause initiatives. They often lack organizational capabilities and remain committed to a single cause related to human rights abuses, such as extrajudicial killings, forced disappearances, or torture in places of custody. Second, some professional associations have also been pushing back against the new authoritarianism on issues related to their autonomy and freedoms of expression and association. The Syndicate of Doctors and the Syndicate of Journalists in particular have taken on larger roles in the resistance since 2015. The resulting activism has restored pluralist politics to professional associations, created new spaces for the resistance of authoritarian policies and practices, and

significantly increased popular awareness about the details of daily repression in which the government is implicated. Third, the Egyptian government's various repressive tactics have failed to vanquish student activism. Students have continued to hold protests and mobilize against pro-government candidates in student union elections. Fourth, despite security surveillance, forced dismissals of labor activists, and referrals of labor activists and protesters to military trials, labor activism remains at the forefront of societal resistance to authoritarian policies and practices. Unionized workers in public and private industrial facilities, as well as civil servants in the state bureaucracy and local government, continue to demonstrate and organize strikes to articulate their economic and social demands and to defend workers' rights to freedoms of expression and association. Finally, popular anger about specific government policies and practices has frequently erupted since 2013. Groups of citizens have taken to the streets mostly to protest the accumulating human rights abuses committed by the security services. These protests are different in that demonstrators are not part of discrete initiatives that have a lasting presence. The demonstrators rather come and go in response to various incidents of abuse.

As part of closing the public space and cracking down on civil society and opposition political parties, Egypt's new authoritarian regime has tried to manage these forms of social activism through repression, undemocratic legal frameworks, and aggressive judicial tools. However, the new authoritarian government has found it difficult to quash a robust and resilient activism scene.

Recommended Reading

- Hamzawy, Amr. "Conspiracy Theories and Populist Narratives: On the Ruling Techniques of Egyptian Generals." *Philosophy & Social Criticism* 20, 10 (2018).
- . "Egypt after the 2013 Military Coup - Lawmaking in Service of the New Authoritarianism." *Philosophy & Social Criticism* 43, 4-5 (2017).
- . *A Margin for Democracy in Egypt - the Story of an Unsuccessful Transition* (in Arabic). Cairo: The Egyptian Lebanese Publishers, 2014.

KASEREKA KAVWAHIREHI

Ph.D., Professor of Literature

University of Ottawa

Né en 1969 à Kavingu, République Démocratique du Congo
Études de philosophie, Faculté de philosophie Saint-Pierre Canisius,
Kimwenza, et de langues et littératures romanes, Université de Namur,
Université catholique de Louvain, et Queen's University, Kingston

LE ROMAN AFRICAÏN CONTEMPORAIN ET LA DEMOCRATIE

L'exploration du lien entre la littérature africaine et la politique a fait émerger deux camps majeurs. D'un côté, ceux qui, réduisant l'œuvre littéraire à un document sociologique et idéologique, font du romancier un héros de la dénonciation des dictatures, de l'autre, ceux qui tiennent à la spécificité de l'œuvre d'art littéraire et à son autonomie. Pour ces derniers, l'œuvre d'art littéraire se prête d'abord et avant tout à une expérience esthétique. Les études qui essayent de réconcilier les deux tendances en repensant le rapport entre esthétique et politique, formes et contexte, afin d'arriver à élaborer une politique du roman africain comme œuvre d'art et d'en élucider les significations et fonctions sociales sont rares.

Ce projet vise à reprendre la question en la situant au niveau théorique approprié et en l'articulant aux défis de l'invention démocratique et du changement social en Afrique. Il s'articule en trois questions : 1. Que peut-on attendre du roman africain en tant qu'œuvre d'art littéraire, quant au défi de construire une communauté démocratique ? 2. Y a-t-il quelque chose dans le principe et la construction du roman africain qui le prédispose à jouer, par l'entremise de l'expérience esthétique souvent pensée comme l'Autre du politique, un rôle actif dans le processus de l'invention démocratique et du changement social ? 3. Dans le cas d'une réponse positive, comment articuler esthétique et politique, œuvre

d'art et espace social, pour que l'analyse du roman révèle tout son potentiel à la fois esthétique et politique/social?

Pour répondre à ces questions, on analysera des romans africains produits entre 1970 et 2015 à l'aide d'une approche intégrant les théories littéraires et/ou esthétiques et les théories sociales. On montrera que le roman africain qui pointe très souvent les contradictions sociales est à aborder à la fois comme un produit d'une situation sociale qu'il intègre au plus intime de sa structure et une forme d'opposition critique à cette condition contre laquelle il se définit lui-même pour faire sentir à ses lecteurs qu'un autre monde est possible.

Lecture recommandée

Kavwahirehi, Kasereka. *Y'en a marre ! Philosophie et espoir social en Afrique*.

Paris : Karthala, 2018. (coll. Hommes et sociétés.)

—, *Le prix de l'impasse : Christianisme africain et imaginaires politiques*. Bruxelles et al. : Lang, 2013. (coll. Documents pour l'histoire des francophonies.)

—, V. Y. Mudimbe et la ré-invention de l'Afrique : *Poétique et politique de la décolonisation des sciences humaines*. Amsterdam, New York : Rodopi, 2006. (coll. Francopolyphonies 4.)

PETER E. KELLER

EURIAS Fellow

Ph.D., Professor of Cognitive Science

Western Sydney University

Born in 1970 in Sydney, Australia

Studied Music and Psychology at the University of New South Wales

HUMAN INTERACTION THROUGH MUSIC: PSYCHOLOGICAL AND SOCIAL FOUNDATIONS OF GROUP MUSIC-MAKING

In musical contexts in all known cultures and most echelons of society, rich patterns of interpersonal coordination can be observed among instrumentalists and dancers and between performers and audience members. Such group music-making, as exemplified by musical ensemble performance, can be viewed as a microcosm of human interaction. Participation in collective musical activities draws upon a broad spectrum of sensory, perceptual, cognitive, motor, and social processes that support other forms of collaborative behaviour in everyday life. My book project will flesh out this idea by adopting an interdisciplinary approach that brings together research from fields within psychology, neuroscience, empirical musicology, ethnomusicology, and anthropology. One goal is to address the “what” and “why” of musical interaction by considering the forms it takes across cultures, and the evolutionary conditions that may have led to its genesis. A second challenge is to address how musical interaction works from psychological, social, and neurophysiological perspectives. Documenting and synthesizing different theoretical approaches and empirical findings will provide a repository of knowledge that can further our understanding of an ancient form of human social communication, one that is quite likely the oldest surviving means of fostering group cohesion and conveying one group’s collective intentions and feelings to other groups. This knowledge will also inform practices related to group musical activity in the context of education, as well as

the use of music to promote health and wellbeing in daily life and in clinical settings.

Recommended Reading

Keller, P. E., G. Novembre, and M. J. Hove. "Rhythm in Joint Action: Psychological and Neurophysiological Mechanisms for Real-Time Interpersonal Coordination." *Philosophical Transactions of the Royal Society B* (2014) 369, 20130394.

D'Ausilio, A., G. Novembre, L. Fadiga, and P. E. Keller. "What Can Music Tell Us About Social Interaction?" *Trends in Cognitive Sciences* 19, 3 (2015): 111–114.

Keller, P. E., R. König, and N. Novembre. "Simultaneous Cooperation and Competition in the Evolution of Musical Behavior: Sex-Related Modulations of the Singer's Formant in Human Chorusing." *Frontiers in Psychology* (2017) 8:1559. doi: 10.3389/fpsyg.2017.01559.

KARIN KUKKONEN

Ph.D., Associate Professor in Comparative Literature
University of Oslo

Born in 1980 in Bretten, Germany

Studied English Literature, Ethnology and Film Studies at the Johannes
Gutenberg-Universität Mainz

LITERATURE AS EXPERIMENT

The novel, says Emile Zola, is a “provoked observation”. It presents its readers with an arrangement of characters, events and language that leads them to observe things about themselves through their conceptual and emotional responses. Zola takes up a definition from the sciences here, and argues that the novel works along the logic of the experiment, with its artificial set-ups and new insights.

I will pursue this suggestion in my project and investigate how readers and writers engage in experimentation through literature. Writers play through their word choices and the rhythm of their language, entwining the speech of characters and narrators. I will trace how this process moves between a design for the novel and an improvisation of linguistic and narrative solutions through the study of literary manuscripts and the different versions of published texts, where authors have made revisions. Literary texts themselves have often been understood as thought experiments, as they posit “what if”-scenarios in their fictional worlds. The experiment as “provoked observation”, however, goes deeper. From this perspective, texts lead readers to moments of minute recognition about their own thoughts and feelings. I will investigate this phenomenon through research on cognitive approaches to literature, which provides models for how literary texts are entwined with readers’ thoughts and feelings. In particular the temporal dimension of novel reading will be important here, as the “provoked observation” unfolds over a longer period of reading and repeated

engagement with the text and as the material substrates on which we read change from printed books to screens.

Literature as Experiment understands the novel as a cultural technology that enables us to think in ways which would not be possible without it. The project sketches out a place for literature in the discussions around how human cognitive capacities and cultural achievements develop in tandem, and it argues for the continuing relevance of the novel's "provoked observations" in the digital age.

Recommended Reading

Kukkonen, Karin. *A Prehistory of Cognitive Poetics: Neoclassicism and the Novel*. New York: Oxford University Press, 2017.

—. "Fantastic Cognition." In *Cognitive Literary Science: Dialogues Between Literature and Cognition*, edited by Michael Burke and Emily Troscianko, 151–167. New York: Oxford University Press, 2017.

—. *Contemporary Comics Storytelling*. Lincoln: University of Nebraska Press, 2013.

ASHELEY R. LANDRUM

from April to June 2019

Fellow of the College for Life Sciences

Ph.D., Science Communication

Texas Tech University

Born in 1983 in Illinois, USA

Studied Science Communication at the University of Pennsylvania,

Computational Cognitive Development at the University of Louisville,

and Cognitive Psychology and Developmental Psychology at the University of Texas at Dallas

SOCIALIZING SCIENCE AND CULTIVATING SCIENTIFICALLY CURIOUS MINDS

Scholars interested in science communication have focused primarily on improving formal and informal science education so that non-scientists better understand science concepts. This goal is based on the intuitive notion that public acceptance of science increases with public understanding of science, a theory referred to as the public deficit model. This model, however, oversimplifies a complex problem: although there are modest gains in acceptance of scientific findings with increasing scientific understanding, increasingly research demonstrates that individuals' "priors" (i.e., prior beliefs, attitudes, values, ideologies) strongly shape their acceptance of science. Rather than accepting scientific evidence that conflicts with their priors, people often use their knowledge and reasoning abilities to more effectively explain it away (i.e., motivated reasoning). Therefore, improving education by itself is not enough to increase acceptance of science.

With my collaborators, I have shown that science curiosity might mitigate against these effects of motivated reasoning. I hypothesize that instead of using their political or religious views as filters for interpreting science information, science-curious individuals use a "science values" filter. These individuals are

more likely to accept what science has to offer, even when its implications conflict with deeply held political or religious views. Because valuing science may mitigate the motivated evaluation of science information, instilling stronger science-based values in childhood may be a fruitful direction for science communication research with potential benefits for the science-society relationship. I would like to shift my research focus to (a) understand the process by which individuals acquire attitudes, beliefs, and values relevant to the system of science (i.e., the process of science socialization) and (b) determine how we might better socialize children in the benefit and values of science.

Recommended Reading

Landrum, A. R., R. B. Lull, H. Akin, A. Hasell, and K. H. Jamieson. "Processing the Papal Encyclical Through Perceptual Filters: Pope Francis, Identity-Protective Cognition, and Climate Change Concern." *Cognition* 166 (2017): 1–12. www.sciencedirect.com/science/article/pii/S0010027717301324.

Kahan, D. M., A. R. Landrum, K. Carpenter, L. Helft, and K. H. Jamieson. "Science Curiosity and Political Information Processing." *Political Psychology* 38, S1 (2017): 179–199.

Landrum, A. R., B. S. Eaves, Jr., and P. Shafto. "Learning to Trust and Trusting to Learn: A Theoretical Framework." *Trends in Cognitive Sciences* 19, 3 (2015): 109–111.
www.sciencedirect.com/science/article/pii/S1364661314002745.

