

Oslo, Norway
July 7-12, 2019

ISHPSSB

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GREETINGS FROM THE PRESIDENT

Welcome to Oslo! As we commence ISHPSSB's 16th biennial conference, and our first meeting in Scandinavia, I extend a cordial greeting to all participants. Like so many others, I regard ISH as my favorite professional meeting—more a coming together of an extended family than simply a gathering of scholars in related disciplines. We are truly an international society, with members hailing from many different countries, and meetings that take

place in locales around the world. To date, we have met on all continents except Asia and Africa—and we welcome invitations to meet in each in the future!

ISHPSSB meetings offer the prospect of five days of academic and personal delight, as we hear (or read) about our colleagues' latest research efforts, as well as engage in intellectually rich discussions and pleasurable interactions with friends old and new. Those of us who have previously attended ISH meetings already know what to expect: just by glancing at the program it is quite apparent that the Oslo meeting will well live up to the high standards set by previous meetings, dating back to 1989. For all their hard work, I want to extend a very special thank you to Ageliki Lefkadi-tou, chair of the Local Organizers Committee (and her assistant Sofie Scheen Jahnsen), who have dedicated over two years to this meeting. In 2017, Ageliki prepared the proposal that would bring ISH to Oslo, and, over the course of the past eighteen months, she has devoted countless hours to arranging all the many details that go into organizing a meeting that will host over 500 people. To mention just one great accomplishment: she oversaw the creation of the beautiful as well as quite utilitarian ISHPSSB Oslo website. But there are so

many others, and I am sure that all her efforts will pay off in making this meeting a great success. Do make a point to congratulate her.

I also want to express my sincere appreciation to Edna Suárez Díaz and Sophia Efstathiou, Program Co-Chairs, as well as to members of the Program Committee. They have spent an enormous amount of time on the other critical component of our biennial meetings: our program. First, they developed new ideas about different forms of submissions, and then came the more complicated stage of vetting and shaping the program—arranging all the various organized symposia and submitted papers, posters, and activities into a coherent schedule. We will benefit from the fruits of their labor over the course of the next five days. The Society owes a big debt of gratitude to this excellent team.

Do take the time to go through the program carefully, and try to set yourself the goal of attending at least one session that is outside your particular area of expertise. I am sure that you will profit from it! Also, take note of the “interdisciplinary organized sessions” that are vying for the new prize created by the Membership Development and Program Committees, and approved by Council. Finally, I urge you to plan on attending the General Meeting and Awards Ceremony on Thursday afternoon, at which you will learn about latest Society news as well as be able to congratulate those who are being recognized for their scholarly achievements. And, finally, aim to make some new acquaintances at this meeting. Some may become potential future collaborators, or at least good drinking buddies. This is what ISHPSSB is all about!

Marsha Richmond



Marsha Richmond



WORD FROM THE PROGRAM COMMITTEE

On behalf of the Program Committee, we welcome you to ISHPSSB 2019 taking place in the Nordic city of Oslo, Norway. ISHPSSB 2019 introduces a number of changes to our previous gatherings with a broad aim to mobilize the diversity of fields that already comprise our Society, in history, philosophy, social studies, and biology, and to make room for contributions from new fields, like the arts.

We chose the guiding theme of “Biology, technology and citizenship” inspired by the Scandinavian tradition of political activism around science and technology, by STS scholarship

in the region, and by the current social-environmental challenges facing citizens globally. Upon the Council’s suggestion, we made an effort to keep this theme woven into the meeting’s activities, including in our choice of keynote speakers: Fern Wickson and Gíssli Pálsson, whose socially engaged work we are eager to share with our members and the general public.

In line with the mood of inclusion and diversity that we wanted to imprint on the 2019 meeting, Council approved a joint proposal, with the Membership Development Committee, for a Prize for the best Interdisciplinary Organized Session, which will be presented at Oslo for the first time. Also, for the first time ISHPSSB’s call for papers included a Mixed Media and Posters session, with the intention to encourage different modes of presentation and communication among our membership, and to promote links between our communities and the arts. This Prize, and the variety of sessions and papers that we received this year, align with the Society’s interest to bring back scholars from history, biology and STS to our interdisciplinary community.

We hope that you will enjoy the meeting as much as we have, envisioning the diversity of people and interests that comprise this truly interdisciplinary and international society. Do stop and introduce yourselves to us if you see any one of us walking the halls. It will be great to put a face to the abstracts.

*With best wishes for ISHPSSB 2019,
Sophia Efstathiou and Edna Suárez-Díaz*



Sophia Efstathiou



Edna Suárez-Díaz

WELCOME FROM THE LOCAL ORGANIZING COMMITTEE

For many of us this is our favorite meeting; a coming together of colleagues and friends from around the world. We hope that we will all enjoy the exciting days that lie ahead and will fill the bright nights with stimulating conversations.

One of the most important aims for us has been to continue to strengthen the Society's tradition of innovative, inclusive, and informal gatherings. At the same time, we have decided that this meeting will contribute to the engagement with one of the most important challenges of our times, climate crisis.

Oslo is a welcoming and safe capital with a fascinating culture and history, surrounded by magnificent nature. It is the economic and governmental center of Norway, a buzzing global city that connects all kinds of Norwegian trade, banking, industry, and shipping with the rest of the world, and a hub of academic and cultural activity. During the last two decades Oslo has experienced a renewal in all aspects of urban living, cultural activities, and architecture. This year it is the European Green Capital, and tries to respond to the challenges raised by rapid development and inspire for local and global action. We hope that ISHPSSB will also contribute to these efforts.

There are two aspects that we are happy to emphasize. First, our 2019 meeting welcomes children as part of the audience. The whole city is rather children-friendly, and kids are literally enjoying all aspects of life with their families. Second, we have made several efforts to minimize the environmental impact of our event. Our catering service is the major business in Norway behind the rising



Ageliki Lefkadiou

interest in the benefits of veganism – including animal welfare, personal health, and the impact on the environment. We have tried to minimize printing, avoid plastic, and we will provide all participants with reusable coffee cups—please remember to bring them with you every day.

Organizing ISHPSSB 2019 has been a great pleasure and a big responsibility. An immense amount of dedicated teamwork went into preparing for these few days. We would like to invite you all to thank the people behind ISHPSSB 2019 and the institutions that supported us!

Ageliki Lefkadiou

On behalf of the Local Organizing Committee

HOMMAGE TO JEAN GAYON

The Council and Program Committee of ISHPSSB 2019 would like to invite you to honor the life and work of Jean Gayon, in a special commemorative session organised on Wednesday afternoon, July 10th.

Jean Gayon (1949–2018) was Professor of History and Philosophy of Science and Director of the Institute for the History and Philosophy of Sciences and Techniques at Paris 1 Panthéon-Sorbonne. He was one of the early

enthusiasts of ISHPSSB, creating fruitful bonds between Europe and America. After studying philosophy, he followed Canguilhem's advice and trained in biology for a decade before embarking on a PhD program that led to his book on the history of the Darwinian theory of natural selection. During this period, Jean travelled frequently to the United States, where he contributed to the emergence of philosophy of biology and built lasting connections with its founding members.

Jean's detailed studies of scientific knowledge combine analytic precision and historical depth and are based on a variety of methods that go beyond traditional disciplinary borders in order to explore conceptual puzzles prompted by present-day issues. Jean's legacy as a philosopher and a historian rests not only on an impressive list of publications and significant international activities, but also on his role as a mentor in training graduate students.

ISHPSSB honours Jean Gayon as a scholar and colleague through a panel organised by Pierre-Olivier Méthot and Francesca Merlin and chaired by Edna Suárez-Díaz, with the participation of Richard Burian, David Depew, Philippe Huneman, Francesca Merlin, Pierre-Olivier Méthot, Victor Petit, Staffan Müller-Wille, and Betty Smocovitis.



JEAN GAYON
1949–2018

NORSK TEKNISK MUSEUM

The Norwegian Museum of
Science and Technology

www.norsktekniskmuseum.no

Norsk
Teknisk
Museum

 Kjelsås stasjon

 Kjelsås stasjon

Kjelsås  ~~~~

Kjelsåsalleen  ~~~~

KJELSÅSVEIEN

MIDTODDVEIEN

Accessing Norsk Teknisk Museum from Oslo city centre

-  **L3 R30 R80X** to Kjelsås stasjon (*recommended option*)
-  **4 5** to Storo  **11B 12B** to Kjelsåsalleen
-  **11 12 13** to Storo  **11B 12B** to Kjelsåsalleen
-  **26 54** to Kjelsås stasjon
-  **28 24 56** to Storo  **11B 12B** to Kjelsåsalleen

BLINDERN CAMPUS

www.uio.no

Forskningsparken  

 Universitetet Blindern

John Collets Plass 

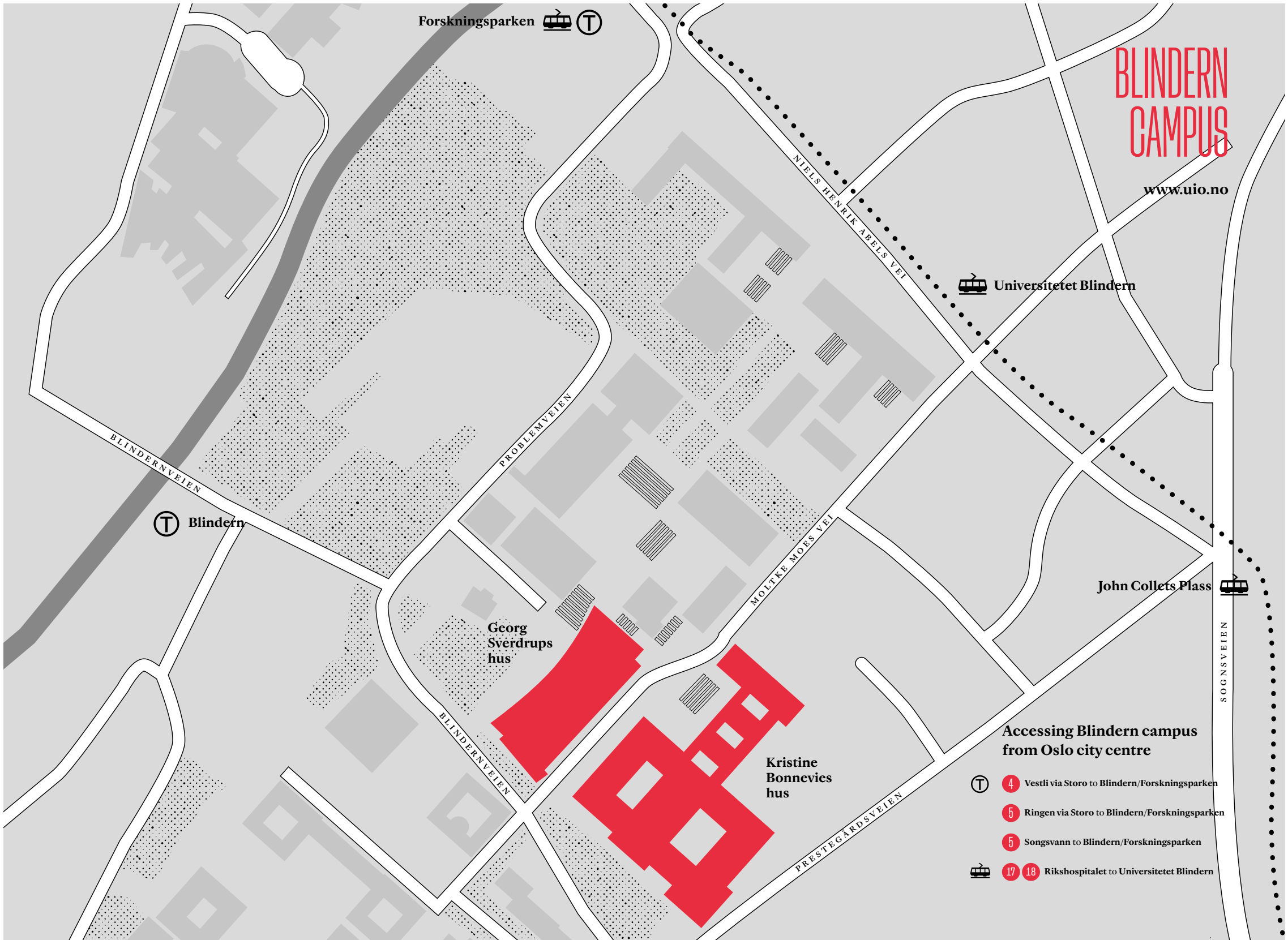
 Blindern

Georg
Sverdrups
hus

Kristine
Bonnevies
hus

Accessing Blindern campus from Oslo city centre

-  **4** Vestli via Storo to Blindern/Forskningsparken
-  Ringen via Storo to Blindern/Forskningsparken
-  Songsvann to Blindern/Forskningsparken
-  **17 18** Rikshospitalet to Universitetet Blindern