WOLF LEPENIES

Permanent Fellow (em.) des Wissenschaftskollegs
Rektor des Wissenschaftskollegs (1986–2001)
Dr. Dr. h.c. mult., Professor (em.) der Soziologie
Freie Universität Berlin

Geboren 1941 in Deuthen, heute Polen
Studium der Soziologie, Philosophie und Publizistik
in München, Münster und Berlin

1. NEW DEAL, MARSHALLPLAN UND MONTANUNION – WIE UND WANN WAR „GROSSE POLITIK“ MÖGLICH?

2. DIE MACHT AM MITTELMEER – ERGÄNZUNGEN

Ad 1. Angesichts der Probleme, vor denen die Europäische Union und einzelne europäische Staaten stehen, wird immer öfter der Ruf nach einer „Großen Lösung“ laut, einer umfassenden und nachhaltigen Reform bestehender sozialer und ökonomischer Verhältnisse. Dabei werden drei Initiativen als Vorbilder genannt: der New Deal, mit dem F. D. Roosevelt die USA der Zwischenkriegszeit aus der Depression führte, der Marshallplan, der den Wiederaufbau Europas nach dem Zweiten Weltkrieg anstieß und beförderte, und die Montanunion, die über die Verflechtung von deutscher Kohle und französischem Stahl zunächst zu einer Wirtschaftsunion und letztlich, mit dem deutsch-französischen Tandem als Motor, zur Bildung der Europäischen Gemeinschaft und dann der EU führte. Ein Rückblick auf die drei Initiativen soll helfen, die Frage zu beantworten, unter welchen Umständen es trotz aller Schwierigkeiten möglich ist, umfassende, weitreichende politische Entscheidungen zu treffen und „Große Politik“ zu machen.

Ad 2. In meinem Buch *Die Macht am Mittelmeer: Französische Träume von einem anderen Europa* habe ich die Versuche Frankreichs und anderer südeuropäischer

Länder beschrieben, eine Art von „lateinischer Koalition“ – Alexandre Kojève sprach 1945 von einem „Lateinischen Reich“ – gegen die deutsche Vormacht in Europa zu bilden. Zu diesen Versuchen gehörte auch der Plan Nicolas Sarkozys bei seinem Amtsantritt 2007, eine Mittelmeerunion („Union Méditerranéenne“) zu gründen – außerhalb der Europäischen Union. Durch das Veto der deutschen Bundeskanzlerin scheiterte dieser Plan, es überlebte eine in die EU integrierte Schwundform („Union pour la Méditerranée“). Ich habe den „Kampf“ um die Mittelmeerunion als Auseinandersetzung zwischen Deutschland und Frankreich beschrieben – und jetzt von „Ohrenzeugen“ erfahren, dass dabei die innerfranzösische Auseinandersetzung zwischen dem Staatspräsidenten („Elysée“) und dem Außenministerium („Quai d’Orsay“) eine große Rolle spielte. Diesem Streit zwischen Elysée und Quai d’Orsay will ich nachgehen und ihn wenn möglich durch Zeugenaussagen und Dokumente belegen. Auch will ich herauszufinden versuchen, ob bei den Diskussionen um die Gründung der ursprünglich geplanten Mittelmeerunion Spanien in der Person des Ministerpräsidenten Zapatero nicht eine größere Rolle spielte als bisher angenommen.

Lektüreprüfung

Lepénies, Wolf. *Die Macht am Mittelmeer: Französische Träume von einem anderen Europa*. München: Hanser, 2016.

—. *Qu’est-ce qu’un intellectuel européen? Les intellectuels et la politique de l’esprit dans l’histoire européenne*. Paris: Editions du Seuil, 2007.

THOMAS M. LEWINSOHN
EURIAS Fellow
Dr. Sc., Professor of Ecology
Universidade Estadual de Campinas

Born in 1952 in Niterói, Brazil
Studied Biology at the Universidade Federal do Rio de Janeiro and Ecological
Sciences at the Universidade Estadual de Campinas

COMMUNITY ECOLOGY – CONCEPTUAL DEVELOPMENT, CURRENT STANDING, FUTURE PROSPECTS

Community ecology is one of the classical subdivisions of ecological science. Its initial task was largely the description and classification of plant communities. From the mid-1960s on, several simple and powerful hypotheses proposed to explain the diversity of species and their key controlling processes in local communities. Hence, the scientific status of community ecology rose; however, it remained more heterogeneous than other subdisciplines, possibly because community ecology originated from distinct research lines that lacked a unified conceptual framework. Moreover, several controversies split researchers, at a time when ecology became increasingly engaged in addressing large-scale environmental and conservation problems. In the 21st century, other adjoining or emerging disciplines, such as biodiversity science, landscape ecology, and macroecology, are raising new questions about the present status of community ecology as a component of the evolving ecological sciences.

I propose to examine the development of community ecology since the 1970s, with two initial sets of questions. First, as it matured in the 20th century, did community ecology approach integration, converging on a common set of concepts and questions? Second, are new scientific fields nowadays cutting into its original domain; or, conversely, is community ecology expanding its domain of enquiry by incorporating novel questions?

I intend to probe these questions through a selective overview of the literature, spanning both conceptual debates and actual research practice. This approach involves the recognition of research programs and how they develop over time. Further foci are several recent proposals to unify community ecology or to integrate it with other subdisciplines. In the end, I hope to produce a workable map of an evolving field of enquiry, without pontificating on its formal status. By focusing chiefly on research practices, this should be relevant and useful to ecologists and the challenges they face, as well as to practitioners engaged in applying this knowledge to policy and management problems.

An additional curiosity involves surveying graphical representations of ecological communities and how these change in form, content, and choice of symbols.

Recommended Reading

Lewinsohn, T. M., V. Novotny, and Y. Basset (2005). "Insects on plants: diversity of herbivore assemblages revisited." *Annual Review of Ecology, Evolution, and Systematics* 36: 597–620.

Lewinsohn, T. M., P. I. Prado, P. Jordano, J. Bascompte, and J. M. Olesen (2006). "Structure in plant-animal interaction assemblages." *Oikos* 113: 174–184.

Lewinsohn, T. M., J. Kollmann, W. W. Weisser et al. (2015). "Ecological literacy and beyond: problem-based learning for future professionals." *AMBIO* 44: 154–162.

TIMOTHY A. LINKSVAYER

from January to June 2019

Ph.D., Associate Professor of Biology

University of Pennsylvania

Born in 1976 in Illinois, USA

Studied Evolutionary Biology at Indiana University

PROSPECTS FOR ELUCIDATING THE EVOLUTION OF COOPERATION AND MUTUALISM WITH GENOMICS

Focus Group *Syngonomics: Evolution – from Conflict to Cooperation to Mutualism*

Individuals are inextricably linked by social interactions in highly social organisms such as humans and ants, and social interactions associated with competition for resources or mating are a basic feature of life for most organisms. Social interactions can fundamentally alter the genetic basis and evolution of traits (e.g., size, behavior), because an individual's traits can be affected directly by its own genes as well as indirectly by the genes of its social partners. Indeed, the genetic composition of the social environment has been shown to strongly affect behavior, physiology, development, survival, and reproduction in diverse animals such as ants, flies, songbirds, fish, and humans, but the underlying molecular and behavioral mechanisms remain unclear. I study the genetic and behavioral underpinnings of complex social systems in order to understand how these systems function and evolve, and more generally to provide basic insight into the genetic basis and evolution of social life.

The evolution of social interactions within species can also be used as a conceptual model for the evolution of cooperation (i.e., mutualism) between species, which, like social interactions, is ubiquitous across the tree of life. Building on my previous research, I will work towards developing theoretical and empirical approaches to understand the evolution of interspecific interactions, in particular the evolution of mutualistic relationships. I will also explore the prospects

(and limits) of using genomic approaches (e.g., sequencing across the tree of life) to elucidate major evolutionary transitions in biological complexity: from solitary to highly social life, unicellular to complex multicellular life, as well as single species to complex interspecific mutualisms.

Recommended Reading

Warner, M. R., A. S. Mikheyev, and T. A. Linksvayer (2017). “Genomic signature of kin selection in an ant with obligately sterile workers.” *Molecular Biology and Evolution* 34: 1780–1787.

Linksvayer, T. A. and M. J. Wade (2016). “Theoretical predictions for sociogenomic data: the effects of kin selection and sex-limited expression on the evolution of social insect genomes.” *Frontiers in Ecology and Evolution* 4: 65.

Mikheyev, A. S. and T. A. Linksvayer 2015. “Genes associated with ant social behavior show distinct transcriptional and evolutionary patterns.” *eLife* 4: e04775.

ANDREAS MAERCKER

Dr. phil. Dr. med., Professor für Psychopathologie und Klinische Intervention
Universität Zürich

Geboren 1960 in Halle (Saale), Deutschland

Studium der Medizin an der Universität Halle-Wittenberg und der Medizin
und Psychologie an der Humboldt-Universität zu Berlin

TRAUMATA, POSTTRAUMATISCHE BELASTUNGS- STÖRUNG UND KULTURELLE SKRIPTE

Die Erforschung der posttraumatischen Belastungsstörung (PTSD) kann auf eine 30-jährige Geschichte zurückblicken. Die international anerkannte Diagnose entstand durch Impulse aus der US-amerikanischen Psychiatrie, um den psychisch kranken „Military Veterans“ eine angemessene diagnostische Einordnung zu ermöglichen. Die Diagnose erfuhr eine Ausweitung auf weitere Opfergruppen: Opfer sexualisierter Gewalt, Überlebende von Naturkatastrophen, Folter- und zivile Kriegsoffer und andere. In den Mittelpunkt der psychologischen und psychiatrischen Forschung wurden die posttraumatisch veränderten Gedächtnisprozesse als zentrale pathologische Veränderung gestellt. Neue Therapieverfahren zielten entweder psychologisch oder pharmakologisch auf die Modifikation dieser Gedächtnisveränderungen. Im Laufe der Zeit zeigte sich, dass zwischenmenschliche und soziale Veränderungen bedeutsamer sind als die Gedächtnisveränderungen (die eine hohe Selbstheilungstendenz aufweisen), beispielsweise wirkt die fehlende Anerkennung als Traumaopfer als wesentliche Chronifizierungsursache für die PTSD. Im Zuge dieses Paradigmenwandels rücken nun die Angehörigen, Gemeinschaften und Gesellschaften in den Fokus und wie sich deren Wahrnehmung und Würdigung traumatischer Erlebnisse auf die Erkrankung bzw. den Genesungsprozess auswirken.

Meine Arbeit wird sich neben den genannten Aspekten auf die Veränderung des „Kernmodells der PTSD“ durch die Globalisierung und somit den weltweiten Einsatz von Therapeuten bei Flüchtlingen unterschiedlichster Kulturen konzentrieren. Es stellt sich die Frage, ob es die posttraumatischen Gedächtnisveränderungen oder die Erschütterungen der zwischenmenschlichen Einstellungen und der Tragfähigkeit der sozialen und gesellschaftlichen Routinen sind, die den Kern der posttraumatischen Veränderungen bilden. Meine Arbeitsgruppe hat in den beiden letzten Jahren themenbezogen psychologisch-anthropologische Beobachtungen und Untersuchungen in vier Regionen der Welt unternommen bei Bevölkerungsgruppen, welche die vorherrschenden westlichen Trauma-/PTSD-Vorstellungen nicht kennen. Meine Arbeit am Wissenschaftskolleg wird sich der kritischen Zusammenführung dieser Befunde mit den überkommenen „PTSD-Modellen“ widmen.

Lektüreempfehlung

Maercker, Andreas. *Trauma und Traumafolgestörungen*. München: Beck, 2017.

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Maercker, Andreas und Simon Forstmeier, Hg. *Der Lebensrückblick in Therapie und Beratung*. Heidelberg: Springer, 2013.

CHRISTOPH MÖLLERS

Permanent Fellow des Wissenschaftskollegs

Dr. iur., LL.M., Professor für Öffentliches Recht und Rechtsphilosophie an der Humboldt-Universität zu Berlin

Geboren 1969 in Bochum, Deutschland

Studium der Rechtswissenschaft und Komparatistik in Tübingen, München und Chicago

1. ORDNUNG UND VERGLEICH

2. LAW'S LEGITIMACY

Ad 1. Mein letztes Buch *Die Möglichkeit der Normen* führte mich über eine Reflexion des Begriffs der sozialen Norm hin zu Fragen gesellschaftlicher Ordnungsbildung. Das Buch hatte ein komparatistisches Erkenntnisinteresse: Eine begriffliche Grundlage für den Vergleich verschiedener sozialer Normen unterschiedlicher Provenienz aus Recht, Religion, Kunst sollte entwickelt werden. Bei der Niederschrift wurde mir deutlich, dass das Vergleichen selbst eine Kulturtechnik darstellt, die für die Operation von Ordnungen, seien sie normativ oder nicht, von großer Bedeutung ist. Um diesen Zusammenhang soll es nunmehr im vorliegenden Projekt gehen. Dabei wird eine doppelte Unterscheidung einzuziehen sein: einerseits zwischen normativen und kognitiven Ordnungen, andererseits zwischen den elementaren kognitiven Operationen, die auf Vergleichen beruhen, und andererseits der Kulturtechnik des Vergleichs, die erst zu einem bestimmten historischen Moment in verschiedenen Disziplinen Einzug hält. Das Ganze ist als zweiter Teil einer Trilogie über Normen und normative Ordnungen geplant, als deren dritter eine Theorie des Rechts verfasst werden soll.

Ad 2. Why do we make use of law? There are two basic kinds of answers to this question: We do it because law has an inherent value or we do it because we

understand the law as a means to an end. Both answers have a point, and both answers miss something. My own answer is based on two observations: First, we never treat a legal order as being legitimate as such, but accept its justification only on external grounds, be it the political legitimacy of a parliament or the moral claim of a specific rule. Second, otherwise quite different institutional arrangements that are typical for legal systems, like independent courts, rights, or sanctions, all resist any direct connection between means and ends. They function as a kind of institutional buffer between the aim of a norm and its realization. These two features, dependent justification and buffered execution, have to be studied in order to understand law's legitimacy.

Lektüreempfehlung

Möllers, Christoph. *Die Möglichkeit der Normen*. Berlin: Suhrkamp, 2015.

Harel, Alon. *Why Law Matters*. Oxford: Oxford University Press, 2014.

NANCY A. MORAN

from April to May 2019

Ph.D., Professor of Integrative Biology

University of Texas at Austin

Born in 1954 in Dallas, Tex., USA

Studied General Studies at the University of Texas at Austin and Zoology at the

University of Michigan

EVOLUTION OF COOPERATION VERSUS CONFLICT IN HOST-ASSOCIATED MICROBIAL COMMUNITIES

Focus Group *The Major Evolutionary Transitions in Organismality*

I plan to characterize genomic features that reflect patterns of evolution in animal gut-associated bacterial species. This project would exploit genomic datasets from my lab and from public databases. Bacterial symbionts able to move readily between different hosts are predicted to have genomes enabling inter-strain conflict, selfish elements, and bacteriophage genes and defenses. Further, their communities are predicted to show high strain-diversity and high variability among hosts. In contrast, more host-restricted lineages that are passed directly between generations are predicted to exhibit the syndrome of “domesticated” genomes, which I have documented extensively for heritable symbionts in other insect groups. Such genomes are streamlined, lacking selfish elements and genes underlying inter-bacterial conflict, and exhibit signs of genome degradation. Although gut symbionts do not evolve to these extremes, they exhibit a wide range in the extent of genome reduction, clonality, and gene content devoted to conflict.

My focus will be the gut communities of social bees, which I have been developing as a model of microbiota evolution for the past decade, due to its advantages as an experimentally tractable system of co-evolved bacteria and hosts. My lab has shown that social bees have a distinct set of gut bacteria that

have evolved with them for ~80 million years. We can categorize hosts according to life-cycle differences predicted to correspond to differences in how natural selection acts on gut bacteria. In bumble bees, gut bacteria are tightly linked with host colonies, passed directly from queen to offspring each generation, imposing high linkage of host reproductive interests to the fate of bacterial lineages. In contrast, in honey bees, this linkage is looser, as colonies are founded by many workers that transmit bacterial symbionts. Genome analyses and lab experiments indicate major differences between strains associated with these two host groups. In some cases, genomes contain signatures of extensive intra-community conflict, with many genes devoted to machinery for killing competing bacteria and to selfish or parasitic genetic elements and defenses against these. In others, the genomes have few such elements and are generally streamlined.

Recommended Reading

Bennett, G. M. and N. A. Moran (2015). “Heritable symbiosis: the advantages and perils of an evolutionary rabbit hole.” *Proceedings of the National Academy of Sciences USA* 112: 10169–10176.

McCutcheon, J. P. and N. A. Moran (2012). “Extreme genome reduction in symbiotic bacteria.” *Nature Reviews Microbiology* 10: 13–26. PMID: 22064560.

Kwong, W. K. and N. A. Moran (2016). “Gut microbial communities of social bees.” *Nature Reviews Microbiology* 14: 374–384.

FRANCO MORETTI

Permanent Fellow of the Wissenschaftskolleg
Professor (emer.) of English and Comparative Literature
Stanford University

Born in 1950 in Sondrio, Italy
Studied Modern Literatures at the University of Rome

CONFLICT AND FORM

In 2018/2019 I will start a multi-year research project on tragic collision – that is to say, on the kind of conflicts that arise within a homogeneous culture (the same city, state, or family), and that, after having radicalized, can end only with the death of one (or both) of the antagonists. Tragedy is a small-scale model of this complex chain of actions and reactions and is thus ideal to try to achieve a synthetic understanding of these uncanny conflicts – most radically, civil wars – that are one of the salient aspects of human societies.

In this first year, I will focus on the shifting historical relationship between the context and the content of conflict. As the dramatic “scene” modifies from the Greek *polis* to absolutist courts and modern households, the reasons for strife also change, from the one-sided demands of the state and the family described in the *Phenomenology of the Spirit* and the *Aesthetics*, to the irreconcilable extremes (the tyrant Macbeth and the martyr Lear) that sever the figure of the sovereign, all the way to the class oppression that haunts Büchner’s “proletarian” Woyzeck and the misery of bourgeois legality denounced by Ibsen’s “feminist” Nora.

Concretely, I will concentrate my investigation on two main objects: dramatic networks and rhetorical confrontations. Networks are ideal for visualizing tragic structure as a whole system of alliances, clashes, and different regions: they offer a simple and powerful approach to the “macro” dimension of drama. At the opposite end of the spectrum lies the study of the “micro” strategies that major characters adopt when putting into words the principles they stand for: from the stichomythia so characteristic of Greek plays to Hamlet’s puns when

talking to the King, Calderon's cosmic monologues, Racine's symmetrical exchanges, Schiller's face-to-face confrontations, Büchner's out-of-control metaphors, or Ibsen's prose. In this respect, the project will also have a methodological ambition – that of achieving a synthesis of traditional literary hermeneutics with the new possibilities opened up by computational criticism.

Recommended Reading

Moretti, Franco. *Distant Reading*. London: Verso, 2013; especially: "Network Theory, Plot Analysis" (211–240).

—. *The Bourgeois: Between History and Literature*. London: Verso 2013. Canon/Archive, 2017.

—. *Signs Taken for Wonders* London: Verso, 1987 (new edition); especially: "The Great Eclipse: Tragic Form and the Deconsecration of Sovereignty" (42–82) and "The Moment of Truth" (249–261).

SIOBHÁN O'BRIEN

from September to December 2018

John Maynard Smith Prize Fellow

Ph.D., Evolutionary Biology

Swiss Federal Institute of Technology Zurich

Born in 1987 in Dublin

Studied Zoology at Trinity College Dublin and Evolutionary Biology

at the University of Exeter

DO SOCIAL INTERACTIONS MATTER IN COMPLEX COMMUNITIES OF MICROBES?

My research asks broad questions about how microbial communities evolve and function. In particular, I am interested in how intra- and interspecific interactions within these communities can shape environmentally and clinically important microbial traits, such as heavy metal bioremediation, adaptation to phage, antibiotic resistance, virulence and microbial motility. My research to date has shown that community context is crucial for understanding evolutionary trajectories of bacteria, and so by considering bacteria as single non-interacting cells we lose important information about the factors shaping bacterial evolution. To tackle these questions, I experimentally evolve microbes in complex environments that bridge the gap between the lab and the field – incorporating aspects such as spatial structure, interacting species and/or intraspecific variation. My ultimate goal is to link simple single-species in vitro evolution with field observations, allowing us to better understand the interplay between ecology and evolution in microbial communities.

Recommended Reading

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- O'Brien, S. and J. L. Fothergill (2017). "The role of multispecies social interactions in driving *Pseudomonas aeruginosa* pathogenicity in the cystic fibrosis lung." *FEMS Microbiology Letters* 364: 15.
- O'Brien, S., D. J. Hodgson, and A. Buckling (2014). "Social evolution of toxic metal bioremediation in *Pseudomonas aeruginosa*." *Proceedings of the Royal Society B: Biological Sciences* 1787, 20140858.

HOWARD OCHMAN

from April to May 2019

Ph.D., Professor of Integrative Biology

University of Texas at Austin

Born in 1954 in Philadelphia, Pa., USA

Studied Biopsychology at Vassar College, New York and Biology at the

University of Rochester

THE IMPACT OF MICROBES ON HUMAN EVOLUTION

Focus Group *The Major Evolutionary Transitions in Organismality*

The focus of my project is to determine the forces that shape the microbial communities inhabiting humans and great apes. This work will establish how these microbes have been influenced by host traits, including diet, behavior, and lifestyle, and in turn, how these microbes have had both positive and negative effects on human hosts. These issues will be examined through the lens of evolution, through comparisons of the microbial communities from a broad geographic and cultural range of humans, and by evaluating this information in the context of the microbiomes from other great apes. Additionally, there is recent evidence that several of the microbial lineages within the human gut microbiome have co-diversified with their hosts over evolutionary timescales. These bacterial lineages also offer an opportunity to directly compare species boundaries within different domains of life. Microbes are generally classified as species using sequence-similarity thresholds; we have developed an approach for delineating species of bacteria and archaea based on the defining principles of the Biological Species Concept. We will apply recent data coming from microbiome analyses to compare the process of speciation, i.e., the disruption of genes, across different prokaryotic and eukaryotic taxa.

Recommended Reading

- Bobay, L.-M. and H. Ochman (2017). “Biological species are universal across Life’s domains.” *Genome Biol. Evol.* 9: 491–501.
- Moeller, A. H., A. Caro-Quintero, D. Mjungu, A. V. Georgiev, E. V. Lonsdorf, M. N. Muller, M. Peeters, A. E. Pusey, B. H. Hahn and H. Ochman (2016). “Co-speciation of gut microbiota with hominids.” *Science* 353: 380–382.
- Raghavan, R., Y. Kelkar and H. Ochman (2012). “A selective force favoring increased G+C content in bacterial genes.” *Proc. Natl. Acad. Sci. USA* 109: 14504–14507.

YVONNE ADHIAMBO OWUOR

Author

Kwani Trust, Nairobi

Born in 1968 in Nairobi

Studied Creative Writing at the University of Queensland, Television/Video for Development at the University of Reading (AERDD), and Linguistics in English and History at Kenyatta University, Nairobi

HIRAETH, A NOVEL IN PROGRESS

Hiraeth is a creative project imagined as transnational fiction situated in the African continent, informed by and drawing from oft-neglected inner/liminal realities of the African continent. Mythopoeic in inclination, this is also a journey story into the future (the son) and the past (the father). The work sets out to re-interpret some of the continent's regional and local archetypes and place these into dialogue (and conflict) with one another in order to interrogate some of Kenya's (and to some extent the continent's) uncomfortable realities through a family story. Pulsing through the text are some of the questions that inform my overall creative quest, for example: Can a "text" carried in memory and blood suggest dimensionality and sense to a place? Where is the "locus of meaning" in Africa's imagined geographies? What do these ceaseless presences say about the future? What does state and nation mean for the idea/project Kenya? As an author of Africa struggling to come to terms with the sense of loss and to uncover the root cause of national restlessness, this story is part of the author's quest for a fresh grammar to frame the riddle of belonging and home, both in Africa and the world. In line with my earlier works, this one is inspired by references from assorted African imaginaries, visual texts, and ways of seeing. In this work, I examine memory as a library of "buried" image and story that offers direction to the protagonists in order to inform their present and future. The outcome of this quest would be, to borrow words from Georg Lukács' *Theory of the Novel*, an "archetypal map" and the artefact of a "liminal" Africa.

Recommended Reading

Owuor, Yvonne Adhiambo. "These Fragments." In *All the Good Things around Us: an Anthology of African Short Stories*, edited by Ivor Agyeman-Duah. Oxfordshire: Ayebia Clarke Publishing, 2016.

—. *Dust* (novel). New York: Knopf, 2014. (German: *Der Ort, an dem die Reise endet*. Köln: DuMont, 2017.)

—. "Contemporary Projections: Africa in the Literature of Atrocity (Aftrocity)." In *Writers, Writing on Conflicts and Wars in Africa*, edited by Okey Ndibe and Chenjerai Hove, 17–26. London: Adonis & Abbey and Nordiska Afrika-institutet, 2009.

—. *Weight of Whispers* (novel). Nairobi: Kwani Trust, 2006.