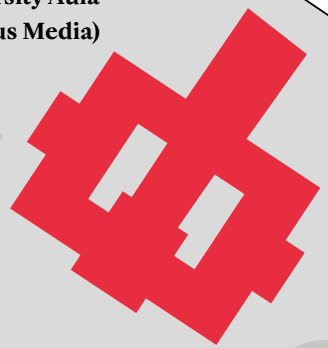


UNIVERSITY AULA

www.uio.no

St. Olavs plass 

University Aula
(Domus Media)






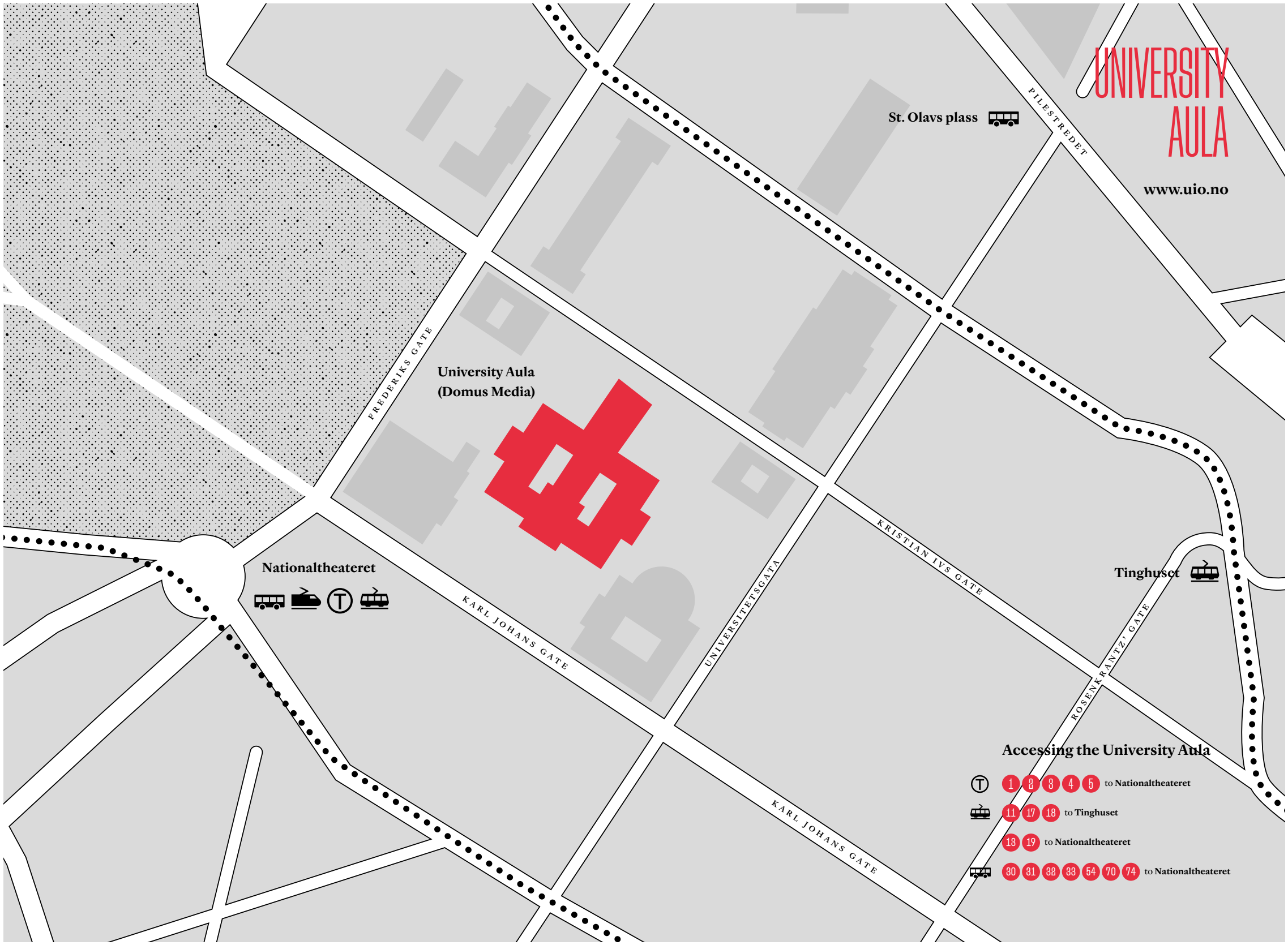
Nationaltheateret

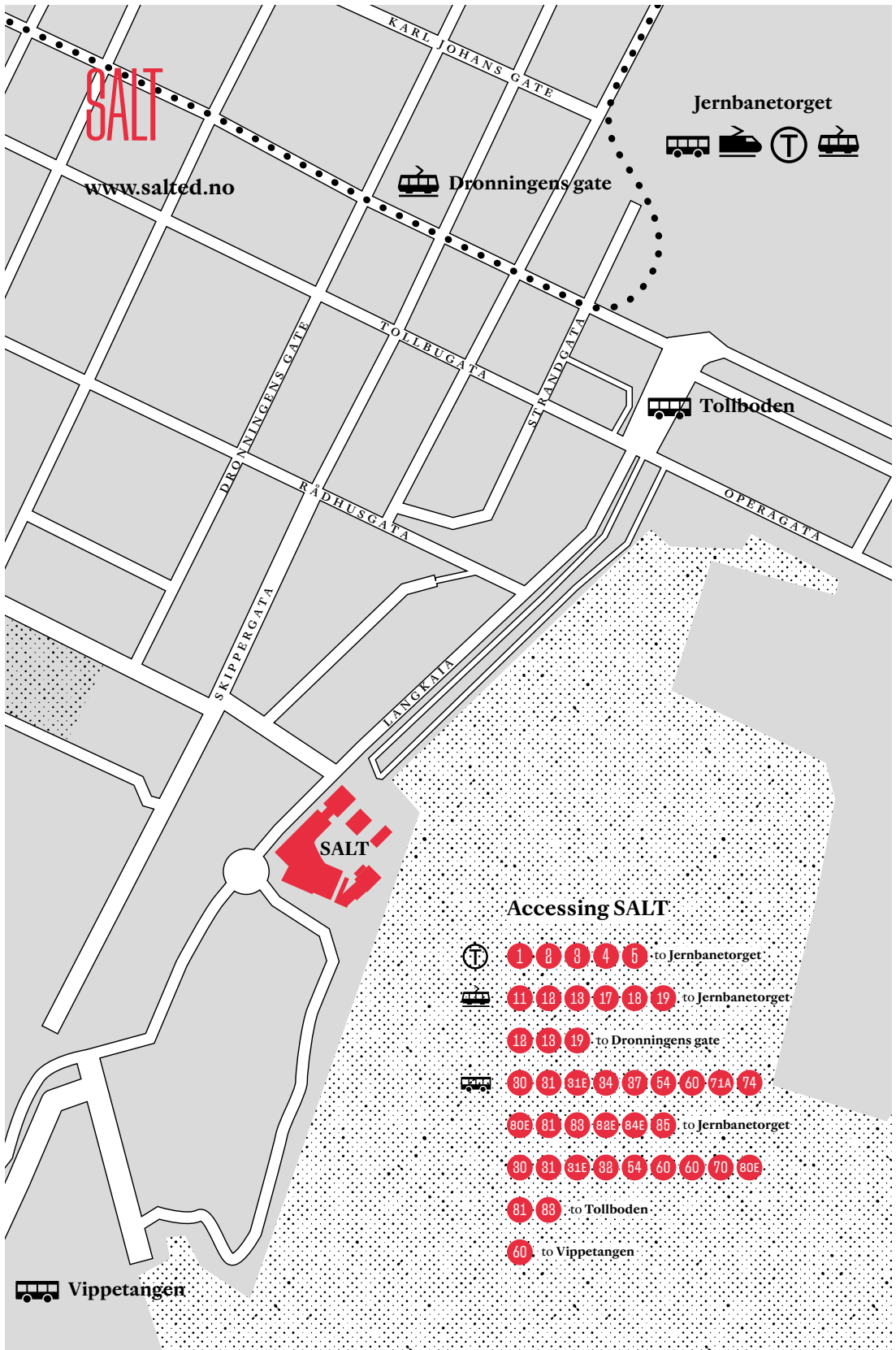


Tinghuset 

Accessing the University Aula

-  1 8 8 4 5 to Nationaltheateret
-  11 17 18 to Tinghuset
- 18 19 to Nationaltheateret
-  80 81 82 83 54 70 74 to Nationaltheateret





DINING SUGGESTIONS

The lively area of **Grünerløkka** is worth visiting for its many restaurants, cafes and bars, but it may be better to get there when more time is available.

For a list of lunch spots and restaurants, check the **visitOslo** website: www.visitoslo.com/en

Two hours are set aside for lunch each day. The on-campus cafeterias that will be open during the conference are located in the buildings called **Fredrikke** and **Eilert Sunds hus**.

There should also be enough time to visit the city center for a meal. The following areas are the easiest to access by the subway: **Majorstuen** (a 3-minute ride), and **Nationaltheatret** (a 5-minute ride). Nationaltheatret is within walking distance of most restaurants and cafés in the city center, and also close to the **harbor promenade of Aker brygge**, with a number of lunch spots.

Youngstorget, a big square located in downtown Oslo (10-minute walk from Nationaltheatret) offers a number of options for eating outside.

A longer walk next to the **sea front from the Oslo City Hall** (Rådhuset) towards the Oslo Opera House will lead you to several restaurants including **Vippa food court** situated on the edge of the Oslo fjord.

INFORMATION FOR PRESENTERS

Registration

Sunday 3 p.m. to 6 p.m. at the **Norwegian Museum of Science and Technology**, and **Monday to Friday 8 a.m. to 9 a.m.** at **Kristine Bonnevis hus** at the University campus. Registration is mandatory for all participants. You will receive your welcome package, nametag and program. The registration desk will remain open all week for latecomers and to buy the book of abstracts and T-shirts.

Nametags and security

You will receive your nametag at registration, which you must wear at all times during the conference. It will give you access to all conference buildings, the sessions, the social events, as well as any food or drinks served during breaks.

Your talk

All rooms are equipped with a computer, a video projector and a sound system. You will need to bring your presentation on a USB key in either PowerPoint or pdf format. If you

wish to use your own laptop, make sure you can connect to VGA, or bring your own adapter. Make sure to arrive well before your session starts. This will allow you to transfer your presentation file to the computer, make sure everything works properly, and meet with the session chair for instructions.

Session chairs

If you are the session chair, please make sure you arrive early to the session, as you are responsible for the coordination of the speakers. As chair, you will monitor the timing of the talks depending on the format of the session. You will have colored signs to indicate the time remaining to the presenters.

Individual papers

Individual paper sessions for which a volunteer chair has not been assigned, will need to designate a chair. We suggest that the last presenter be acting chair, to be replaced by the first during their talk. As with organized sessions, the chair is responsible for the timing of the talks and discussion.

Poster and diverse format session

The display panels can accommodate posters **up to 96 cm wide and 138 cm high (37,7×54,3 in)**. The poster and diverse format session will be on **Tuesday 9th from 6pm to 8pm**. Installation of the posters and all equipment for the diverse format presentations will take place after lunch on Tuesday at the **Lobby of Georg Sverdrups hus**.

CHILDCARE

ISHPSSB is family friendly and welcomes children at its conferences. We therefore welcome children as part of the audience during the 2019 conference in Oslo. The whole city is also rather children-friendly and kids are literally enjoying all aspects of life with their families. Breastfeeding in public is a well-established norm despite some recent discussion. The organizers have booked room **U161** at **Kristine Bonnevis hus** for parents who wish to spend some time there with their children. For advice on childcare services, check the conference website.

WiFi AND SOCIAL MEDIA

WiFi

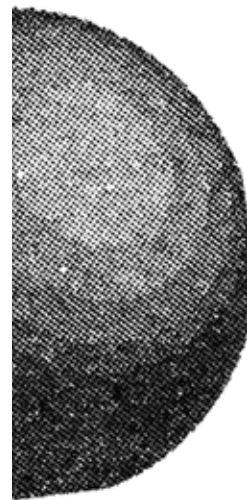
Anywhere within the University of Oslo campus, you can connect to the WiFi network named **uioguest**. You register for the network by following instructions on a website, which opens when you turn on your internet browser. If you have trouble connecting, please come see us at the registration desk.

Social Media

Receive last-minute updates, join the ongoing conversations and share your pictures on our social media platforms.

Twitter: **@ISHPSSB2019**

Facebook: **facebook.com/ISHPSSB**



FERN WICKSON

LESSONS LEARNED FROM
WATERFLEAS, WHALES AND
BEES: A JOURNEY INTO
ENVIRONMENTAL CONTRO-
VERSIES IN THE SEARCH
FOR SUSTAINABLE FOOD



Ecology seeks to understand how organisms interact with their environment. It is a biological science that looks at how things are interconnected, how they interrelate. I am an ecologist interested in how we, the human species, interact with our environment. My work is transdisciplinary; researching the human/nature relationship through overlapping lenses of biological science, ecological ethics and environmental politics. In this talk I will present some of the lessons I have learned about how ethics and politics are entangled in the science of environmental harm. These are lessons I have learned from working with waterfleas, whales and bees.

How we feed ourselves, as a species, is one of the foundational ways we construct and conduct our interaction with nature/the environment/our ecological community. It is a key mode of entry into our relationship with the rest of life on Earth. Today there is increasing recognition that modern industrial food

systems have created extensive environmental damage and there is an urgent quest to find sustainable solutions. In this quest though, certain technologies and practices generate intense socio-political controversy over their role in a sustainable future.

This presentation will explore two such sustainable food controversies: genetically modified organisms (GMOs) in agriculture and the hunting of whales and seals in the North Atlantic. Through my ongoing engagement with these issues, I will demonstrate how the question of what constitutes environmental harm is a splendid swirling nexus of science, ethics and politics.

And that in this complexity, there

is much we can learn from being attentive to waterfleas, whales and bees. Indeed, to all the other species we share this extraordinary planet with.

Fern Wickson is an Australian citizen who has been living in Norway for over a decade. She is a Research Professor of Environmental Governance and holds an interdisciplinary PhD across biology and political science. Her work has focused on the science/policy interface and specifically, the integration of science, indigenous knowledge, stakeholder views and environmental philosophy in the pursuit of sustainable food systems.

Fern Wickson

NAMMCO and GenØK, Norway

Dr. Fern Wickson is the Scientific Secretary of the North Atlantic Marine Mammal Commission (NAMMCO) and a Senior Advisor at GenØk Centre for Biosafety in Tromsø, Norway. Committed to ecological ethics and a politics of socio-ecological care, the primary objective of her work has been to advance sustainability in food systems and responsibility in research and innovation arenas.

Fern has served as an expert delegate to the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) working group on the diverse conceptualization of values in nature. She has also been a member of the Norwegian Biotechnology Advisory Board and past President of the international Society for the Study of New and Emerging Technologies (S.Net).

In her spare time, Fern enjoys hiking, snowboarding, kayaking and trying to grow her own food. She is also a yoga and meditation teacher and runs her own studio in Tromsø called The Peaceful Wild.

KEYNOTE
LECTURES



GÍSLI PÁLSSON

EPISTEMIC LANDSCAPES FOR THE CENTURY OF LIFE



Gísli Pálsson
University of Iceland, Iceland

The last century has been variously named the century of genetics, biology, and the gene. The 21st Century, in contrast, seems primarily associated with life and the environment. Such a shift, I argue, has at least two kinds of momentum. On the one hand, it continues from recent concepts of “local biologies”, “body worlds”, and “biosocial relations”, conflating genomes, organisms, and context, erasing the boundaries between inside and outside the organism. On the other hand, it recognizes an emergent momentum in the history of life, characterized by the alarming threat of mass extinction as a result of human activities, witnessed by a recent UN report. Probing the advent and implications of the “environment” is at the core of the growing field of “epigenetics”, identified by Conrad Waddington in the 1940s. Applying Waddington’s visualization of epigenetic landscape to epistemic shifts in the century of life – partly turning Waddington on Waddington – I suggest one may interrogate the development of the notions of “epigenome” for the purpose of understanding and respecting “life itself” in the current century of life.

Gísli Pálsson is Professor of Anthropology at the University of Iceland. He has written extensively on a variety of issues, including human-environmental relations, slavery, biomedicine, and genomics. He has done fieldwork in Iceland, the Republic of Cape Verde, the Canadian Arctic, and the Virgin Islands. He is the author, editor, or co-editor of many books, including *Anthropology and the New Genetics* (2007), *Biosocial Becomings: Integrating Social and Biological Anthropology*, co-edited with Tim Ingold (2013),

Nature, Culture, and Society: Anthropological Perspectives on Life (2016), *Can Science Solve the Nature/Nurture Debate?* with Margaret Lock (2016), and *The Man Who Stole Himself* (2016).

Pálsson has a keen interest in photography and human/other-than-human relations. Recently he has embarked on a new project that combines scholarship and the arts, science and history: the fate of the Great Auk (*Pinguinus impennis*), which became extinct by the mid-19th century.



7 JULY
SUN

8 JULY
MON

9 JULY
TUE

10 JULY
WED

11 JULY
THU

12 JULY
FRI

08:00

09:00

10:00

11:00

12:00

13:00

14:00

15:00

16:00

17:00

18:00

19:00

Registration

Registration

Registration

Registration

Registration

Parallel
Sessions 1

Parallel
Sessions 5

Parallel
Sessions 8

Parallel
Sessions 12

Parallel
Sessions 15

Coffee break

Coffee break

Coffee break

Coffee break

Coffee break

Parallel
Sessions 2

Parallel
Sessions 6

Parallel
Sessions 9

Parallel
Sessions 13

Parallel
Sessions 16

Lunch Break
& Meetings

Lunch Break
& Meetings

Lunch Break
& Meetings

Lunch Break
& Meetings

Excursions
in & around
Oslo

Parallel
Sessions 3

Parallel
Sessions 7

Parallel
Sessions 10

Parallel
Sessions 14

Registration
and museum
visit

Coffee break

Coffee break

Coffee break

General
Meeting
& Awards
Ceremony

Parallel
Sessions 4

Keynote
lecture
**Gísli
Pálsson**

Parallel
Sessions 11

President's
welcome
and welcome
reception

Keynote
lecture

**Fern
Wickson**

Mixed Media
& Poster
Session

Conference
dinner

SUNDAY

7 JULY
SUN

NORSK TEKNISK MUSEUM

15:00

REGISTRATION

Registration and
museum visit

15:00–18:00

16:00

17:00

18:00

SPECIAL EVENT

President's
welcome
& welcome
reception

18:00–21:00

19:00

MONDAY

8 JULY MON

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

S 2621

S 3203

S 3213

S 3508

S 4424

S 4512

S 4613

S 4619

08

REGISTRATION
Please register
in the lobby

09:00

TRADITIONAL SESSION
Philosophy in biology
and medicine: The mi-
crobiota and biological
individuality, part I

TRADITIONAL SESSION
The politics of
Lamarckism

TRADITIONAL SESSION
Genetics and eugenics
in Norway, part I

INDIVIDUAL PAPERS SESSION
Normativity and
psychiatry

INDIVIDUAL PAPERS SESSION
Making models

INDIVIDUAL PAPERS SESSION
Ethics and prac-
tice of animal
experimentation

INDIVIDUAL PAPERS SESSION
Philosophy of synthe-
tic, systems biology, and
ecology

DIVERSE FORMAT SESSION
Should we stay or should we
go now? An open workshop
with examples from the histo-
ries, philosophies, and sociol-
ogies of systems biology

INDIVIDUAL PAPERS SESSION
Natural selection

INDIVIDUAL PAPERS SESSION
Early modern bodies

TRADITIONAL SESSION
Tackling bioinvasions
60 years on: Lessons
from the trenches,
part I

TRADITIONAL SESSION
Genealogies of life in
Germany at the end of
the eighteenth century

10:00

COFFEE BREAK

11:00

TRADITIONAL SESSION
Philosophy in biology
and medicine: The mi-
crobiota and biological
individuality, part II

TRADITIONAL SESSION
Rethinking foundational as-
sumptions about the "local",
"global", "postcolonial", and
"transnational" in science,
part I: Connected, shared, and
entangled histories of biology
and the life sciences

TRADITIONAL SESSION
Genetics and eugenics
in Norway, part II

INDIVIDUAL PAPERS SESSION
Ethics and prac-
tice of animal
experimentation

INDIVIDUAL PAPERS SESSION
Modes of selection

INDIVIDUAL PAPERS SESSION
Philosophy of compar-
ative biology

INDIVIDUAL PAPERS SESSION
Formalising models

TRADITIONAL SESSION
Where are we after 160
years of communication
between evolutionary biology
and economic and social
sciences? Perspectives from
history, philosophy and social
sciences

INDIVIDUAL PAPERS SESSION
The mind in
philosophy

INDIVIDUAL PAPERS SESSION
Natural history and
empires

TRADITIONAL SESSION
Tackling bioinvasions
60 years on: Lessons
from the trenches, part
II

TRADITIONAL SESSION
Let's talk about sexual
selection and gender
relations

12:00

LUNCH BREAK

13:00

LUNCH EVENT
ISHPSSB
Council Meeting

14:00

TRADITIONAL SESSION
Rethinking transnationalism
in the anthropological and
genetic study of human popu-
lations: Methods of research,
part I

TRADITIONAL SESSION
Rethinking foundational
assumptions about the "local",
"global", "postcolonial," and
"transnational" in science,
part II: (Re)articulating the
modern biology paradigm
beyond the "West"

TRADITIONAL SESSION
Articulating ancestors
in the molecular age,
part I

INDIVIDUAL PAPERS SESSION
The animal-human
mind

INDIVIDUAL PAPERS SESSION
Models and maps

INDIVIDUAL PAPERS SESSION
Philosophy of the
environment

INDIVIDUAL PAPERS SESSION
Revisiting Darwinism
and EvoDevo

DIVERSE FORMAT SESSION
Animal consciousness,
part I

TRADITIONAL SESSION
Extending developmental
approaches to evolution:
The role of chance, plasticity,
and environmental stress in
evolvability

TRADITIONAL SESSION
Fidelity in cultural
evolution, part I

15:00

COFFEE BREAK

16:00

TRADITIONAL SESSION
Rethinking transnationalism
in the anthropological and
genetic study of human popu-
lations: Concepts of race,
caste, and tribe, part II

TRADITIONAL SESSION
Rethinking foundational
assumptions about the "local",
"global", "postcolonial," and
"transnational" in science:
Part III: Coming together and
"mutual influencing" in local
histories of biology and the
life sciences

TRADITIONAL SESSION
Articulating ancestors
in the molecular age,
part II

INDIVIDUAL PAPERS SESSION
STS and
environmentalism

INDIVIDUAL PAPERS SESSION
Synthesis and
modularity

INDIVIDUAL PAPERS SESSION
Natural history and
molecular biology

INDIVIDUAL PAPERS SESSION
Modeling practices

INDIVIDUAL PAPERS SESSION
Mental ontologies

DIVERSE FORMAT SESSION
Animal consciousness,
part II

TRADITIONAL SESSION
The challenges of
opposing intelligent
design and creationism