BISSERA PENTCHEVA
Ph.D., Professor of Art History
Stanford University

Born in 1972 in Sofia
Studied Art History at Dartmouth College and Medieval and Byzantine Art
and Architecture at Harvard University

ANIMATION IN MEDIEVAL ART

Since the Renaissance, Western culture has promoted naturalism and the ability of the painter or sculptor to imitate nature and produce a lifelike image. By contrast, medieval culture across the Christian-Islamic divide privileged liveliness, stemming from the changing appearance of materials like gold, enamel, and gems. The material flux was produced by ambient conditions such as the movement of diurnal light and shadows across the complex surfaces, or the flicker of candles stirred by a breeze or human breath. By employing digital technology along with the traditional textual research, this study explores the phenomenon of animation in medieval art.

We identify image with the mimetic representation that can be sculptural or painted. Yet, medieval culture surprises us with an alternative definition of the image as performance, more specifically as a channeling of breath, whereby the faithful can recuperate and return, albeit fleetingly, to the state of being an image of God or *imago Dei*. The written sources attribute the eruption of this *imago Dei* to prayer and chant. Singing is a process in which the Spirit enters human bodies and is exhaled as sonic energy. Both the performer and the audience consume some of this energy and thus become implicated in the production of the *imago Dei*.

The recognition of this non-representational, performative icon demands that we approach medieval art as installation and view its architecture, music, liturgical furnishing, and ritual as a choreographed production of metaphysical presence. I approach this expanded field of what constitutes an image through a

series of case studies: the Exultet liturgy celebrated on Easter vigil in Southern Italy; the chanted office of the Byzantine cathedral rite; and the theology and performance of the Eucharist, which grapples with the tension between a figural mise-en-scène and a theology maintaining that the gifts are dissemblant from Christ in their figural form, but partake substantially in his body and blood.

My methodology is informed by phenomenology and aesthetics. In the past, phenomenology has been viewed as an approach that negates hermeneutics and fails to produce a contextual, historical exploration. My research demonstrates an alternative, in which phenomenology and hermeneutics engage in a productive dialogue. Attention to the changing appearances of objects, architectural spaces, and the participants in the ritual highlights the existence of protean hermeneutics, in which certain meanings emerge at particular moments of the ritual only to sink back from consciousness as other phenomena stir the semantics into new directions.

Recommended Reading

Pentcheva, Bissera. *Hagia Sophia: Sound, Space, and Spirit in Byzantium*. University Park, Pennsylvania: Pennsylvania State University Press, 2017. <http://hagiasophia.stanford.edu>.

—. *The Sensual Icon: Space, Ritual, and the Senses in Byzantium*. University Park, Pennsylvania: Pennsylvania State University Press, 2010. Paperback 2013. www.thesensualicon.com.

—. *Icons and Power: The Mother of God in Byzantium*. University Park, Pennsylvania: Pennsylvania State University Press, 2006. Paperback 2014.

DAVID C. QUELLER

Ph.D., Spencer T. Olin Professor of Biology
Washington University in St. Louis

Born in 1954 in Wisconsin, USA

Studied History and Philosophy of Science at the University of Illinois and
Biological Sciences at the University of Michigan

THE SOCIAL ELEMENTS OF SELECTION: FORMALIZING THE GENE'S-EYE VIEW OF EVOLUTION

Focus Group *The Major Evolutionary Transitions in Organismality*

Biologists and philosophers have long debated what units natural selection works on. Confusion has arisen over how to deal with the dual nature of selection versus inheritance, whether we should be predicting the course of selection or trying to understand adaptation, and whether to work top-down from the individual or bottom up from the gene. The latter approach, called the “gene’s-eye view of evolution”, is widely used by biologists but less favorably viewed by some philosophers. My project involves formalizing the gene’s-eye view mathematically, with the goal of resolving the sorts of confusion noted above. Less abstractly, the work will bear on important biological questions such as how cooperation evolves, what kinds of entities are adapted, and why organisms exist.

My approach will be synthetic. I note, at the risk of too much detail, that it will lie at the intersection of the Price equation for evolutionary change, quantitative-genetic concepts, the statistical technique of path analysis, and an approach to causation from computer scientist Judea Pearl. It will start with a given gene and ask what elements need to be added – such as other genes, other individuals, or environmental factors – to explain its fate under selection. It will identify both direct and indirect causal paths and, for each, specify both the gene-phenotype relation and the phenotype-fitness relation.

From there, I plan to build up to the questions of our working group on the evolution of organismal entities, that is, those entities that show very high levels of internal cooperation with very little internal conflict. First, I will use the framework to compare and contrast the three major kinds of selection that can select for cooperative behaviors: “kin” or indirect effects moderated by correlation, “kith” effects that involve acting through other individuals, and “kind” effects that are due to true interaction. Second, I will also try to use the framework to describe evolutionary conflict and the ways that such conflict can be reduced.

Recommended Reading

- Noh, S., K. S. Geist, X. Tian, J. E. Strassmann, and D. C. Queller (2018). “Genetic signatures of microbial altruism and cheating in social amoebas in the wild.” *Proc. Nat. Acad. Sci. USA*; online ahead of print: <https://doi.org/10.1073/pnas.1720324115>.
- Queller, D. C. (2011). “Expanded social fitness and Hamilton’s rule for kin, kith, and kind.” *Proc. Natl. Acad. Sci. USA* 108: 10792–10799.
- Brock, D. A., T. E. Douglas, D. C. Queller, and J. E. Strassmann (2011). “Primitive agriculture in a social microbe.” *Nature* 469: 393–396.

ARUNAS L. RADZVILAVICIUS

from September 2018 to February 2019

Fellow of the College for Life Sciences

Ph.D., Evolutionary Theory

University of Pennsylvania

Born in 1988 in Elektrenai, Lithuania

Studied Theoretical Physics at Vilnius University, Modelling Biological

Complexity and Evolutionary Biology at University College London

UNCOVERING CORE PRINCIPLES OF NATURE'S HIERARCHICAL ORGANIZATION

Despite life's incredible complexity, there are principles universal across all its scales – genes, cells, organisms, and populations with social networks, norms, and political structure. All living things have this built-in hierarchical organization, but it is not clear why and how new levels of this organization evolve. Information-theoretical hypotheses suggest that new levels appear as coarse-grained representations of smaller scales, which eventually become capable of exerting causal power over lower levels. It is notoriously difficult to study evolutionary transitions of the distant past, like the origins of life and multicellularity, as we lack too many details of ancient biospheres and often don't have reliable experimental techniques. Instead, I suggest testing the most promising hypotheses using mathematical modeling, including information-theoretical tools and the newly available massive data sets from online social communities, where new ideas and norms become established as new levels of organization governing lower ones. If there are indeed universal principles that have repeatedly driven evolutionary transitions in organizational complexity, the results will have far-reaching implications for our understanding of the very origins of life and the first complex cells. Critically, this research will provide novel insights into the emergence of norms and collective identities in human groups,

the nature of conflict, and stability in the age of social media and will suggest possible interventions aimed at improving these aspects of our societies.

Recommended Reading

Radzvilavicius, A. L. and N. W. Blackstone (2018). "The evolution of individuality revisited." *Biological Reviews* doi.org/10.1111/brv.12412.

Radzvilavicius, A. L., N. Lane, and A. Pomiankowski (2017). "Sexual conflict explains the extraordinary diversity of mechanisms regulating mitochondrial inheritance." *BMC Biology* 15, 94.

Radzvilavicius, A. L. and N.W. Blackstone (2015). "Conflict and cooperation in eukaryogenesis: implications for the timing of endosymbiosis and the evolution of sex." *Journal of the Royal Society Interface* 12, 111: 20150584.

SARAH S. RICHARDSON

Ph.D., Professor of the History of Science and of Studies of Women,
Gender, and Sexuality
Harvard University

Born in 1980 in Washington, DC
Studied Philosophy at Columbia University and Modern Thought and
Literature at Stanford University

THEORIZING “SEX”

Are sex differences like species differences? Is there a “male” and “female” genome? Can a cell have a sex? These questions are more beguiling than they may first appear. Among scientists, sex is typically conceptualized as a simple discrete variable consisting of a short list of biological components, such as chromosomes and hormones, which characterize maleness and femaleness. Feminist theories complicate conventional notions that sex is a fixed and discrete binary. They also emphasize that, in humans, “sex” is deeply entangled with “gender”, so much so that the two concepts can be difficult to pry apart. Some theorists embrace the term sex/gender in a refusal to disambiguate the two. Others suggest that sex is merely gender dressed up in the authoritative language of the biological sciences.

During a year at the Wissenschaftskolleg, I hope to develop a philosophically sophisticated account of “sex” that presses beyond this divide. Through historically and philosophically sensitive analyses of the concept of “sex” as it is operationalized in particular biological research programs, I argue that the concept of sex is an indispensable one in biological research; at the same time, I understand sex as a contested theoretical construct pinned to research context and open to conceptual debate. Conceptualizing sex in this way, I argue, opens terrain for arguing for more apt and reflective uses of the concept.

Recommended Reading

Richardson, Sarah S. and Hallam Stevens, eds. *Postgenomics: Perspectives on Biology after the Genome*. Durham, London: Duke University Press, 2015.

Richardson, Sarah S. *Sex Itself: The Search for Male and Female in the Human Genome*. Chicago, London: University of Chicago Press, 2013.

Lee, Sandra, Barbara Koenig, and Sarah S. Richardson, eds. *Revisiting Race in a Genomic Age*. New Brunswick, NJ: Rutgers University Press, 2008.

HASSAN SALEM

from September 2018 to February 2019

Fellow of the College for Life Sciences

Ph.D., Evolutionary Ecology

Emory University, Atlanta

Born in 1986 in Cairo

Studied Botany at Miami University and at the Max Planck Institute for

Chemical Ecology, Jena

MICROBIAL MEDIATION OF FOLIVORY

Numerous adaptations in animals are a direct consequence of symbiotic partnerships with microorganisms. A core aim in my research is to study symbioses across multiple levels of biological organization, from the molecular and physiological mechanisms underlying the initiation and maintenance of these associations to the ecological and genetic consequences of coevolution. Leveraging advances in genomics and transcriptomics, in combination with bioassays and biochemical analyses, I apply these tools to discover bacterial diversity in herbivorous insects and, more significantly, to reveal how microbial metabolic capabilities functionally contribute to the phenotypic complexity of their hosts. To this aim, phytophagous insects are central to my research program, serving as a model to study the role of microbes in mediating folivory in animals and to better understand the evolutionary ecology of an exceptionally diverse phytophagous lineage: leaf beetles (Coleoptera: Chrysomelidae). For my stay at the Wissenschaftskolleg, my aim is to develop the conceptual and experimental framework necessary to uncover the breadth of symbiotic partnerships between leaf-feeding insects and bacteria, as well as to understand the adaptive impact of these partnerships.

Recommended Reading

- Salem H., E. Bauer, R. Kirsch, A. Berasategui, M. Cripps, B. Weiss, R. Koga, K. Fukumori, H. Vogel, T. Fukatsu, and M. Kaltenpoth (2017). “Drastic genome reduction in an herbivore’s pectinolytic symbiont.” *Cell* 171, 1520–1531.
- Salem, H., L. Florez, N. Gerardo, and M. Kaltenpoth (2015). “An out-of-body experience: the extracellular dimension for the transmission of mutualistic bacteria in insects.” *Proceedings of the Royal Society B: Biological Sciences* 282, 20142957.
- Salem, H., E. Bauer, A. Strauss, H. Vogel, M. Marz, and M. Kaltenpoth (2014). “Vitamin supplementation by gut symbionts ensures metabolic homeostasis in an insect host.” *Proceedings of the Royal Society B: Biological Sciences* 1796, 20141838.

GISÈLE SAPIRO

Dr., Directrice de recherche and directrice d'étude

Centre national de la recherche scientifique and École des hautes études en sciences sociales

Born in 1965 in Neuilly-sur-Seine, France

Studied Comparative Literature and Philosophy at Tel Aviv University and Sociology at the École des hautes études en sciences sociales

THE CONCEPT OF DISINTERESTEDNESS IN THEORY AND IN PRACTICE: THE CASE OF THE INTELLECTUAL AND ARTISTIC PROFESSIONS

This project sets out to study the concept of disinterestedness, combining *Begriffsgeschichte* with historical sociology, in a *longue durée* perspective. Restricted to religious uses in the Moralists' reflections, this concept developed in the 18th century, at a time when the notion of interest became central in defining human action. It was adopted and theorized by writers, artists and philosophers (notably Shaftesbury and Kant) to define their autonomy from the political and religious powers, as well as from the emerging market of symbolic goods. The concept circulated between France, Germany and England. The project aims first at studying its development, usages and circulation across these countries, focusing on key moments and on controversies (for instance the debate about the introduction of the scientific paradigm in the *Geisteswissenschaften* at the end of the 19th century). This intellectual history will be complemented by a study of the forms of embodiment of the concept in the organization and social practices of intellectual and artistic professions (codes of ethics, *droit d'auteur*, non-profit organizations, free work and so on) in the era of capitalism and of the rise of cultural industries.