TRADITIONAL SESSION
Fidelity in cultural
evolution, part II

17:00

KBH, LOBBY

BREAKS
Coffee is served in
the lobby of Kristine
Bonnevies hus

This event
is open to
the public

18:30

UNIVERSITY AULA

KEYNOTE LECTURE

Fern Wickson

Lessons learned from water fleas, whales and
bees: A journey into environmental controver-
sies in the search for sustainable food

8 JULY
MON

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

09:00-
10:30

TRADITIONAL SESSION

Philosophy in biology and medicine: The microbiota and biological individuality, part I

Organizer: Thomas Pradeu, CNRS & University of Bordeaux, France
Chair: Samir Okasha, University of Bristol, UK

Immunity, development, and the microbiota: An overview
Wiebke Bretting, CNRS & University of Bordeaux, France

How microbes make us who we are
Rob Knight, UC San Diego, USA

Immunity and host-microbiota integration
Thomas Pradeu, CNRS & University of Bordeaux, France

TRADITIONAL SESSION

The politics of Lamarckism

ID PRIZE CANDIDATE

Organizer: Snait Gissis, Tel Aviv University, Israel; Eva Jablonka, Tel Aviv University, Israel
Chair: Eva Jablonka, Tel Aviv University, Israel

Lamarckism in the West, or the ambiguous politics of biological plasticity
Maurizio Meloni, Deakin University, Australia

The short "Lamarckian period" in the German Democratic Republic after the Second World War
Martin Battran, Independent scholar, Germany

The politics of Lamarckism in Fin de Siècle Vienna
Johannes Feichtinger, Austrian Academy of Sciences, Austria

TRADITIONAL SESSION

Genetics and eugenics in Norway, part I

Organizer: Marsha L. Richmond, Wayne State University, USA
Chair: Lars Walløe, University of Oslo, Norway

Kristine Bonnevie: Her roles as the first female professor in Norway and the first female professor of genetics worldwide
Ida Stamhuis, Vrije University, Netherlands

Aslaug Sverdrup, William Bateson, and the chromosome theory of heredity
Marsha L. Richmond, Wayne State University, USA

Kristine Bonnevie's studies on the inheritance of fingerprints, and their application for racial evaluations in Nazi Germany
Amir Teicher, Tel Aviv University, Israel

INDIVIDUAL PAPERS SESSION

Normativity and psychiatry

Chair: Abigail Nieves Delgado, Ruhr University Bochum, Germany

Forms of insanity: The development of the British psychiatric classification system 1870-1950
Kevin Matthew Jones, University of Leeds, UK

Types or Traits? Typal personality disorder constructs in DSM-5 as natural kinds
Danielle Brown, University of Alberta, Canada

Norm psychology, normative stress, and polarization
Ehud Lamm, Tel Aviv University, Israel

8 JULY
MON

KRISTINE BONNEVIES HUS
S 2621

S 3203

S 3213

S 3508

09:00-
10:30

INDIVIDUAL PAPERS SESSION

Making models

When is a model?
Jason Oakes, University of California, Davis, USA

Informal models in biology
Fridolin Gross, Universität Kassel, Germany

Epistemic values, trade-offs, and multiple-models juxtaposition
Yoshinari Yoshida, University of Minnesota, USA

INDIVIDUAL PAPERS SESSION

Ethics and practice of animal experimentation

Chair: Sophia Efstathiou, Norwegian University of Science and Technology, Norway

Behavioural studies of humans and non-human primates: crossed influences
Sophie Evers, Sorbonne Université, France; Grant Ramsey, KU Leuven, Belgium

Who should not be harmed: Human and non-human in the animal experimentation debate
Yunjie Zhan, Glasgow University, UK

Where in the world is Aldo Leopold?: An examination of "The Land Ethic" in relation to late 20th century animal liberation ethics and environmentalism
Denise Regina Percequillo Hossom, University of California Davis, USA

INDIVIDUAL PAPERS SESSION

Philosophy of synthetic, systems biology, and ecology

Chair: Janella Baxter, University of Pittsburgh, USA

Genetic engineering, synthetic biology and reductionist explanations in philosophy of biology
Lucas Rafael Gonçalves Ferreira, University of São Paulo, Brazil

Exploring biological possibility through synthetic biology
Tero Ijäs, University of Helsinki, Finland; Rami Koskinen, University of Helsinki, Finland

"Diversity" conflicts with "heterogeneity"
Ayelet Shavit, Tel Hai College, Israel

DIVERSE FORMAT SESSION

Should we stay or should we go now? An open workshop with examples from the histories, philosophies, and sociologies of systems biology

ID PRIZE CANDIDATE

Organizer: Karen Kastenhofer, Austrian Academy of Sciences, Austria; Niki Vermeulen, University of Edinburgh, UK
Chair: Dominic Berry, London School of Economics and Political Sciences, UK

Participants:
Karen Kastenhofer, Austrian Academy of Sciences, Austria; Niki Vermeulen, University of Edinburgh, UK

8 JULY
MON

KRISTINE BONNEVIES HUS

S 4424

S 4512

S 4613

S 4619

09:00-
10:30

INDIVIDUAL PAPERS SESSION

Natural selection

Group selection does not act on "belonging to" properties of individuals

Ciprian Jeler, Alexandru Ioan Cuza University of Iasi, Romania

A model of phenotypic architectural changes to account for selective and non-selective processes of evolutionary changes

Giorgio Airoidi, UNED, Spain; Cristian Saborido Alejandro, UNED, Spain

Evolution's invisible hand? From Adam Smith to contemporary evolutionary biology

Nicola Bertoldi, University of Paris 1 Panthéon-Sorbonne, France

INDIVIDUAL PAPERS SESSION

Early modern bodies

Explaining body's disruption and natural death. A late-medieval paradigm shift

Chiara Beneduce, University Campus Bio-Medico of Rome, Italy

The fruitful shrub: The necessity of female pubic hair in early modern Europe

Karlyn Prisco, Florida State University, USA

The observation of animals throughout history: the descriptions of snakes

Giuliana Uchôa Carrieri, University of São Paulo, Brazil; Maria Elice de Brzezinski Prestes, University of São Paulo, Brazil

TRADITIONAL SESSION

Tackling bioinvasions 60 years on: Lessons from the trenches, part I

ID PRIZE CANDIDATE

Organizer: Alkistis Elliott-Graves, University of Helsinki, Finland

Chair: James Griesemer, University of California, Davis, USA

Biodiversity realism and invasive species

Christopher Lean, University of Sydney, Australia

Transitions caused by the rate of change: The special case of invasions

Alexis Synodinos, Potsdam University, Germany

Conservation moonshots

James Maclaurin, University of Otago, New Zealand

TRADITIONAL SESSION

Genealogies of life in Germany at the end of the eighteenth century

Organizer & Chair: Joan Steigerwald, York University, UK

(Mis)understanding the Kant-Blumenbach relation: Mechanism and natural teleology

Boris Demarest, Universität Heidelberg, Germany

Blumenbach on the varieties of the human species

François Duchesneau, Université de Montréal, Canada

The Caucasian

Joan Steigerwald, York University, UK

8 JULY
MON

KRISTINE BONNEVIES HUS

AD 1

AD 2

AD 3

S 2203A

11:00-
12:30

TRADITIONAL SESSION

Philosophy in biology and medicine: The microbiota and biological individuality, part II

Organizer: Thomas Pradeu, CNRS & University of Bordeaux, France

Chair: Paul E. Griffiths, University of Sydney, Australia

How should we think about microbiota structure and function?

Gregor Greslehner, CNRS & University of Bordeaux, France

Transmitting symbiosis – the extraordinary reproductive strategies of animal-attached bacteria

Silvia Bulgheresi, University of Vienna, Austria

Individuality and methodology: The part part

John Huss, The University of Akron, USA

TRADITIONAL SESSION

Rethinking foundational assumptions about the "local", "global", "postcolonial", and "transnational" in science, part I: Connected, shared, and entangled histories of biology and the life sciences

ID PRIZE CANDIDATE

Organizer: William Leeming, OCAD University, Canada; Ana Barahona, UNAM, Mexico

Chair: William Leeming, OCAD University, Canada

These primitives, for whom life counts so little: Early social science racial categories, French military doctrine, and the introduction of West Africa combat troops into Europe during the First World War

Joe Lunn, University of Michigan-Dearborn, USA

Collaborative networks and transnational knowledge in the study of the life sciences in Mexico during the Cold War. Mexico 1968

Ana Barahona, UNAM, Mexico

Disentangling postcolonial and indigenous ways of knowing and controlling biological systems

Christian H. Ross, Arizona State University, USA

TRADITIONAL SESSION

Genetics and eugenics in Norway, part II

Organizer: Marsha L. Richmond, Wayne State University, USA

Chair: Lars Walløe, University of Oslo, Norway

The Norwegian association for heredity: Expertise, authority, and boundary work in genetics and eugenics, 1919–1940

Jon Røyne Kyllingstad, University of Oslo, Norway

Eugenics, genetics and the sterilization law of 1934

Nils Roll-Hansen, University of Oslo, Norway

Session commentary

Lars Walløe, University of Oslo, Norway

INDIVIDUAL PAPERS SESSION

Ethics and practice of animal experimentation

Chair: Sophia Efstathiou, Norwegian University of Science and Technology, Norway

Biological argumentation in early Norwegian salmon farming legislation

Widar Aalrust Kristoffersen, NTNU, Norway

Animals, pleasure, and animal pleasures

Jason Zinser, University of Wisconsin, USA

Some considerations about the fallacious defense of genetically modified organisms in Mexico

Julio Munoz-Rubio, Universidad Nacional Autónoma de México, Mexico

8 JULY
MON

KRISTINE BONNEVIES HUS
S 2621

S 3203

S 3213

S 3508

11:00-
12:30

INDIVIDUAL PAPERS SESSION

Modes of selection

Chair: Charles H. Pence, Université catholique de Louvain, Belgium

A game-theoretic model of Richard Prum's "aesthetic selection"

Derek Halm, University of Utah, USA

Can adaptiveness and rationality part ways?

Samir Okasha, University of Bristol, UK

What research practice shows about fitness and natural selection

Marshall Abrams, University of Alabama at Birmingham, USA

INDIVIDUAL PAPERS SESSION

Philosophy of comparative biology

Historicizing the homology problem

Devin Gouvêa, University of Chicago, USA

Building the case for comparative neurobiology

Jason Scott Robert, Arizona State University, USA

Does the scorpion sting itself to death? The history and philosophy of an "easy" question

Evan Arnet, Indiana University Bloomington, USA

INDIVIDUAL PAPERS SESSION

Formalising models

How do we reason about formal models in biology?

Brian McLoone, Higher School of Economics, Russia

Justifying the use of temporal idealizations in biological modeling

Kyra Hoerr, Bryn Mawr College, USA

Meta-parsimony

Charles Beasley, The London School of Economics and Political Science, UK

TRADITIONAL SESSION

Where are we after 160 years of communication between evolutionary biology and economic and social sciences? Perspectives from history, philosophy and social sciences

ID PRIZE CANDIDATE

Organizer: Naïd Mubalegh, University of Lisbon, Portugal & University Paris I Sorbonne, France

Chair: Naïd Mubalegh, University of Lisbon, Portugal & University Paris I Sorbonne, France

The evolutionist sources of neoliberalism: A critique of neoclassical economics
Barbara Stiegler, Université Bordeaux Montaigne, France

Do biologists "minimize influences that are external" to biology and historians of Ideas "go to the other extreme"?

Naïd Mubalegh, University of Lisbon, Portugal & University Paris I Sorbonne, France

8 JULY
MON

KRISTINE BONNEVIES HUS
S 4424

S 4512

S 4613

S 4619

11:00-
12:30

INDIVIDUAL PAPERS SESSION

The mind in philosophy

Theory of mind in non-human primates

Alba Leticia Pérez Ruiz, CEPF SVLT, Mexico

"But is it cognition?"

Interpreting claims about cognition in bacteria, plants and tissues

Fred Keijzer, University of Groningen, Netherlands

What is a mental symptom?

Steeves Demazeux, Bordeaux-Montaigne University, France

INDIVIDUAL PAPERS SESSION

Natural history and empires

The naming of the Mikado pheasant: Ornithology, aviculture and zoogeography in the Age of Empires
Takashi Ito, Tokyo University of Foreign Studies, Japan

The making of the "Butterfly Kingdom": Hans Sauter (1871-1943) and the institutionalization of Japanese entomology in the early twentieth century
Ayako Sakurai, Senshu University, Japan

TRADITIONAL SESSION

Tackling bioinvasions 60 years on: Lessons from the trenches, part II

ID PRIZE CANDIDATE

Organizer: Alkistis Elliott-Graves, University of Helsinki, Finland

Chair: James Griesemer, University of California, Davis, USA

Why are biological invasions uncertain, and what can trait-based predictions tell us?

Andrew Latimer, University of California, Davis, USA

Can the hierarchy-of-hypotheses (HoH) approach facilitate explanation and prediction in invasion ecology?

Tina Heger, Potsdam University, Germany

Meta-analysis as a predictive tool for invasion biology

Alkistis Elliott-Graves, University of Helsinki, Finland

TRADITIONAL SESSION

Let's talk about sexual selection and gender relations

Organizer: Marion Blute, University of Toronto, Canada

Why are men the criminal sex? Extended heredity and the gender gap in offending

Russil Durrant, Victoria University of Wellington, New Zealand

From ape to (wo)man: Epistemological issues in the use of primatology for the study of human social evolution

Marie Lacomme, Paris Diderot French University, France

The puzzle of what compensates for the two-fold cost of sex solved: The advantages of specialization

Marion Blute, University of Toronto, Canada

8 JULY
MON

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

14:30-
16:00

TRADITIONAL SESSION

Rethinking transnationalism in the anthropological and genetic study of human populations: Methods of research, part I

ID PRIZE CANDIDATE

Organizer: Iris I. Clever, UCLA, USA

Chair: Jon Røyne Kyllingstad, University of Oslo, Norway

Researching and protecting a "race in fluid constancy": Narratives of physical anthropology in Greece, 1915–1950
Ageliki Lefkaditou, Norsk Teknisk Museum, Norway

"Tiresome anthropometric affairs." Standardization efforts in the history of physical anthropology, 1880–1950
Iris I. Clever, UCLA, USA

Engaging with foreign science: Practicing transnationalism in late Portuguese colonial physical anthropology
Ricardo Roque, University of Lisbon, Portugal

TRADITIONAL SESSION

Rethinking foundational assumptions about the "local," "global," "postcolonial," and "transnational" in science, part II: (Re)articulating the modern biology paradigm beyond the "West"

ID PRIZE CANDIDATE

Organizer: Hallam Stevens, Nanyang Technological University, India; Abhinav Tyagi, Indian Institute of Technology, India
Chair: Hallam Stevens, Nanyang Technological University, India

The emergence of biotechnology in India: Collaboration, contestation and a non-western perspective
Abhinav Tyagi, Indian Institute of Technology, India

Mechanization by insect: Multi-species ecologies in the transnational plantationocene
Aaron van Neste, Harvard University, USA

Collecting blood, flies, and ideas: David and Mary Bruce, the game-nagana link, and the role of "Zulu knowledge", c. 1890–1920s
Jules Skotnes-Brown, University of Cambridge, UK

TRADITIONAL SESSION

Articulating ancestors in the molecular age, part I

ID PRIZE CANDIDATE

Organizer: Michael R. Dietrich, University of Pittsburgh, USA
Chair: Michael R. Dietrich, University of Pittsburgh, USA

Visualisation, inference and extending the meaning of "genetic" from "related by heredity" to "related to genes and genomes" in medicine
William Leeming, Ontario College of Art and Design University, Canada

Depicting simultaneously similarity, diversity, ancestry, and admixture?
Peter J. Taylor, University of Massachusetts, USA

Dynamic homology and circularity
Ariel Roffé, University of Buenos Aires & CEFHIC-UNQ-CONICET, Argentina

INDIVIDUAL PAPERS SESSION

The animal-human mind

Chair: Gregory Radick, University of Leeds, UK

From dancing bees to step-counting ants: A productive tradition of finding meaning in the actions of insects
Kelle Dhein, Arizona State University, USA

Bacterial organelles: From metaphor to conceptual change
Laura Perini, Pomona College, USA; Cheryl Kerfeld, MSU and Berkeley National Lab, USA

Lessons from embedding in animal behavior science
Tiernan Armstrong-Ingram, University of California Davis, USA

8 JULY
MON

KRISTINE BONNEVIES HUS
S 2621

S 3213

S 3508

S 4424

14:30-
16:00

INDIVIDUAL PAPERS SESSION

Models and maps

Extrapolation and cascading uncertainty across dynamical scales in modelling: from ecological modelling to climate downscaling
Kimberly Brumble, University of Calgary, Canada

Mapping vs. representational accounts of models and simulations
Michal Hladky, University of Geneva, Switzerland

Shifting ranges, shifting meanings
Christopher H. Eliot, Hofstra University, USA

INDIVIDUAL PAPERS SESSION

Philosophy of the environment

Chair: Jan Baedke, Ruhr University Bochum, Germany

Phylogenetic competition: Defining the selective environment
Grant Ramsey, University of Leuven, Belgium
Hugh Desmond, University of Leuven, Belgium

Environmental ethics, meet modelling: Evaluating nature-society dualism with tools from philosophy of science
Kinley Gillette, University of British Columbia, USA

Population, metapopulation and metahabitat
Gregory Cooper, Washington and Lee University, USA

INDIVIDUAL PAPERS SESSION

Revisiting Darwinism and EvoDevo

Generalized Darwinism revisited: How a new synthesis changes our view on cultural evolution
Karim Baraghith, Heinrich Heine University Düsseldorf, Germany

Extended Genotypes? The consequences of adopting non genetic inheritance to a classical framework
Ulrich Krohs, University of Münster, Germany

The extended evolutionary synthesis debate: Some ontological, epistemological and historical dimensions
Alejandro Fábregas-Tejeda, Universidad Nacional Autónoma de México, Mexico

DIVERSE FORMAT SESSION

Animal consciousness, part I

Organizer: Jonathan Birch, London School of Economics and Political Science, UK
Chair: Simona Ginsburg, Open University of Israel, Israel

Participants:
Eva Jablonka, Tel Aviv University, Israel; Zohar Bronfman, Tel Aviv University, Israel; Lars Chittka, Queen Mary, University of London, UK

8 JULY
MON

KRISTINE BONNEVIES HUS

S 4613

S 4619

14:30-
16:00

TRADITIONAL SESSION

Extending developmental approaches to evolution: The role of chance, plasticity, and environmental stress in evolvability

ID PRIZE CANDIDATE

Organizer: Laura Nuño de la Rosa, Complutense University of Madrid, Spain

Chances and propensities in variational approaches to evolvability

Laura Nuño de la Rosa, Complutense University of Madrid, Spain

Evolvability and the causal structure of evolutionary theory

Cristina Villegas, Complutense University of Madrid, Spain; Grant Ramsey, KU Leuven, Belgium

Environment, innovation, and evolvability: Mapping the conceptual landscape

Alan C. Love, University of Minnesota, USA

TRADITIONAL SESSION

Fidelity in cultural evolution, part I

ID PRIZE CANDIDATE

Organizer: Chiara Elettra Ferrario, University of Münster, Germany

Chair: Ivan Gonzalez-Cabrera, Konrad Lorenz Institute for Evolution and Cognition Research, Austria

Understanding cultural fidelity
Mathieu Charbonneau, Central European University, Hungary

Cultural fidelity. More food for thoughts

Chiara Elettra Ferrario, University of Münster, Germany

Culture without high-fidelity copying

Alberto Acerbi, Eindhoven University of Technology, Netherlands

8 JULY
MON

KRISTINE BONNEVIES HUS

AD 1

AD 2

AD 3

S 2203A

16:30-
18:00

TRADITIONAL SESSION

Rethinking transnationalism in the anthropological and genetic study of human populations: Concepts of race, caste, and tribe, part II

ID PRIZE CANDIDATE

Organizer: Jaehwan Hyun, MPIWG, Germany
Chair: Soraya de Chadarevian, UCLA, USA

Transnational routes and knowledge transformation in the intersection of anthropology and genetics: "Race", "caste" and "tribes" in German-Indian connections (1927–1970)

Thiago Pinto Barbosa, Leibniz-Zentrum Moderner Orient, Germany

From Konketsuji to Nisei: Human adaptability research and the making of Japanese Americans, 1945–1975

Jaehwan Hyun, MPIWG, Germany

Iran as ethnic homeland or racial crossroads: Indian and Japanese approaches to Iranian genetics

Elise Burton, University of Cambridge, UK

TRADITIONAL SESSION

Rethinking foundational assumptions about the "local," "global," "postcolonial," and "transnational" in science: Part III: Coming together and "mutual influencing" in local histories of biology and the life sciences

ID PRIZE CANDIDATE

Organizer: William Leeming, OCAD University, Canada; Ana Baharona, Universidad Nacional Autónoma de México, Mexico
Chair: Ana Baharona, Universidad Nacional Autónoma de México, Mexico

Fauna in Serra do Japi and Mocóca, São Paulo, Brazil: From 19th century naturalists to 20th century scientific chronicles
Eleonore Zuhnara Freire Setz, Universidade Estadual de Campinas, Brazil & Fazenda Boiada

Starting-up biology: BGI and the making of life in Shenzhen
Hallam Stevens, Nanyang Technological University, India

TRADITIONAL SESSION

Articulating ancestors in the molecular age, part II

ID PRIZE CANDIDATE

Organizer: Michael R. Dietrich, University of Pittsburgh, USA
Chair: Michael R. Dietrich

The "microbialization" of ancestry: Culture collections and the chemotaxonomically modified "tree of life"

Alexander Waszynski, Technische Universität Braunschweig, Germany; Nicole C. Karafyllis, Technische Universität Braunschweig, Germany

(Re)producing mtEve: Recognition work in the Wilson Lab
Marina DiMarco, University of Pittsburgh, USA

The genitization of "the Khazar controversy"
Snait B. Gissis, Tel Aviv University, Israel

INDIVIDUAL PAPERS SESSION

STS and environmentalism

Chair: Susanne Bauer, University of Oslo, Norway

Engineering regeneration in corals
Elis Jones, University of Exeter, UK

Preserving the evolvability of what? Biological conservation and the objects of persistence
Richard Figueroa, University of Utah, USA

How to look at burrows and dams? Proposing an artistic field experiment to engage with the beaver question
Clemens Driessen, Wageningen University, Netherlands

8 JULY
MON

KRISTINE BONNEVIES HUS

S 2621

S 3203

S 3213

S 3508

16:30-
18:00

INDIVIDUAL PAPERS SESSION

Synthesis and modularity

The modern evolutionary synthesis: A radical reformulation of a structurally flawed paradigm
Koen B. Tanghe, UGENT, Belgium

Is there a unique zero-force law in evolutionary biology?
Michael Goldsby, Washington State University, USA; Aleta Quinn, University of Idaho, USA

INDIVIDUAL PAPERS SESSION

Natural history and molecular biology

Staging of the natural sciences, or the making of young naturalists (Spain, 1960-1970s)
Carlos Taberner, Universidad Autónoma de Barcelona, Spain

Schrödinger's *What is life?* 75 years on
Daniel J. Nicholson, Konrad Lorenz Institute for Evolution and Cognition Research, Austria

The discovery of RNA splicing at 40: From public memory to epistemic justice
Pnina Geraldine Abir-Am, Brandeis University, USA

INDIVIDUAL PAPERS SESSION

Modeling practices

How the choice of model phenomenon matters: Exploring an understudied topic in the history and philosophy of the life sciences
Robert Meunier, University of Kassel, Germany; Saliha Bayir, University of Kassel, Germany

Are model organisms like theoretical models?
Veli-Pekka Parkkinen, University of Bergen, Norway

Forms and limits of reductionism in stem cell research
Anja Pichl, Bielefeld University, Germany

INDIVIDUAL PAPERS SESSION

Mental ontologies

What does it take to be a psychological primitive? Separating innateness from foundationalism
Dominie Dessaix, Australian National University, Australia

Carving brains: are modules and mechanisms the same?
Aida Roige, University of Maryland, USA