Recommended Reading

Sapiro, Gisèle. "How Do Literary Texts Cross Borders (or Not)." *Journal of World Literature* 1, 1 (2016): 81–96.

—. "The Metamorphosis of Modes of Consecration in the Literary Field: Academies, Literary Prizes, Festivals." *Poetics* 59 (2016): 5–19.

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IRENE SCHNEIDER

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Georg-August-Universität Göttingen

Geboren 1959 in Waldkirch, Deutschland
Studium der Islamwissenschaft, Geschichte und Soziologie an den
Universitäten Freiburg, Göttingen und Tübingen

GESCHLECHT UND RECHT – DEBATTEN UM DAS PALÄSTINENSISCHE FAMILIENRECHT 2012–2018

Mein Projekt bewegt sich im Bereich der auch in Berlin thematisierten Forschung zu „Recht im Kontext“. Ich untersuche vor allem anhand eines konkreten Beispiels (der sogenannten Loskauf-Scheidung), aber auch darüber hinaus die Frage, wie in Palästina (West Bank, teilweise auch Gaza) das geltende Familienrecht fortentwickelt wird. Bisher gibt es kein palästinensisches Familiengesetz, sondern in der West Bank gilt beispielsweise das Jordanische Familiengesetzbuch von 1976, das vor dem Hintergrund der gesellschaftlichen Entwicklung und auch mit Blick auf die Tatsache, dass Präsident Abbas kürzlich die Frauenrechtskonvention (CEDAW) unterschrieben hat, veraltet ist. Mit Blick auf die Frage der Ausgestaltung der Geschlechterbeziehung – Familienrecht ist in fast allen muslimischen Ländern noch stark mit islamrechtlichem Bezug ausgestaltet – untersuche ich die gesellschaftlichen Diskurse wie auch die verschiedenen Gesetzesentwürfe, die kursieren und diskutiert werden, und stelle die Frage nach den zentralen Akteuren in diesem Diskurs und deren Rolle und Positionen: dem Staat bzw. den entsprechenden Ministerien, der in Palästina äußerst aktiven Zivilgesellschaft in Form von Frauenrechtsorganisationen und dem „Scharia-Establishment“, also den Islamgelehrten und Scharia-Richter_innen.

Die Forschungsfragen sind:

- Wie sehen diese Debatten aus, wie werden sie inhaltlich und formal geführt und welche gesellschaftlichen Kreise, Personen und Organe sind involviert?
- Welche Vorstellungen von Geschlechterrollen, Rechten und Pflichten der Geschlechter, Konstruktion von Familie, von Sexualität, Konzeptionen von Männlichkeit und Weiblichkeit werden von den verschiedenen Akteuren dabei verhandelt?
- Wie sieht der Bezug auf traditionell-islamische Konzepte aus – wie werden sie aufgenommen, neu- oder umgedeutet bzw. eventuell *ad acta* gelegt?
- Inwieweit kann trotz des seit 2007 nicht tagenden Parlaments dennoch eine Rechtsfortbildung geschehen?

Das Projekt basiert auf meiner Feldforschung, die ich 2013/2014 und danach immer wieder mit kurzen Aufenthalten in der West Bank durchgeführt habe, es basiert auf der Analyse der Texte der Gesetzesentwürfe und den Berichten in Medien und Zeitungen wie auch auf Experteninterviews.

Lektüreempfehlung

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—. „Islamisches Recht zwischen göttlicher Satzung und temporaler Ordnung? Überlegungen zum Grenzbereich zwischen Recht und Religion.“ In *Recht und Religion in Europa – zeitgenössische Konflikte und historische Perspektiven*, herausgegeben von Christine Langenfeld und Irene Schneider, 138–191. Göttingen: Universitätsverlag Göttingen, 2008.

BHRIGUPATI SINGH

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Brown University

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Studied English Literature at the University of Delhi and Anthropology at

SOAS University of London and at Johns Hopkins University

WAXING AND WANING LIFE: INVESTIGATIONS AT THE THRESHOLD OF MENTAL ILLNESS AND HEALTH

During my stay at the Wissenschaftskolleg, I propose to write the first draft of a book titled “Waxing and Waning Life: Investigations at the Threshold of Mental Illness and Health”. This book is based on extensive ethnographic fieldwork that I have conducted over the past few years across three sites: the psychiatric ward of a leading hospital; the All India Institute for Medical Sciences (AIIMS, Delhi), a community psychiatry and Opioid Substitution Therapy clinic run by AIIMS in an urban poor “resettlement colony” in Delhi; and a leading North Indian Sufi Muslim shrine renowned for the treatment of mental illness. Rather than positing an incommensurable difference between spiritual and secular or Western and non-Western conceptions of mental illness and healing, I attempt to create a comparative conceptual vocabulary built from the experiences and treatment-seeking journeys that I witnessed patients and caregivers undertake between hospital, home, and shrine. This book is structured around three philosophical concepts – vitalism, skepticism, and tempo – none of which are commonly associated with the study of mental health, but which, I argue, better help us to understand illness experience, as well as the fragility of what constitutes health, wellbeing, and conceptions of the normal in the contemporary world, particularly in the context of urban poverty. I draw on a range of methods, including ethnographic observation, sustained engagement with particular ethnographic interlocutors over time, household surveys, the writings of patients, and close engagement with psychiatric instruments and the perspec-

tives of clinicians. Drawing on a range of interlocutors from religious studies, literature, philosophy, and medicine, this book seeks to depart from existing approaches at the intersection of anthropology and psychiatry, which have tended to focus on a cultural critique of biomedical universals or to be organized by diagnostic categories (addiction, depression, schizophrenia) and institutional locations. This book will aim to offer new perspectives on a variety of global phenomena, including the rise of opioids, urban poverty, and attempts to measure the “quality of life”.

Recommended Reading

Singh, Bhrigupati. “An Uncritical Encounter Between Anthropology and Psychiatry.” *Medicine Anthropology Theory* 4, 3 (2017): 153–165.

—. *Poverty and the Quest for Life: Spiritual and Material Striving in Rural India*. Chicago: University of Chicago Press, 2015.

Singh, Bhrigupati et al., eds. *The Ground Between: Anthropologists Engage Philosophy*. Durham: Duke University Press, 2014.

VÍCTOR SOJO

from January to June 2019

Fellow of the College for Life Sciences

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Born in 1980 in Manchester, UK

Studied Chemistry and Computer Science at the Central University of

Venezuela, and Evolutionary Biology and Biological Modelling at University

College London

WHY DO EUKARYOTES HAVE BACTERIAL MEMBRANES?

There are three types of organisms on Earth today: Archaea, Bacteria and Eukaryotes. Essentially all those we can see (plants, mushrooms, animals) are Eukaryotes.

Phylogenetic evidence shows that Eukaryotes arose much later than the other two, from a merger of bacterial cells into an archaeal host. The internal bacteria would go on to become mitochondria, providing power for the whole cell, while the archaeal genome became the basis of what now is the nucleus.

Interestingly, the membranes of archaea and bacteria are drastically different. No archaea has ever been found with a bacterial membrane, or vice versa. The ancestral eukaryotic cell thus likely had an archaeal outer membrane but bacterial inner membranes. Yet all modern eukaryotes have only bacterial membranes, both internally and peripherally. At some point eukaryotes swapped their outer membranes from archaeal to bacterial.

Perhaps one set of phospholipids disrupted the membranes built with the other, creating pressure to be rid of one. But why did eukaryotes choose bacterial?

Genes for making archaeal phospholipids were already in the (proto)nucleus, while in modern eukaryotes, bacterial phospholipids have taken their place,

transferred from the mitochondrial genome. Both the archaeal counterparts and the bacterial originals inside mitochondria were lost or repurposed. Eukaryotes went through the evolutionary trouble of replacing the perfectly functional archaeal originals with bacterial analogues. Why?

Mitochondria produce most of the power of the eukaryotic cell (as ATP), and they do so with ancestrally bacterial membrane proteins that sit on ancestrally bacterial membranes. Mismatches are lethal, as gravely demonstrated by mitochondrial diseases in humans. I suggest that this means bacterial lipids had to be kept, and I will use a combination of computational methods to test it.

As a second project, I will develop educational resources for teaching and learning anything, anywhere, in any language, for free.

Recommended Reading

Sojo, V., C. Dessimoz, A. Pomiankowski, and N. Lane (2016). “Membrane proteins are dramatically less conserved than water-soluble proteins across the tree of life.” *Molecular Biology and Evolution* 33, 11: 2874–2884.

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JESSICA STOCKHOLDER

Ph.D., Raymond W. & Martha Hilpert Gruner Distinguished Service Professor
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Born in 1959 in Seattle, Wash., USA
Studied Visual Arts at Yale University

DRAWING AND PAINTING IN RESPONSE TO BERLIN
AND IN PREPARATION FOR A PROJECT AT THE
CENTRAAL MUSEUM IN UTRECHT

I will be working towards an exhibition at the Centraal Museum opening April 2019 that will present an overview of my work merged with a curatorial project aimed at exploring questions revolving around boundary, dependence, and autonomy – central questions in my work that I have explored in many different forms. This project is unfolding, and many directions are possible.

As I work towards this exhibition, I will make drawings and small works in my studio. It may be that I make sets of drawings that are both autonomous and interactive in groups. I am interested in proposing sequences of drawing events as equivalent to the execution of alphabet letters. I may explore the wide variety of different kinds of marks that resonate with the alphabet, handwriting, drawing, calligraphy, and computer fonts as they might run into different kinds of pencil, brush, and ink drawing forms.

In most of my work, color has been central. Color evokes feeling and thought. It is experienced both as solid, embodied by material, and ephemeral, as it is carried by light. Color can be used to facilitate the creation of illusion and it is factual. I appreciate and orchestrate the experience of color as a metaphor for the complexity of our ever-changing layered and dynamic internal lives.

I will likely also make three-dimensional objects that involve sequencing and pose related questions about dependence, autonomy, and context.

Recommended Reading and Viewing

Jessica Stockholder: Revised and Expanded Edition New York: Phaidon Press, 2018. (= Contemporary Artist Series.)

Website link including information, images, and a video about a recent work installed at the Smart Museum, University of Chicago:
smartmuseum.uchicago.edu/exhibitions/jessica-stockholder-roses-inclination/

BARBARA STOLLBERG-RILINGER

Rektorin des Wissenschaftskollegs

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Westfälische Wilhelms-Universität Münster

Geboren 1955 in Bergisch Gladbach, Deutschland

Studium der Geschichte, Germanistik und Kunstgeschichte

an der Universität zu Köln

METAPHERN UND SYMBOLE DES ENTSCHEIDENS

Das Projekt habe ich aus dem Münsteraner Sonderforschungsbereich „Kulturen des Entscheidens“ mitgebracht. Die Ausgangsthese lautet: Entscheiden ist nicht selbstverständlich, ja, es ist nicht einmal wahrscheinlich. Genauer gesagt: Es versteht sich nicht von selbst, dass Handeln als Entscheidungshandeln gerahmt, geformt, wahrgenommen und erzählt wird. Explizite Entscheidungen zu treffen, ist grundsätzlich mit allerlei sozialen Zumutungen verbunden, es wirft Legitimations- und Verantwortungsprobleme auf. Historisch gesehen scheint es eher die Ausnahme als die Regel gewesen zu sein. Die zweite These lautet daher: Ob und wie soziales Handeln als Entscheidungshandeln gerahmt ist, ist historisch variabel und kulturell geprägt. Das Entscheiden, verstanden als beobachtbares, soziales, nicht rein mentales Geschehen, hat eine historische Dimension.

Wenn das so ist, dann gilt es zu fragen, ob und inwiefern sich unterschiedliche Kulturen des Entscheidens rekonstruieren lassen. Wie ging man in unterschiedlichen historischen Kontexten mit dem Problem des Entscheidens um, oder, noch grundsätzlicher, was hat man eigentlich unter einer Entscheidung genau verstanden? Schon das ist ja keineswegs so klar, wie die Alltagssprachliche Verwendung des Wortes suggeriert. Dieser Frage möchte ich anhand von Metaphern, Symbolen und Urszenen des Entscheidens nachgehen. Wie wurde der Akt der Entscheidung historisch je unterschiedlich dargestellt, symbolisiert und erzählt? Zum Beispiel macht es offensichtlich einen Unterschied, ob man

den Vorgang des Entscheidens durch Hintergrundmetaphern wie Waage, Schwert oder Würfel veranschaulicht. Im ersten Fall senkt sich die Waagschale von allein, nur aufgrund des Gewichts, etwa der guten oder bösen Taten, ohne Zutun des Richters. Ganz anders verhält es sich mit den Würfeln, die so oder anders fallen: Da gibt es keinerlei Zusammenhang zwischen irgendwelchen Gründen und der Entscheidung, und es ist unverfügbar, wie die Entscheidung buchstäblich „fällt“. Die eine Metapher betont die Kontingenz des Entscheidens, die andere bringt sie zum Verschwinden. Die Frage ist: Lassen sich solche Metaphern mit verschiedenen Kulturen des Entscheidens in Verbindung bringen?

Lektüreempfehlung

Stollberg-Rilinger, Barbara. *Maria Theresia: Die Kaiserin in ihrer Zeit. Eine Biographie*. München: C.H.Beck, 2017 (Englisch: *Maria Theresa: The Empress in Her Time*. Princeton University Press, 2019, im Erscheinen).

—. *Des Kaisers alte Kleider: Verfassungsgeschichte und Symbolsprache des Alten Reiches*. München: C.H.Beck, 2008 (Engl.: *The Emperors's Old Clothes: Constitutional History and the Symbolic Language of the Holy Roman Empire*. New York: Berghahn, 2015).

—. *Rituale*. Frankfurt/Main: Campus, 2013.

JOAN E. STRASSMANN

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Washington University in St. Louis

Born in 1953 in Washington, DC
Studied Zoology at the University of Michigan, Ann Arbor and at the
University of Texas at Austin

ORGANISMALITY

Focus Group *The Major Evolutionary Transitions in Organismality*

The organism is the central unit of biology because it is what natural selection operates on most directly. Organismal boundaries mark the main divisions of the living world. Beyond is the world of Darwinian competition, but inside harmony mostly rules, with the parts cooperating for the good of the whole. Yet, how organisms are defined is fundamentally unclear. The main insight, which will be elaborated in this work, is that organisms can be defined as the living unit in which cooperation is at a maximum with minimal internal conflict.

It is not possible to generalize the principles of organismality from organisms we all recognize – ducks, elephants, oaks, or crickets. Nor is it possible to generalize from traits once thought to define an organism – functional integration, physical contiguity, indivisibility, genetic co-transmission, and development from a single cell, to name the most prominent. The historical problem is that microbes and their interactions have not been considered. Yet, there is more free-living microbial mass than all animals and plants combined. Do these microbes interact in ways that make higher structures organismal? What about the fungal filaments that pervade every shovelful of soil? What about biofilms? What about the tight bonds between fungi and algae that we call lichens? What about sucking insects and their intracellular bacteria? What about social insect colonies? Will our definition help us understand these complex life forms?

There are many other examples that challenge traditional views of organismality. How do we consider the angler fish male that fuses with a female, ultimately sharing a circulatory system with his much larger mate? What makes him any more than an externally acquired gonad? The Portuguese-man-of-war is considered a colony of organisms; this view is supported by development and observation of its relatives, but not by observation of its behavior or how evolution operates on it. What do we do with marmosets that are genetic chimeras of twins, aphid clones, fungi that share nuclei, or even the transmissible facial cancer of Tasmanian devils? My ambitious goal is to answer these questions.

Recommended Reading

- Strassmann, J. E. and D. C. Queller (2014). "Privatization and property in biology." *Animal Behaviour* 92: 305–311.
<http://dx.doi.org/10.1016/j.anbehav.2014.02.011>.
- Strassmann, J. E. and D. C. Queller (2011). "Evolution of cooperation and control of cheating in a social microbe." *Proc. Natl. Acad. Sci. USA* 108: 10855–10862.
- Strassmann, J. E. and D. C. Queller (2010). "The social organism: congresses, parties, committees." *Evolution* 64: 605–616.

RICHARD SWEDBERG

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Cornell University

Born in 1948 in Stockholm

Studied Law at Stockholm University and Sociology at Boston College

THEORIZING IN SOCIAL THEORY: WHAT IT IS AND HOW TO DO IT

My book *The Art of Social Theory* (Princeton 2014) is the first part of a larger project that I will continue to develop during my year at the Wissenschaftskolleg. In this work, I attempted to further develop social theory by focusing primarily on theorizing or the process that precedes the final formulation of a theory. In doing so, I am especially interested in understanding what happens in the so-called context of discovery, and how this can be used to improve today's social theory. My primary reasons for working on this topic are two, namely (1) to advance social theory by learning more about the practices that are needed to produce a theory (and how to handle theory in empirical research) and (2) to devise new ways of teaching theory to students (beyond the quantitative and qualitative methods with which they are currently being taught, namely with exercises and "hands-on" examples). Besides social theory, my work draws on cognitive science and the philosophy of science, including the important work of Charles Sanders Peirce.

In my book from 2014, I merely skimmed the surface of many difficult topics in theorizing that I now would like to further study and develop in more detail. These include the nature and practical use of concepts, as well as metaphors, analogies, and definitions. Other topics include forms of reasoning such as induction, deduction, and abduction. If I have time, I would also like to take a close look at the nature of abstractions and generalizations; different types of explanations, including social mechanisms; and how to advance theory through visualization. For all of these topics, I am also interested in working out exer-

cises, since I see teaching students as an integral part of the project of theorizing. Finally, I have by now taught theorizing for several years using a number of different exercises, and I feel that it is time for me to try to summarize which of these exercises work and which need to be replaced by new ones.

Recommended Reading

Swedberg, Richard. "Theorizing in Sociological Research." *Annual Review of Sociology* 43 (2017): 189–206.

—. "Can You Visualize Theory?" *Sociological Theory*. 34, 3 (2016): 250–275.

—. *The Art of Social Theory*. Princeton: Princeton University Press, 2014.

HEIDI TAGLIAVINI

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UNO-Generalsekretärs, des OSZE-Vorsitzenden und des EU-Rates
Bundesverwaltung, Bern

Geboren 1950 in Basel, Schweiz

Studium der russischen, italienischen und französischen Literatur
an der Universität Genf

KONFLIKTE IM POSTSOWJETISCHEN RAUM

Kurz nach der Auflösung der Sowjetunion 1991 brachen an deren Rändern eine Reihe von Konflikten aus, in denen internationale Organisationen (UNO, OSZE, EU) in vermittelnder Mission zum Einsatz kamen. Als Schweizer Diplomatin, die bereits die Wende 1991 in Moskau und die Aufnahme diplomatischer Beziehungen zu den Nachfolgestaaten vor Ort erlebt hatte, bekam ich die ungewöhnliche Gelegenheit, 1995 mit einer kleinen OSZE-Mission und einem Friedensauftrag nach Tschetschenien im Nordkaukasus mitten in den Krieg entsandt zu werden. Das war der Anfang eines fast 20-jährigen Einsatzes, bei dem es um Konflikte der ehemaligen Sowjetunion mit ihren Nachfolgestaaten ging (Tschetschenien, Georgien mit Abchasien und Südossetien, Ukraine). Mit der Erarbeitung des von der EU in Auftrag gegebenen Untersuchungsberichts über den Georgienkrieg von August 2008 und mit einer Reihe von Wahlbeobachtungen in Ländern des ehemaligen Reichen können meine praktischen Erfahrungen in der Arbeit mit diesen Ländern Aufschluss über deren Entwicklung und die Hintergründe und möglicherweise auch die Hindernisse zur erfolgreichen Durchsetzung von Demokratie und Eigenstaatlichkeit aufzeigen.

Der Gedanke, der meiner Arbeit am Wissenschaftskolleg zugrunde liegt, ist zweifach. Die Aufarbeitung der Konflikte, in denen ich vermittelnd tätig war, soll aus einer persönlichen Warte meine praktischen Erfahrungen in den Verhandlungen mit den Beteiligten beschreiben. Es soll gezeigt werden, warum es

so schwierig ist, nach einem ausgebrochenen Konflikt zu einem dauerhaften Frieden zu kommen. Die Arbeit soll andererseits aber auch versuchen, die Handhabung der Konflikte an der Peripherie des Reiches aus der Sicht der verschiedenen Akteure zu beleuchten. Von meinen Einsätzen sollen vor allem jene näher beschrieben werden, die Aufschluss über die Entwicklungen der letzten 25 Jahre im postsowjetischen Raum und das internationale Kräfteverhältnis geben können. Sie erlauben möglicherweise Einsichten über Verhaltensmuster, die sich im internationalen Kontext herauskristallisiert haben.

Lektüreempfehlung

Duve, Freimut und Heidi Tagliavini. *Kaukasus – Verteidigung der Zukunft: 24 Autoren auf der Suche nach Frieden*. Wien: Folio, 2001.

Tagliavini, Heidi. *Report on the August 2008 conflict in Georgia, Volume I–III*, by the Independent International Fact-Finding Mission on the Conflict in Georgia, September 2009.

KIRSTEN S. TRAYNOR

from September 2018 to February 2019

Fellow of the College for Life Sciences

Ph.D., Biology

University of Maryland, College Park

Born in 1981 in New York, USA

Studied Biology at Arizona State University

VARROA BIOLOGY AND CONTROL: A WORLDWIDE PERSPECTIVE

Honey bees (*Apis mellifera*) provide critical pollination services valued at over \$200 billion worldwide and \$17 billion in the US. Despite increased attention, colony losses have remained elevated since 2006, with beekeepers losing 40–50% of their colonies annually. These elevated losses are due in large part to the parasitic mite *Varroa destructor*.

Beekeepers in the United States struggle greatly to keep Varroa populations under control. Our recent APHIS National Honey Bee Disease Survey indicates that managed colonies exceed the treatment threshold of three mites per 100 bees from July through November. This peak in Varroa during the late summer and early fall occurs at a critical time of year, when colonies start rearing long-lived winter bees and commercial beekeepers are preparing their colonies for almond pollination. Varroa feed on developing brood, shortening the life span of the adult bees, thus reducing colony size and increasing colony mortality.

Many research advances in understanding Varroa biology and methods of control have been made in the last decade, but often the results appear in diverse scientific journals and the details are not collated into text that is easily accessible to beekeepers. While a few Varroa management guides are available, they often are prescriptive treatment lists without an explanation of Varroa biology.

My goal at the Wissenschaftskolleg is to produce an in-depth, yet accessible book “Varroa Biology and Control: A Worldwide Perspective” that synthesizes

what we have learned in the last decade of scientific research. The first half of the book will detail *Varroa* biology, as recent discoveries have revolutionized our insight into its feeding habits, its reproductive biology, how the viruses it vectors have increased in virulence, and how this parasite evolves resistance. The second half will detail practical control methods, which often vary regionally due to temperature and humidity considerations.

Recommended Reading

Traynor, Kirsten S., et al. (2016). "Multiyear survey targeting disease incidence in US honey bees." *Apidologie* 47, 3: 325–347.

Traynor, Kirsten S., et al. (2016). "In-hive Pesticide Exposome: assessing risks to migratory honey bees from in-hive pesticide contamination in the Eastern United States." *Scientific Reports* 6: 33207.

Traynor, Kirsten S., Yves Le Conte, and Robert E. Page Jr. (2015). "Age matters: pheromone profiles of larvae differentially influence foraging behaviour in the honeybee, *Apis mellifera*." *Animal Behaviour* 99: 1–8.

BAŞAK TUĞ
EURIAS Fellow
Ph.D., History
Istanbul Bilgi University

Born in 1975 in Istanbul, Turkey
Studied Political Science, International Relations and History at
Boğaziçi University, and History and Middle Eastern and Islamic
Studies at New York University

GENDER, LEGAL PRACTICE AND MODERNITY IN THE OTTOMAN EMPIRE, LATE 18TH TO MID-19TH CENTURIES

Although the association of sexuality with honour was not a novel phenomenon for Ottoman society, the “violation of honour” (*hetk-i ‘ırz*) is one of the most frequently encountered concepts in eighteenth-century Ottoman legal documents. The recurring presence of this concept in official correspondence represents the development of new parameters concerning relations between the early modern state and its subjects, as expressed in moral terms. The Ottoman central government’s claim to protect the honour of its subjects reflects a dialogic process in which subjects started to use new types of legal terminology to request the intervention of the state in local matters that threatened their well-being.

This project argues that such a relationship or claim to honour began to establish a state-society relationship based on citizenship rights to the protection of life, honour and property well before the so-called reform era that began with the Tanzimat Edict of 1839. Analysing this continuity in the Ottoman legal discourse on honour, this project aims to trace continuities and changes in Ottoman governmental and punitive techniques of moral order, from the mid-eighteenth century to the early decades of the Tanzimat era, namely the 1840s and 1850s. Thus, it aims to investigate how the genders and sexualities of Otto-

man subjects were contested and reshaped in accordance with changing constitutional arrangements in this transition.