Epistemic injustice in psychiatry
Megan Delehanty, University of Calgary, Canada

8 JULY
MON

KRISTINE BONNEVIES HUS

S 4424

S 4613

S 4619

16:30-
18:00

DIVERSE FORMAT SESSION

Animal consciousness, part II

Organizer: Jonathan Birch, London School of Economics and Political Science, UK
Chair: Simona Ginsburg, Open University of Israel, Israel

Participants:
David Rudrauf, University of Geneva, Switzerland

Panel discussion

TRADITIONAL SESSION

The challenges of opposing intelligent design and creationism

Organizer: Martin Potschka, Independent Scholar, Austria
Chair: Michael Ruse, Florida State University, USA

Can physics account for biology? Intelligent design as anti-reductionism gone wild
Taner Edis, Truman State University, USA

Intelligent design would modify but not replace Neodarwinian logic in evolution
Martin Potschka, Independent Scholar, Austria

Methodological naturalism and the truth seeking objection
Erkki Vesa Rope Kojonen, University of Helsinki, Finland

TRADITIONAL SESSION

Fidelity in cultural evolution, part II

Organizer: Ivan Gonzalez-Cabrera, Konrad Lorenz Institute for Evolution and Cognition Research, Austria
Chair: Chiara Elettra Ferrario, University of Münster, Germany

High-fidelity transmission of social norms
Ivan Gonzalez-Cabrera, Konrad Lorenz Institute for Evolution and Cognition Research, Austria

Mechanisms of propensity fidelity embodied in musical practices
Alejandro Villanueva, National Autonomous University of Mexico, Mexico & Konrad Lorenz Institute for Evolution and Cognition Research, Austria

Stability and dynamics of multicultures

Harold P. de Vladar, Konrad Lorenz Institute for Evolution and Cognition Research, Austria & Hungarian Academy of Sciences, Hungary; Eörs Szathmáry, Parmenides Foundation & Center for the Conceptual Foundations of Science, Germany

ID PRIZE CANDIDATE

8 JULY
MON

KRISTINE BONNEVIES HUS
S 4512

UNIVERSITY
AULA

12:30-
14:30

LUNCH EVENT

**ISHPSSB
Council
Meeting**

Organizer: Marsha L. Richmond
(President) and ISHPSSB
Executive Council

Participants:

Marsha L. Richmond, Rachel
Ankeny, Laura Perini, Greg
Radick, Edna Suárez-Díaz,
Sophia Efstathiou, Ingo Brigandt,
Nick Hopwood, Roberta
Millstein, Sarah Richardson,
Ageliki Lefkakitou

18:30-
20:00

KEYNOTE LECTURE

Fern Wickson

Lessons learned from water
fleas, whales and bees: A
journey into environmental
controversies in the search
for sustainable food

INTRODUCTION:

Edvard Munch's art of science
Patricia G. Berman

TUESDAY

9 JULY TUE

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

S 2621

S 3203

S 3213

S 3508

S 4424

S 4512

S 4613

S 4619

GEORG SVERDRUPS HUS
SM U.ROM 1

08

REGISTRATION
Please register
in the lobby

09:00

TRADITIONAL SESSION
New historical and philosophical perspectives on quantitative genetics, part I

TRADITIONAL SESSION
Entangled roots: The relationship between biology and values from bioethics to biopolitics, part I

TRADITIONAL SESSION
Organism naming practices in and out of biology, part I

INDIVIDUAL PAPER SESSION
Biological organisation

INDIVIDUAL PAPER SESSION
Gendering bodies

INDIVIDUAL PAPER SESSION
Evolution's history

TRADITIONAL SESSION
The paleontological science of form: Between mechanical adaptation and structural constraints

TRADITIONAL SESSION
The many faces of epistemic tools, part I

INDIVIDUAL PAPER SESSION
Process biology

INDIVIDUAL PAPER SESSION
Teaching and the history of biology

INDIVIDUAL PAPER SESSION
Evolution and the human mind?

TRADITIONAL SESSION
Astrobiology: Life, ethics and policy

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

COFFEE BREAK

11:00

TRADITIONAL SESSION
New historical and philosophical perspectives on quantitative genetics, part II

TRADITIONAL SESSION
Entangled roots: The relationship between biology and values from bioethics to biopolitics, part II

TRADITIONAL SESSION
Organism naming practices in and out of biology, part II

INDIVIDUAL PAPER SESSION
Biology and language

INDIVIDUAL PAPER SESSION
Teaching and the history of biology

INDIVIDUAL PAPER SESSION
Evolution's history

TRADITIONAL SESSION
Moving past the naturalism-normativism dichotomy in philosophy of medicine

INDIVIDUAL PAPER SESSION
Process ontologies

INDIVIDUAL PAPER SESSION
Family and biology

TRADITIONAL SESSION
Revisiting organ culture: History, concepts, technologies, part I

TRADITIONAL SESSION
Astrobiology: Plausibility and astrobiology

DIVERSE FORMAT SESSION
Doing philosophy through performance

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

LUNCH BREAK

12:00

LUNCH EVENT
Mentoring Groups Meeting

14:00

TRADITIONAL SESSION
Idealizations in computational neuroscience: Facticity, pragmatics and the coding heuristics

TRADITIONAL SESSION
The statistalist-causalist debate: New contributions

DIVERSE FORMAT SESSION
Exogenous homologues and experimental graduate pedagogy: Or, how to write a paper in a day

INDIVIDUAL PAPER SESSION
Gender and biology

DIVERSE FORMAT SESSION
Reassessing the role of narratives in psychiatry

DIVERSE FORMAT SESSION
Representing protein dynamics

DIVERSE FORMAT SESSION
What's new in the new mechanical philosophy? Book symposium with Stuart Glennan

INDIVIDUAL PAPER SESSION
Risk

DIVERSE FORMAT SESSION
The psyche and the life sciences

TRADITIONAL SESSION
Revisiting organ culture: History, concepts, technologies, part II

TRADITIONAL SESSION
Dehumanization in connection with biological determinism, anthropomorphism, and essentialism

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

ID PRIZE CANDIDATE

COFFEE BREAK

16:00

KBH, LOBBY

BREAKS
Coffee is served in the lobby of Kristine Bonnevie hus

GSH, LOBBY

18:00

19:00

MIXED MEDIA AND POSTER PRESENTATIONS
Mixed media and poster session

GSH, AUDITORIUM 1

16:30

KEYNOTE LECTURE
Gísli Pálsson
Epistemic landscapes for the century of life

9 JULY
TUE

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

09:00-
10:30

TRADITIONAL SESSION

New historical and philosophical perspectives on quantitative genetics, part I

Organizer: Davide Serpico, University of Genoa, Italy
Chair: Gregory Radick, University of Leeds, UK

A reanalysis of Bateman's data
Thierry Hoquet, University Paris Nanterre, France

The legacy of cybernetics on quantitative and qualitative issues in the post-genomic era
Flavia Fabris, Konrad Lorenz Institute for Evolution and Cognition Research, Austria

How a theory of phenotypes became a theory of genotypes and what this meant for genetics
Davide Serpico, University of Genoa, Italy

TRADITIONAL SESSION

Entangled roots: The relationship between biology and values from bioethics to biopolitics, part I

Organizer: David Suárez Pascal, UNAM, Mexico
Chair: David Suárez Pascal

Political regulation of recombinant DNA research in 1980s Germany: Responsibility and knowledge
Anna Klassen, Friedrich-Schiller-Universität Jena, Germany

The forgetting of the organism, the forgetting of experience: Values in conservation biology
Gabriela Klier, CONICET – Universidad Nacional de Rio Negro, Argentina; Constanza Casalderrey, CONICET – Universidad Nacional de Rio Negro, Argentina

What can species do?
Matthew K. Chew, Arizona State University, USA

ID PRIZE CANDIDATE

TRADITIONAL SESSION

Organism naming practices in and out of biology, part I

Organizer: Sabina Leonelli, University of Exeter, UK
Chair: Robert Montoya, Indiana University Bloomington, USA

Naming, ontology and translation: A case study from the Laplandic highlands
Staffan Müller-Wille, University of Exeter, UK

Informal and formal lichen naming practices
Catherine Kendig, Michigan State University, USA

From golden bum fly to scaptia beyonceae: New species and naming practices down under
Rachel A. Ankeny, University of Adelaide, Australia

ID PRIZE CANDIDATE

INDIVIDUAL PAPER SESSION

Biological organisation

Organizational etiological teleology: A selected-effect approach to biological self-regulation
Cristian Saborido, UNED, Spain; Javier Gonzalez de Prado, UNED, Spain

Agential niche construction
Bendik Hellem Aaby, KU Leuven, Belgium; Hugh Desmond, KU Leuven, Belgium

Microbial signaling
Marc Artiga, Universitat de València, Spain

9 JULY
TUE

KRISTINE BONNEVIES HUS
S 2621

S 3203

S 3213

S 3508

09:00-
10:30

INDIVIDUAL PAPER SESSION

Gendering bodies

Chair: Siobhan Guerrero Mc Manus, National Autonomous University of Mexico, Mexico

The womb and the war: The construction of women's body and the conscription of women to military service
Erela Teharlev Ben-Shachar, Bar-Ilan University and Open University, Israel

Materializing trans identities: A dialogue between the new biology and the new feminist materialisms
Leah Daniela Muñoz Contreras, National Autonomous University of Mexico, Mexico

Be fruitful and multiply: Fitness and health in evolutionary mismatch and clinical research
Rick Morris, University of California, USA

INDIVIDUAL PAPER SESSION

Evolution's history

We need to talk about Richard Owen: A contextual analysis of Owen's period in the Royal College of Surgeons (1827–1856)
Daniela Scavo, University College of London, UK

Wallace's 1858 essay on natural selection: Immediate and remote contexts
Michael Jonathan Sessions Hodge, University of Leeds, UK

The concept of the cell as an active conception of life: The case study of Haeckel, his monism and his monera
Caroline Angleraux, Université Paris 1 Panthéon-Sorbonne, France & Università degli Studi di Padova, Italy

TRADITIONAL SESSION

The paleontological science of form: Between mechanical adaptation and structural constraints

Organizer: Marco Tamborini, Technische Universität Darmstadt, Germany
Chair: Joyce Havstad, Oakland University, USA

Challenging the adaptationist paradigm: Morphogenesis, constraints, and constructions
Marco Tamborini, Technische Universität Darmstadt, Germany

Growth, form and evolution: Stephen Jay Gould before (and after) punctuated equilibria
Max W. Dresow, Minnesota Center for Philosophy of Science, USA

The presuppositions of paleontology: Some methodological remarks on necessity, possibility, and double contingency
Mathias Gutmann, Karlsruhe Institute of Technology, Germany

ID PRIZE CANDIDATE

TRADITIONAL SESSION

The many faces of epistemic tools, part I

Organizer: Chia-Hua Lin, University of South Carolina, USA
Chair: Chia-Hua Lin, University of South Carolina, USA

Models as epistemic tools in the engineering sciences
Mieke Boon, University of Twente, Netherlands

Data analysis methods: Tools or techniques?
Jessey Wright, Stanford University, USA

A transcendental argument for realism: The metaphysics of tool development
Rick Shang, Washington University of St. Louis, USA

ID PRIZE CANDIDATE

9 JULY
TUE

KRISTINE BONNEVIES HUS
S 4424

S 4512

S 4613

S 4619

09:00-
10:30

INDIVIDUAL PAPER SESSION

Process biology

Chair: Emily Herring, University of Leeds, UK

Thou doth process too much: Why process ontology of biology should halt the war on machines and learn to love technology

Tyler David Price Brunet, University of Cambridge, UK

Susanne K. Langer's process philosophy of biology

Derek D. Turner, Connecticut College, USA

Changing the perspective in the study of social learning: From "transmission of information" to "relational developmental process"

Murillo Pagnotta, University of St Andrews, UK

INDIVIDUAL PAPER SESSION

Teaching and the history of biology

Chair: Jorge Armando Romo Bonilla, UNAM, Mexico

The contributions of George Newport (1803–1854) to the studies on animal reproduction and possibilities for science teaching

Natália Abdalla Martins, University of São Paulo, Brazil; Maria Elice de Brzezinski Prestes, University of São Paulo, Brazil

Scientific conceptions of race and their impact on pictorial representations of Homo sapiens in Mexico

Erica Torrens Rojas, UNAM, Mexico

Ecology of orchid pollination and scientific explanation: The case study of deception strategy from Darwinian botanists till the current scientific results

Antonio Danese, University of Padua, Italy

INDIVIDUAL PAPER SESSION

Evolution and the human mind?

Questioning our evolutionary loneliness: Archaic hominin admixture through a philosophical lens

Andra Meneganzin, University of Padua, Italy; Telmo Pievani, University of Padua, Italy

Investigating animal minds from the perspective of mental health

Kate Nicole Hoffman, University of Pennsylvania, USA

Biological functions of episodic memory

Arieh Schwartz, University of California, Davis, USA

TRADITIONAL SESSION

Astrobiology: Life, ethics and policy

ID PRIZE CANDIDATE

Organizer: Kelly C. Smith, Clemson University, USA

Chair: Kelly C. Smith, Clemson University, USA

Ethical obligations towards extraterrestrial life

Gonzalo Munévar, Lawrence Technological University, USA

Towards a family resemblance definition of "Life"

Erik Persson, Lund University, Sweden

To contact or not to contact? Ethics, risk, and public policy in the METI debate

Kelly C. Smith, Clemson University, USA

9 JULY
TUE

GEORG SVERDRUPS HUS
STORT MØTEROM

09:00-
10:30

MIXED MEDIA AND POSTER PRESENTATION

Epistemic experimentation: Tools to evolve research practices

ID PRIZE CANDIDATE

Livio Riboli-Sasco, Atelier des Jours à Venir, France and Institut Curie, France; Leïla Perié, Atelier des Jours à Venir, France and Institut Curie, France; Goni Shifron, Atelier des Jours à Venir, France and Institut Curie, France

9 JULY
TUE

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

11:00-
12:30

TRADITIONAL SESSION

New historical and philosophical perspectives on quantitative genetics, part II

Organizer: Davide Serpico, University of Genoa, Italy
Chair: Gregory Radick, University of Leeds, UK

Data madness and quantified heredity
Theodore M. Porter, University of California, USA

Degeneration and victorian cultural history: The surprising challenge from the new historiography of quantitative genetics
Gregory Radick, University of Leeds, UK

How a focus on intelligence has shaped the nature-nurture debate
Kate E. Lynch, University of Sydney & Macquarie University, Australia

TRADITIONAL SESSION

Entangled roots: The relationship between biology and values from bioethics to biopolitics, part II

Organizer: David Suárez Pascal, Universidad Nacional Autónoma de México, Mexico
Chair: Matthew K. Chew, Arizona State University, USA

Regeneration, adaptation, and other entangled items at the edge of biological objectivity
David Suárez Pascal, UNAM, Mexico

Making science human: American biologists and the philosophical shift to ethics circa 1920
Judy Johns Schloegel, Independent Scholar

Hawking evolution: How technology favors survival of the weaker
Terry Bristol, Portland State University, USA

ID PRIZE CANDIDATE

TRADITIONAL SESSION

Organism naming practices in and out of biology, part II

Organizer: Beckett Sterner, Arizona State University, USA
Chair: Robert Montoya, Indiana University Bloomington, USA

What's in a name? The globalisation of plant descriptors and its relevance to biological research
Sabina Leonelli, University of Exeter, UK

Taxonomic freedom and nomenclatural governance in the data age
Joeri Witteveen, Utrecht University, Netherlands & University of Copenhagen, Denmark

Biodiversity data stewardship and the future of biological naming
Beckett Sterner, Arizona State University, USA

ID PRIZE CANDIDATE

INDIVIDUAL PAPER SESSION

Biology and language

Evolution of music and language
Anton Killin, Australian National University, Australia

Nested agency
David Kelley, University of Auckland, New Zealand

What can we learn from how a parrot learns to speak like a human? A model for referential communication learning
Shereen Chang, University of Pennsylvania, USA

9 JULY
TUE

KRISTINE BONNEVIES HUS
S 2621

S 3203

S 3213

S 3508

11:00-
12:30

INDIVIDUAL PAPER SESSION

Teaching and the history of biology

You can be Jane Goodall: The history behind today's far-reaching campaigns encouraging K-12 girls to pursue biology careers, 1960s-today
Amy Sue Bix, Iowa State University, USA

From the Cold War to Genomic Era: visual representations of genetics in Mexican high school textbooks
Marco Ornelas Cruces, Universidad Nacional Autónoma de México, Mexico

Students' attitudes towards new genetic technologies: Is there a relationship with students' knowledge of modern genetics and genomics?
Neima Alice Menezes Evangelista, Federal University of Bahia, Brazil;
Charbel Niño El-Hani, Federal University of Bahia, Brazil

INDIVIDUAL PAPER SESSION

Evolution's history

Chair: Thomas F. Hansen, University of Oslo, Norway

"A ripple rather than a revolution"? – John Maynard Smith on Stephen J. Gould's challenges to neo-Darwinism
Helen Piel, University of Leeds and The British Library, UK

The darwinian analogy between artificial and natural selection and its social dimension
Marcos Rodrigues da Silva, University State of Londrina, Brazil

What, if anything, do we know about the history of model building in ecology and population biology in the 1960s?
Steven Orzack, Fresh Pond Research Institute, USA

TRADITIONAL SESSION

Moving past the naturalism-normativism dichotomy in philosophy of medicine

Organizer: Brandon Conley, Virginia Commonwealth University, USA
Chair: Brandon Conley, Virginia Commonwealth University, USA

Coding groups in the mental illness literature
Francis Fairbairn, Cornell University, USA

How to be a naturalist and a social constructivist about disease, part I
Brandon Conley, Virginia Commonwealth University, USA

How to be a naturalist and a social constructivist about disease, part II
Shane Glackin, University of Exeter, UK

TRADITIONAL SESSION

The many faces of epistemic tools, part II

Organizer: Chia-Hua Lin, University of South Carolina, USA
Chair: Mieke Boon, University of Twente, Netherlands

Analogies and tool recruitment in nerve signal research
Tarja Knuuttila, University of Vienna, Austria; Natalia Carrillo-Escalera, Universidad Nacional Autónoma de México, Mexico

Using scientific concepts as investigative tools: Beyond representation and materiality
Eden T. Smith, University of Melbourne, Australia

From foes to friends: Competing research approaches integrated through tool migration
Chia-Hua Lin, University of South Carolina, USA

ID PRIZE CANDIDATE

9 JULY
TUE

KRISTINE BONNEVIES HUS

S 4424

S 4512

S 4613

S 4619

11:00-
12:30

INDIVIDUAL PAPER SESSION

Process ontologies

A novel account of activities
Kalewold Hailu Kalewold,
University of Maryland, USA

**A critical analysis of process
ontology**
William Morgan, The University
of Sheffield, UK

**Materially-continuous gender-
identity: A synthesis of substance
and process ontology**
Daniel Molter, University of
Utah, USA

INDIVIDUAL PAPER SESSION

Family and biology

**Human infants are born into
a social womb: The biosocial
philosophy of Adolf Portmann**
Filip Jaroš, University of Hradec
Králové, Czech Republic

**Pregnancy as an evolved repro-
ductive relation**
Arantza Etxeberria Agiriano,
University of the Basque
Country, Spain; Laura Nuño de
la Rosa, Complutense University
Madrid, Spain

**”The body for family”:
Biopolitics of living donor liver
transplantation in South Korea**
Dae-Cheong Ha, Gwangju
Institute of Science and
Technology, South Korea

TRADITIONAL SESSION

Revisiting organ cul-
ture: History, concepts,
technologies, part I

ID PRIZE CANDIDATE

Organizer: Silvia Caianiello,
National Research Council &
Stazione Zoologica Anton Dohrn,
Italy
Chair: Karl S. Matlin, University
of Chicago and Marine Biological
Laboratory, USA

**Envelope, mechanical support,
microenvironment. The changing
role of the extra-cellular matrix in
Aron Moscona’s research**
Alessandra Passariello, Ben Gurion
University of the Negev, Israel

**Clifford Grobstein and the “wis-
dom of the matrix”**
Silvia Caianiello, National
Research Council & Stazione
Zoologica Anton Dohrn, Italy

**Giuseppe Levi and the question of
growth and form**
Ariane Dröscher, Università degli
Studi di Trento, Italy

TRADITIONAL SESSION

Astrobiology:
Plausibility and
astrobiology

ID PRIZE CANDIDATE

Organizer: Emily Parke,
University of Auckland, New
Zealand
Chair: Christophe Malaterre,
L’Université du Québec à
Montréal, Canada

**Scientific plausibility: Case
studies from origins of life
research**
Christophe Malaterre,
L’Université du Québec à
Montréal, Canada

**Assessing the research pro-
gram(s) of astrobiology**
Carlos Mariscal, University of
Nevada Reno, USA

**Soviet astrobotany: Early exper-
iments in earthly analogues for
Martian life**
Luis Campos, University of New
Mexico, USA

9 JULY
TUE

GEORG SVERDRUPS HUS
STORT MØTEROM

UNDERVISNINGSRUM 1

11:00-
12:30

DIVERSE FORMAT SESSION

Doing philosophy
through performance

Organizer: Sophia Efstathiou,
Norwegian University of Science
and Technology, Norway
Chair: Gemma Anderson,
Independent artist, UK

Participants:
Sophia Efstathiou, Norwegian
University of Science and
Technology, Norway; Joyce
Havstad, Oakland University,
USA; Leah McClimans,
University of South Carolina,
USA

DIVERSE FORMAT SESSION

Unculturable organ-
isms in the big data era

ID PRIZE CANDIDATE

Organizer: Holly Andersen,
Simon Fraser University, Canada
Chair: Holly Andersen, Simon
Fraser University, Canada

Participants:
Anders Kristian Krabberød,
University of Oslo, Norway;
Kathleen Creel, University
of Pittsburgh, USA; Holly
Andersen; Simon Fraser
University, Canada

9 JULY
TUE

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

14:30-
16:00

TRADITIONAL SESSION

Idealizations in computational neuroscience: Facticity, pragmatics and the coding heuristics

ID PRIZE CANDIDATE

Organizer: Daniel Kostic, University Bordeaux Montaigne & University of Paris 1 Panthéon-Sorbonne, France
Chair: Daniel Kostic

Non-causal understanding via spatially embedded networks in the brain

Daniel Kostic, Université Bordeaux Montaigne & University of Paris 1 Panthéon-Sorbonne, France

Pragmatic constraints on transferring models in interdisciplinary science: The case of neuroeconomics

Cédric Brun, Université Bordeaux Montaigne & Université de Bordeaux, France

The eye of the modeler

Nicolas Rougier, Inria Bordeaux Sud-Ouest & Université de Bordeaux, France

TRADITIONAL SESSION

The statisticalist-causalist debate: New contributions

Organizer: Adam Krashniak, Tel Aviv University, Israel
Chair: André Ariew, University of Missouri, USA

Selection and adaptedness

Adam Krashniak, Tel Aviv University, Israel

Natural selection as a cause and the causes of selection

Philippe Huneman, CNRS & Université Paris 1 Panthéon-Sorbonne, France

Causation and reduction in natural selection

Mohan Matthen, University of Toronto, Canada

DIVERSE FORMAT SESSION

Exogenous homologies and experimental graduate pedagogy: Or, how to write a paper in a day

ID PRIZE CANDIDATE

Organizer: Matt Haber, University of Utah, USA
Chair: Matt Haber, University of Utah, USA

Participants:

Matt Haber, University of Utah, USA; University of Utah Philosophy of Biology Lab Group, University of Utah, USA; Derek Halm, University of Utah, USA

INDIVIDUAL PAPER SESSION

Gender and biology

Chair: Thierry Hoquet, University Paris Nanterre, France

Does every cell have a sex? Four approaches

Sarah Richardson, Harvard University, USA

Gender and the measurement of fertility: A case study in critical metrology

Marion Boulicault, Massachusetts Institute of Technology, USA

Practices of comparison in early molecular genetics

Rebecca Mertens, Bielefeld University, Germany

9 JULY
TUE

KRISTINE BONNEVIES HUS
S 2621

S 3213

S 3508

S 4424

14:30-
16:00

DIVERSE FORMAT SESSION

Reassessing the role of narratives in psychiatry

Organizer: Nina Atanasova, The University of Toledo, USA
Chair: Shane Glackin, University of Exeter, UK

Participants:

Nina Atanasova, The University of Toledo, USA; Lilia Gurova, New Bulgarian University, Bulgaria; Isabella Sarto-Jackson, Konrad Lorenz Institute for Evolution and Cognition Research, Austria; Paola Hernández-Chávez, University of Pittsburgh, USA

DIVERSE FORMAT SESSION

Representing protein dynamics

ID PRIZE CANDIDATE

Organizer: John Dupre, University of Exeter, UK
Chair: John Dupre, University of Exeter, UK

Participants:

John Dupre, University of Exeter; Gemma Anderson, University of Exeter; Jonathan J. Phillips, University of Exeter

DIVERSE FORMAT SESSION

What's new in the new mechanical philosophy? Book symposium with Stuart Glennan

Organizer: Lena Kästner, Saarland University, Germany
Chair: Carl Craver, Washington University in St. Louis, USA

Participants:

Lena Kästner, Saarland University, Germany; Beate Krickel, Ruhr-University Bochum, Germany; Dingmar van Eck, Amsterdam University, Netherlands and Ghent University, Belgium

INDIVIDUAL PAPER SESSION

Risk

Epidemiologic evidence: Use at your "own risk"?