My research has three interrelated focuses. Firstly, I investigate the correlation between legal discourse on honour and morality, on the one hand, and the legal practices governing sexual order, on the other. Secondly, I take a closer look at the punitive order by comparing eighteenth-century legal documents with the Tanzimat criminal codes of 1840, 1851 and 1858. In so doing, I explore continuities and ruptures in the surveillance techniques of the Ottoman imperial government. Finally, I scrutinize the appellate system. By concentrating on the gradual shift from a loosely defined appellate structure, which emerged in the eighteenth century, to a more bureaucratized and hierarchized one of the nineteenth century, this project aims to analyse the governmental technologies of the Ottoman state and thus gain an understanding of the nature of political power when transiting from an early modern structure to a modern one.

Recommended Reading

Tuğ, Başak. *Politics of Honor in Ottoman Anatolia: Sexual Violence and Socio-Legal Surveillance in the Eighteenth Century*. Leiden and Boston: Brill, 2017.

—. “Gendered Subjects in Ottoman Constitutional Agreements, ca. 1740–1860.” *European Journal of Turkish Studies* 18 (2014).

—. “Gender and Ottoman Social History.” *International Journal of Middle East Studies* 2 (2014): 379–381.

JULIANE VOGEL

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Allgemeine Literaturwissenschaft
Universität Konstanz

Geboren 1959 in Mainz, Deutschland
Studium der Germanistik und Anglistik an der Universität Wien und der
Albert-Ludwigs-Universität Freiburg

„NEHMT SCHEREN!“ SCHNEIDEN, KLEBEN,
SCHREIBEN IN DER LITERATUR DER MODERNE

Die Texte der Moderne werden vielfach mit der Schere geschrieben. Wie die Zeitungen in die Bibliotheken dringen Schere und Klebstoff auf den Schreibtisch des Schriftstellers vor und greifen tief in traditionelle Textgrammatiken ein. Schneiden und Kleben sind Teile einer Verfahrenskette, die bestehende Texte zerstört und ihre Fragmente nach einer neuen beweglichen und jederzeit veränderlichen Syntax anordnet. Insbesondere kommen sie dann und dort zum Einsatz, wo die Zufälle des Findens die Textproduktion regieren. Geschnittene und geklebte Texte erfinden nicht, sie operieren mit Gefundenem und Reproduziertem und lassen der Eigenlogik des Materials, seiner Dynamik wie seiner Widerständigkeit, in unerhörter Weise Raum. In meiner Zeit am Wissenschaftskolleg zu Berlin, wo ich meine Vorarbeiten (u. a. bei der Kolleg-Forschergruppe BildEvidenz an der Freien Universität Berlin) vertiefen und verschriftlichen werde, möchte ich der Frage nachgehen, was es bedeutet, mit Schere und Klebstoff zu schreiben. Die poetische wie die künstlerische Scherenpraxis des frühen zwanzigsten Jahrhunderts möchte ich vor dem Hintergrund einer Geschichte betrachten, die der Schere die Fähigkeit zur künstlerischen Produktion absprach und sie als ein Werkzeug denunzierte, das in der Hierarchie der künstlerischen Werkzeuge nur einen geringen Rang einnahm. Scheren, so lassen sich die seither geäußerten Urteile zusammenfassen, stiften keine Form und übertragen keine Schöpfungsimpulse. Bereits Michelangelo

denunzierte das Schneiden als eine „nutzlose Tätigkeit“, die jeder künstlerischen Kraft ermangele. Mit Blick auf die literarischen Verfahren der Collage und Montage und insbesondere auf die Avantgarden des frühen 20. Jahrhunderts soll die Geschichte ihrer Aufwertung geschrieben werden. Ich möchte den historischen und zeitgenössischen Verwendungszusammenhängen nachgehen, die sich der Arbeit mit Schere und Klebstoff in der Moderne mitteilen. Dabei soll gezeigt werden, dass die Gründe für ihre Denunziation auch die Gründe für ihre moderne Karriere sind.

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MICHAEL J. WADE

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Indiana University, Bloomington

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Studied Biology and Mathematics at Boston College and Theoretical Biology at
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NATURE, NURTURE, AND THE NURTURERS

Focus Group *Syngonomics: Evolution – from Conflict to Cooperation to Mutualism*

In my research as a Fellow at the Wissenschaftskolleg, I want to extend my theoretical investigations of evolution in metapopulations (recently summarized in Wade 2016, *Adaptation in Metapopulations*, University of Chicago Press) to include interactions between genomes (e.g., nuclear and organelle) and between species in meta-communities. Most organisms live in metapopulations, interacting locally with their own and other species in ways that affect individual fitness and in genetic contexts that vary from one deme to another. As a result, natural selection in metapopulations always differs from that in large, randomly mating populations, whether or not there is an added component of higher-level selection acting among demes. This difference between adaptive evolution in metapopulations and that in non-subdivided populations has been overlooked by evolutionary genetic theory with its tradition of partitioning variation into dichotomous genetic and environmental factors, nature and nurture, respectively. This traditional approach founders whenever some of the factors responsible for variation in phenotype or fitness are both genetic and environmental at the same time. It is these genetic factors, called “indirect genetic effects” or IGEs, that create causal pathways between the genes in one individual and the phenotypes expressed by others, even if unrelated. These pathways permit the co-evolution of phenotype and context that is unique to metapopulations. Because an IGE is an environmental source of variation that can itself evolve in

response to selection, IGEs are fundamental to the co-evolution of phenotype and context. Their existence fundamentally changes the paradigm of “Nature versus Nurture” to a new paradigm, which I refer to as “Nature, Nurture, and the Nurturers”. I propose to write a scholarly monograph with this working title as my project when a Fellow at the Wissenschaftskolleg.

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GÜNTHER WASSILOWSKY

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Studium der Theologie, Germanistik und Geschichte an der Albert-Ludwigs-Universität Freiburg, der Pontificia Università Gregoriana (Rom) und der Westfälischen Wilhelms-Universität Münster

STADT DER GNADE: THEOLOGIE UND KULTUR IM FRÜHNEUZEITLICHEN ROM

An der spätmittelalterlichen und frühneuzeitlichen Kurie des Papstes stellte der Erweis von Gnade eine sozial strukturbildende „Basisaktivität“ (Marcel Mauss) dar. In einer sich immer stärker ausdifferenzierenden Gnadenbürokratie wurde mittels regelgeleiteter Verfahren über massenhaft aus aller Welt eingehende Suppliken entschieden, in denen der Papst um die Gnade gebeten wurde, eine geltende Rechtsnorm für den Einzelfall nicht anzuwenden. Solche vormoderne Begnadigungspraktiken hatten eine herrschaftsfunktionale Seite, insofern sie die Hoheit des über dem Recht stehenden Souveräns darstellen und weltweite Bindungen der Dankbarkeit gegenüber dem gnädigen Papst herstellen sollten. Auf der anderen Seite wirkte die Gewährung römischer Gnade individualitätsgenerierend, insofern sie die unvollkommene Allgemeinheit des Rechtes im Blick auf die Besonderheit des Einzelnen und seiner konkreten Situation korrigieren konnte. Aber nicht nur das Rechts- und Verwaltungssystem Roms wurde durch das Prinzip von Gnade und Gunst bestimmt, vielmehr wurden sämtliche Bereiche sozialer Interaktion am römischen Hof von einer Logik erfasst, die eine Logik des Austausches von Gabe und Gegengabe war.

In der geplanten Monografie sollen diese administrativen und sozialen Gnadenpraktiken und Gnadenlogiken erstmalig in Beziehung gesetzt werden zu den theologischen Konzeptionen von Gnade, wie sie im Jahrhundert der Reformation auch im päpstlichen Rom insbesondere im Blick auf die Bedeu-

tung des menschlichen Werkes und menschlicher Freiheit kontrovers debattiert wurden. Gefragt wird nach den komplexen reziproken Austauschprozessen zwischen der zeitgenössischen Gnadentheologie und der sozio-politischen Kultur Roms. Inwiefern haben sich die beiden Vorstellungs- und Handlungssphären gegenseitig beeinflusst oder gar bedingt? Am Ende soll eine Kulturgeschichte Roms im 16. und 17. Jahrhundert entstehen, in der mittels der analytischen Kategorie von Gnade verschiedene zentrale kulturelle Felder untersucht und aufeinander bezogen werden. Es soll gezeigt werden, wie sich die auf dem Konzil von Trient definierte Gnadentheologie in der stadtrömischen Frömmigkeit, in Zeremoniell, Architektur und Urbanistik, aber auch in der in Rom entstandenen bildenden Kunst und Musik niedergeschlagen hat. Letztlich geht es darum, die frühneuzeitliche Stadt Rom insgesamt als ein planmäßig konstruiertes, global ausstrahlendes Symbol einer spezifischen theologischen Anthropologie zu entziffern.

Lektüreempfehlung

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JASON WOLF

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Genetics at the University of Kentucky

MULTI-LOCUS EVOLUTION FROM GENES TO COMMUNITIES

Focus Group *Syngonomics: Evolution – from Conflict to Cooperation to Mutualism*

Our understanding of evolutionary change is largely built on the traditional genetic framework wherein the genes of individuals are responsible for differences in the traits they express. However, there is a growing appreciation of the fact that the traits of individuals are often influenced by the genes possessed by others. While there have been several models that have considered how these types of “indirect” genetic influences impact evolutionary processes, there are still important gaps in our understanding. To help close these gaps, we will work towards a general framework for understanding how various phenomena contribute to the relationship between genetic and phenotypic variation and how this, in turn, influences evolutionary processes. We aim to incorporate as wide an array of influences as possible, including “epigenetic” processes, interactions between genes at different scales, social interactions and interspecific interactions. To achieve this goal, we will develop a flexible analytical (mathematical) framework that unifies the influences of different phenomena by identifying fundamental modes through which they impact the relationship between genotype and phenotype. To maximize the link to the topic of the Focus Group, we will emphasize the evolution of positive interactions (cooperative or mutualistic) and negative interactions (conflict and competition). Our overarching goal

will be to identify general processes and concepts that unify the contributions of different types of effects to evolutionary change.

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Studied History and Political Science at the University of Paris I Panthéon-Sorbonne and the Institut d'études politiques de Paris

WHAT KIND OF WORK FOR WHAT KIND OF SOCIETY?

Changes in the sphere of work over the last thirty years may be described as a continuous process of adapting companies and their employees to the quality, productivity, and profit demands of the economic and financial markets. The consequences in terms of work conditions, of income gap among workers and shareholders, but also of sustainable development raise the question of the meaning of work and its final purpose. Why do we work?

The ends of work are diverse; this diversity encourages us to consider people at work not merely as producers of economic value but also as creative and social beings. The goal of this project is to analyze current transformations of work and society in light of these multiple meanings of work. Taking France and Germany as cases in point, the analysis aims, first, to develop a better understanding of the various and interrelated processes that converge to reshape the relationship between work, society, and democracy, and, second, to identify the political and social challenges arising from them.

Recommended Reading

Fertikh, Karim, Heike Wieters, and Bénédicte Zimmermann, eds. *Ein soziales Europa als Herausforderung / L'Europe sociale en question: von der Harmonisierung zur Koordination sozialpolitischer Kategorien / De coordination des catégories d'action publique*. Frankfurt/Main: Campus, 2018.

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Schwerpunktgruppe *Die großen Übergänge im System der Organismen*

Wie haben sich Kooperation zum Zweck der Fortpflanzung und Altruismus im Verlauf der Evolution, d. h. durch natürliche Auslese, entwickelt? Dies gehört zu den grundlegendsten Fragen in der Biologie. Mehrere Ideen gehen auf die Theorie der Gesamtfitness [*inclusive fitness*] zurück, die in den 1960er- und 1970er-Jahren entwickelt wurde: Wenn die an der Interaktion Beteiligten nicht miteinander verwandt sind, ist Kooperation unter der Bedingung stabil, dass alle ihren Fortpflanzungserfolg steigern können; doch Altruismus kann sich nur dann entwickeln, wenn die Beteiligten miteinander verwandt sind. Das liegt daran, dass biologischer Altruismus letztlich eher eigennützig als selbstlos ist, wenn man den Fortpflanzungserfolg in der „Währung“ von genetischen Kopien ausdrückt. Diese Betrachtungsweise der adaptiven sozialen Evolution „durch die Augen des Gens“ sagt Folgendes vorher: Anscheinend sind Organismen durch natürliche Auslese so konstruiert, dass sie die Summe von Genkopien, die soziale Charakteristika kodieren, in den kommenden Generationen über zwei mögliche Wege maximieren – entweder über direkte Fortpflanzung und/oder über die Fortpflanzung von Verwandten. Dabei ist entscheidend, dass die Differenz zwischen der Verwandtschaftsnähe zu den Nachkommen der Verwandten und der eigenen Nachkommenschaft ausgeglichen wird.

Eine weitere wichtige Entwicklung besteht darin, dass sich in den 1990er-Jahren das Paradigma der großen Übergänge in der Evolution [*major transitions in evolution*] etabliert hat. Nach diesem Ansatz ist es von zentraler Bedeutung, dass es bei der Entstehung komplexen Lebens nur einige wenige wesentliche Übergänge gab: als bakterielle Mikroben verschmolzen, um eukaryotische Protisten zu werden; als einige dieser Protisten dauerhaft zu vielzelligen Tieren, Pflanzen, Pilzen und Algen wurden; und als einige Tiere – etwa Ameisen, Bienen, Wespen und Termiten – sich zu staatenbildenden Superorganismen entwickelten. Doch die Konzeption der großen Übergänge wurde mit der Theorie der Gesamtfitness auf formaler Ebene noch nicht verknüpft; es muss sich noch zeigen, ob die Kooperation von Individuen derselben Spezies mit der

gleichen Theorie beschrieben werden kann wie Mutualismen, die zwischen Individuen verschiedener Spezies stattfinden. Jedenfalls ist klar, dass die großen Übergänge immer mit grundlegenden Aspekten von Kooperation und Altruismus verbunden waren und dass man stabile Anpassungsergebnisse nicht verstehen kann, wenn man die Regulierung möglicher Fortpflanzungskonflikte nicht auch von den Grundbegriffen her versteht.

Die Schwerpunktgruppe wird verschiedene begriffliche und empirische Ansätze heranziehen, um unser allgemeines Verständnis jener Prozesse weiterzuentwickeln, durch die sich verschiedene Ebenen im System der Organismen evolutionär herausgebildet haben und durch die sie zu eigenständigen Einheiten der Auslese wurden, trotz der allgegenwärtigen zerstörerischen Kräfte innerer Konflikte.

Die Mitglieder der Schwerpunktgruppe sind: Jacobus J. (Koos) Boomsma (Convener), Ashleigh Griffin, Nancy A. Moran, Howard Ochman, David C. Queller und Joan E. Strassmann.

Jacobus J. (Koos) Boomsma

Focus Group: *The Major Evolutionary Transitions in Organismality*

How reproductive cooperation and altruism can evolve by natural selection is one of the most fundamental questions in biology. Several insights emanated from Inclusive Fitness Theory, developed in the 1960s and 1970s: cooperation can be stable when interacting parties are unrelated provided they all increase their reproductive success, but altruism cannot evolve unless parties are related. This is because biological altruism is ultimately self-serving rather than self-sacrificing when expressing reproductive success in gene-copy currency. This “gene’s-eye” view of adaptive social evolution predicts that organisms will appear as if designed by natural selection to maximize the sum of future-generation gene copies coding for social traits via two possible routes: by direct reproduction and/or via the reproduction of relatives after adjusting for the difference in relatedness to the offspring of relatives versus one’s own.

Another important development has been the establishment of the Major Transitions in Evolution paradigm in the 1990s. This way of looking at the

emergence of life's complexity emphasizes that there have been a limited number of crucial transitions: when bacterial microbes merged to become eukaryote protists; when some such protists became permanently multicellular animals, plants, fungi and algae; and when some animals such as ants, bees, wasps, and termites evolved superorganismal colonies. However, the Major Transitions concept has not been formally connected to Inclusive Fitness Theory, and it remains to be seen whether cooperation between individuals of the same species can be captured by the same theory as mutualisms between individuals of different species. What is clear, however, is that Major Transitions always involved fundamental aspects of cooperation and altruism, and that stable adaptive outcomes cannot be understood unless we also understand the regulation of possible reproductive conflicts from first principles.

The Focus Group will use different conceptual and empirical approaches to advance our general understanding of the processes by which different levels of organismality evolved and were elaborated as distinct units of selection, despite the omnipresent corrupting forces of internal conflict.

The members of the Focus Group are: Jacobus J. (Koos) Boomsma (Convener), Ashleigh Griffin, Nancy A. Moran, Howard Ochman, David C. Queller, and Joan E. Strassmann.

Jacobus J. (Koos) Boomsma

Schwerpunktgruppe *Syngonomik: Evolution – von Konflikt zu Kooperation zu Mutualismus*

Mutualistische Symbiosen sind die Grundlage für Zellen mit einem Zellkern. Wir wissen heute, dass fast jede Pflanzen- und Tierart von mutualistischen Interaktionen abhängig ist, um zu überleben und sich fortzupflanzen. Mutualismen und ökologische Interaktionen zwischen Arten, die sich so verhalten, überschreiten die Grenzen der gewohnten Organisationshierarchie in der Biologie – von Zellen hin zu Individuen, weiter zu Populationen und Gemeinschaften. Im Mutualismus verbinden sich die evolutionären Wege von Arten unterschiedlicher Ebenen der Hierarchie. Obligate Mutualismen sind mehr als eine Anhäufung von Arten oder Artengemeinschaften, denn das Überleben und die Fortpflanzung jeder Art, die ein Teil eines Mutualismus ist, hängt nicht von Genen in seinem eigenen Genom ab, sondern von Genen im Genom der jeweils anderen Art.

Die moderne Evolutionstheorie, die den Egoismus der Gene und genetische Konflikte hervorhebt, ist für die Erforschung des Mutualismus schlecht gerüstet. Nach dieser Theorie ist Mutualismus instabil und geht wahrscheinlich in Ausbeutung über, da beide Seiten die jeweils andere übervorteilen können, indem sie sich nicht an den Kosten beteiligen, aber den Nutzen mitnehmen. Dennoch gibt es viele Beispiele in zahlreichen Taxa, die für das Gegenteil sprechen – nämlich dass parasitäre Arten zusammen mit ihren Wirten Mutualismen entwickeln können. Dagegen gibt es, wenn überhaupt, nur wenige Beispiele dafür, dass sich eine mutualistische Interaktion zu einer rein ausbeuterischen Beziehung entwickelt. Diesen Widerspruch zwischen der theoretischen Prognose und der Beobachtung der Natur wird die Schwerpunktgruppe untersuchen.

Mitglieder der Schwerpunktgruppe sind: Judith Bronstein, Timothy A. Linksvayer, Michael J. Wade (Convener) und Jason B. Wolf.

Michael J. Wade

Focus Group *Syngonomics: Evolution – from Conflict to Cooperation to Mutualism*

Mutualistic symbioses are the basis for the eukaryotic cell, and recent studies demonstrate that almost every species of plant and animal depends upon mutualistic interactions to survive and reproduce. Mutualisms and the ecological interactions between species that sustain them transcend the standard biological hierarchy of organization, from cells to individuals to populations to communities. Mutualisms conjoin the evolutionary trajectories of species from multiple levels in the hierarchy. Obligate mutualisms are more than species aggregates or communities, because the viability and reproduction of each component species in such a mutualism relies on genes not in its own genome, but in the genomes of other species.

Current evolutionary theory, which emphasizes selfishness and “genomic conflict”, is ill equipped for the study of mutualisms. This theory predicts that mutualisms should be unstable and should devolve into exploitation, since either party in a mutualism can “cheat” by withholding costs and free-riding on benefits. Yet, there are many examples across several taxa of the opposite, namely, a parasitic species becoming a mutualist with its host, and few if any examples of a mutualistic interaction becoming a purely exploitative one. The Focus Group will examine this contradiction between theoretical prediction and natural observation.

The members of the Focus Group are: Judith Bronstein, Timothy A. Linksvayer, Michael J. Wade (Convener), and Jason B. Wolf.

Michael J. Wade

NAME FELLOWSHIPS

EURIAS Fellowship

Als Mitglied des Netzwerkes europäischer Institutes for Advanced Study nimmt das Wissenschaftskolleg am EURIAS-Fellowship-Programm teil. Im Rahmen dieses Programms werden drei zehnmonatige Fellowships durch die Europäische Union kofinanziert.

As a member of the Network of European Institutes for Advanced Study, the Wissenschaftskolleg participates in the EURIAS Fellowship Programme. In the framework of this programme, the European Union is co-financing three 10-month Fellowships.

EURIAS Fellows 2018/2019

Peter R. Keller	Psychologie	Sydney
Thomas Lewinsohn	Biologie, Ökologie	Campinas
Başak Tuğ	Geschichte	Istanbul

John Maynard Smith Prize Fellow

Das Wissenschaftskolleg hat mit der European Society of Evolutionary Biology vereinbart, dass die jungen Preisträger des John-Maynard-Smith-Preises, die in einem hoch kompetitiven Verfahren ausgewählt werden, einen dreimonatigen Forschungsaufenthalt am Kolleg verbringen können.

The Wissenschaftskolleg has agreed with the European Society of Evolutionary Biology that the young prize winners of the John Maynard Smith Prize, who are chosen in a highly competitive procedure, will be granted a three-month research residency at the Kolleg.

John Maynard Smith Prize Fellows 2018/2019

Siobhán O'Brien	Evolutionsbiologie	Zürich
Amanda K. Gibson	Evolutionsbiologie	Atlanta, Ga.

COLLEGE FOR LIFE SCIENCES

Mit dem *College for Life Sciences* will das Wissenschaftskolleg Forscherinnen und Forschern aus den Lebenswissenschaften am Beginn ihrer Karriere Gelegenheit geben, in der anregenden Atmosphäre eines internationalen und multidisziplinären Institute for Advanced Study zu arbeiten. Je nach persönlicher Situation soll der Aufenthalt den ausgewählten Junior Fellows dazu dienen, sich neu zu orientieren, Ideen zu entwickeln, Forschungspläne zu entwerfen, frühere Arbeiten oder empirische Daten zu überdenken – jedenfalls für eine beschränkte Zeit aus der Routine der täglichen Arbeit auszusteigen, Umschau zu halten und dabei mit Wissenschaftlern und Intellektuellen verschiedenster Fachgebiete und Traditionen zu interagieren.

Die Fellows des *College for Life Sciences*, die nach Begutachtung durch ein Expertengremium für eine Dauer von drei bis sechs Monaten eingeladen werden, sind den Fellows des Wissenschaftskollegs gleichgestellt. Das Institut erwartet, dass sie für die Dauer ihrer Fellowships in Berlin arbeiten und aktiv an der Gemeinschaft der Fellows teilnehmen. Das Wissenschaftskolleg stellt Stipendium, Unterkunft und Dienstleistungen zur Verfügung.

Den Fellows des *College for Life Sciences* ist es freigestellt, in ihrer Gruppe zusätzliche Aktivitäten zu betreiben. Eine Wissenschaftliche Koordinatorin steht bereit, Hilfestellungen und Anregungen zu geben, gemeinsame Unternehmungen zu organisieren und Verbindungen zu Berliner Institutionen und Kollegen zu schaffen.

COLLEGE FOR LIFE SCIENCES

With the *College for Life Sciences*, the Wissenschaftskolleg wants to provide early-career researchers in the life sciences with the opportunity to work in the stimulating atmosphere of an international and multidisciplinary Institute for Advanced Study. Depending on the personal situations of the selected Junior Fellows, the residency should serve to gain new orientation, develop ideas and research plans, rethink earlier work or empirical data – at any rate, to drop out

of the routine of daily work, to take a look around and to interact with scientists and intellectuals from the widest possible spectrum of fields and traditions.

Selected by a group of experts, the Fellows of the *College for Life Sciences* are invited to come for three to six months. They are on equal terms with the Fellows of the Wissenschaftskolleg.

The institute expects them to work in Berlin for the duration of their Fellowships and to actively take part in the Fellow community. The Wissenschaftskolleg provides the stipend, accommodation, and services.

The Fellows of the *College for Life Sciences* are free to engage in additional activities within their group. A Research Coordinator is ready to provide assistance and suggestions for organizing common undertakings and for establishing connections with Berlin institutions and colleagues.

Fellows des College for Life Sciences 2018/19

Simon Elsässer	Systembiologie	Stockholm
Gordon Feld	Neuropsychologie	London
Ashley Landrum	Wissenschaftskommunikation	Lubbock, Tex.
Arunas Radzvilavicius	Evolutionstheorie	Philadelphia
Hassan Salem	Evolutionäre Ökologie	Atlanta
Víctor Sojo	Biophysik	München
Kirsten Traynor	Biologie	College Park, Md.

Scientific Committee des College for Life Sciences

Dieter Ebert	Zoologie, Evolutionsbiologie	Basel
Raghavendra Gadagkar	Biologie	Bangalore
Nikolaus Rajewsky	Systembiologie	Berlin
Simone Reber	Quantitative Biologie	Berlin
Constance Scharff	Verhaltensbiologie	Berlin