Jonathan Fuller, University of Toronto, Canada

Dealing with genetic uncertainty: Risks, errors, and value

Anthony P. Smith, University of Utah, USA

Shallow predictions vs. mechanistic predictions

Viorel Pâslaru, University of Dayton, USA

9 JULY
TUE

KRISTINE BONNEVIES HUS

\$ 4512

\$ 4613

\$ 4619

14:30-
16:00

DIVERSE FORMAT SESSION

The psyche and the life sciences

Organizer: Håvard Friis Nilsen, Ostfold University College, Norway
Chair: Håvard Friis Nilsen, Ostfold University College, Norway

Participants:
Anna Lindemann, Sigmund Freud University, Austria;
Håvard Friis Nilsen, Østfold University College, Norway

TRADITIONAL SESSION

Revisiting organ culture: History, concepts, technologies, part II

ID PRIZE CANDIDATE

Organizer: Silvia Caianiello, National Research Council & Stazione Zoologica Anton Dohrn, Italy
Chair: Ariane Dröscher, Università degli Studi di Trento, Italy

Functional epithelial cells in culture

Karl S. Matlin, University of Chicago & Marine Biological Laboratory, USA

Entangling morphology and physiology: The trajectory of simple and complex systems of cultured cells in 1980's research on cytoskeleton-environment interactions

Hanna Lucia Worliczek, University of Vienna, Alpen-Adria-Universität Klagenfurt, Austria & Marine Biological Laboratory, USA

From organs to single cell, and back

Denis Thieffry, IBENS, France

TRADITIONAL SESSION

Dehumanization in connection with biological determinism, anthropomorphism, and essentialism

ID PRIZE CANDIDATE

Organizer: Maria Kronfeldner, Central European University, Hungary; Erika Milam, Princeton University, USA; Rohan Deb Roy, University of Reading, UK
Chair: Rob Wilson, La Trobe University, Australia

The dehumanization of humanity and critiques of biological determinism

Erika Milam, Princeton University, USA

The white ant's burden: Anthropomorphism, dehumanization, and British colonialism in South Asia

Rohan Deb Roy, University of Reading, UK

Essentialism and dehumanization

Maria Kronfeldner, Central European University, Hungary

9 JULY
TUE

GEORG SVERDRUPS HUS
LOBBY

18:00-
20:00

MIXED MEDIA AND POSTER PRESENTATION

Mixed media and poster session

Monster mash: History and practice of creature design
Kristine Grønning Ericson, Yale University, USA

An analysis of Louis Guillaume Figuier's (1819–1894) contestation on the experiments of Claude Bernard (1813–1878)
Alan Dantas dos Santos Felisberto, University of São Paulo, Brazil; Silvia Fernanda de Mendonça Figueirôa, University of Campinas, Brazil

Irrational expectations: Rationality and mental health across cultures

Alexander Nicholas Lerner, University of Nevada Reno, USA

The neuroscientific case against retributive justice

Robert C. Robinson, Georgia State University, USA; Stephen G. Morris, City University of New York, USA

An evolutionary game theory approach to sex bias in drug research

Lida Sarafranz, University of Utah, USA

Memento alien, a tale from alterity

Alecks Volta, Independent Artist

Reexamine the individuality of holobionts through a framework of evolutionary transitions

Shijian Yang, Xiamen University, China; Zhiping Cao, Xiamen University, China

9 JULY
TUE

KRISTINE BONNEVIES HUS
S 4613

GEORG SVERDRUPS HUS
AUDITORIUM 1

12:30-
14:30

LUNCH EVENT

**Mentoring
Groups
Meeting**

Organizers: Isabella Sarto-
Jackson, Charbel El-Hani
(Education Committee); María
Ferreira Ruiz, Evan Arnet,
Ariel Roffé (Student Advisory
Committee)

Participants:
Guido Caniglia, Charbel El-Hani,
Arantza Etxeberria, Sabina
Leonelli, Thomas Pradeu, Joeri
Witteveen, Laura Nuno de la
Rosa Garcia

16:30-
18:00

KEYNOTE LECTURE

Gísli Pálsson

**Epistemic landscapes
for the century of life**

WEDNESDAY

08:00	REGISTRATION Please register in the lobby											
09:00	TRADITIONAL SESSION Cultures of care in animal research <small>ID PRIZE CANDIDATE</small>		DIVERSE FORMAT SESSION Roundtable on historical, philosophical, and interdisciplinary writing & publishing	INDIVIDUAL PAPER SESSION Ethics and medical practice	INDIVIDUAL PAPER SESSION Disease	INDIVIDUAL PAPER SESSION Cultural evolution	INDIVIDUAL PAPER SESSION Cultural studies of biology	INDIVIDUAL PAPER SESSION Mechanisms and causes in biology		DIVERSE FORMAT SESSION Digital history and philosophy of science: The reconstruction of scientific phylomemories as a tool for the study of the life sciences <small>ID PRIZE CANDIDATE</small>	TRADITIONAL SESSION Cell theory, evolutionary theory, and the concept of individuality	TRADITIONAL SESSION The role of non-epistemic values in scientific classification, part I
10:00	COFFEE BREAK											
11:00	DIVERSE FORMAT SESSION Precision biology: Concepts and measurements	TRADITIONAL SESSION Concepts and understanding in ecology, part II	INDIVIDUAL PAPER SESSION Race in history	TRADITIONAL SESSION New narratives in the history, philosophy, and social study of biological engineering <small>ID PRIZE CANDIDATE</small>	INDIVIDUAL PAPER SESSION Disease	INDIVIDUAL PAPER SESSION Natural selection and explanation	INDIVIDUAL PAPER SESSION Evolution and morality	TRADITIONAL SESSION Pain, care and killing in animal research <small>ID PRIZE CANDIDATE</small>	INDIVIDUAL PAPER SESSION Scientific discovery in context		TRADITIONAL SESSION Reconstitution as a more inclusive way of inheritance and its relation to current debates: Small RNAs, holobionts, and niche construction <small>ID PRIZE CANDIDATE</small>	TRADITIONAL SESSION The role of non-epistemic values in scientific classification, part II
12:00	LUNCH BREAK											
12:00	LUNCH EVENT KBH, AUDITORIUM 3 Graduate Students General Meeting											
13:00	LUNCH EVENT Membership Development Committee Meeting											
14:00	TRADITIONAL SESSION Is organismic agency a mere heuristic?	TRADITIONAL SESSION Function and health in ecology, part I	DIVERSE FORMAT SESSION Philosophy, history, and social studies of the life sciences: A tribute to Jean Gayon, part I	INDIVIDUAL PAPER SESSION Ethics of medical genomics	INDIVIDUAL PAPER SESSION The microbiome	INDIVIDUAL PAPER SESSION Explanations all over the place	INDIVIDUAL PAPER SESSION Evolution and Society	TRADITIONAL SESSION New considerations on inheritance, heredity and transmission <small>ID PRIZE CANDIDATE</small>	INDIVIDUAL PAPER SESSION The biology of philosophy		TRADITIONAL SESSION Exploring biological ontologies through the interdisciplinary lens of ethnobiology <small>ID PRIZE CANDIDATE</small>	TRADITIONAL SESSION Beyond mendelians and biometricians <small>ID PRIZE CANDIDATE</small>
15:00	COFFEE BREAK											
16:00	TRADITIONAL SESSION Averages, templates and types in past and present biosciences <small>ID PRIZE CANDIDATE</small>	TRADITIONAL SESSION Function and health in ecology, part II	DIVERSE FORMAT SESSION Philosophy, history, and social studies of the life sciences: A tribute to Jean Gayon, part II	INDIVIDUAL PAPER SESSION Ethics of medical genomics	INDIVIDUAL PAPER SESSION The investigation of genome structure	INDIVIDUAL PAPER SESSION Stories, narrative and explanation	INDIVIDUAL PAPER SESSION Evolution and cooperation	TRADITIONAL SESSION On the origin of genes (by means of natural selection)	INDIVIDUAL PAPER SESSION The biology of philosophy		TRADITIONAL SESSION Contesting entomological practices	TRADITIONAL SESSION Social interactions: Contemporary issues <small>ID PRIZE CANDIDATE</small>

KBH, LOBBY

BREAKS
Coffee is served in the lobby of Kristine Bonnevie hus

10 JULY
WED

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

09:00-
10:30

TRADITIONAL SESSION

Cultures of care in animal research

ID PRIZE CANDIDATE

Organizer: Michael R. Dietrich, University of Pittsburgh, USA
Chair: Rachel Ankeny, University of Adelaide, Australia

Culturing care: Insights from the laboratory animal house
Beth Greenhough, University of Oxford, UK; Emma Roe, University of Southampton, UK

Keeping animal research practices in Australia honest: A discussion of transparency, translation and replacement in animal research
Karina Burns, University of Adelaide, Australia

Creating chimeras: Ethics and monster-making in developmental biology
Michael R. Dietrich, University of Pittsburgh, USA; Nathan Crowe, University of North Carolina, USA

TRADITIONAL SESSION

Concepts and understanding in ecology, part I

Organizer: Rose Trappes, Bielefeld University, Germany; Philipp Haueis, Bielefeld University, Germany
Chair: Philipp Haueis, Bielefeld University, Germany

Defining the niche for niche construction
Rose Trappes, Bielefeld University, Germany

On implicitly defining biodiversity
James Justus, Florida State University, USA

The concept of hierarchy and the problem of scales in ecosystem modeling
Philipp Haueis, Bielefeld University, Germany

DIVERSE FORMAT SESSION

Roundtable on historical, philosophical, and interdisciplinary writing & publishing

Organizer: ISHPSSB Education Committee
Chair: Isabella Sarto-Jackson, Biological Theory

Participants: Rachel Ankeny, Studies in History and Philosophy of Biological and Biomedical Sciences; Giovanni Boniolo, History and Philosophy of the Life Sciences; Christopher H. Eliot, Philosophy, Theory, and Practice in Biology; Ties Nijssen, Springer; Karen Rader, Journal of the History of Biology; Marsha L. Richmond, Journal of the History of Biology

INDIVIDUAL PAPER SESSION

Ethics and medical practice

Chair: Leah McClimans, University of South Carolina, USA

Balancing both the philosophical and practical problems that arise from advanced pediatric medical technologies
Sarah M. Roe, Southern Connecticut State University, USA

Research ethical requirements and standards in the archiving of eyewitness documents
Felicitas Söhner, Heinrich-Heine-Universität Düsseldorf, Germany

The exposome as a postgenomic repertoire: Exploring scientific change in contemporary epidemiology
Stefano Canali, Leibniz Universität Hannover, Germany

10 JULY
WED

KRISTINE BONNEVIES HUS
S 2621

S 3213

S 3213

S 3508

09:00-
10:30

INDIVIDUAL PAPER SESSION

Disease

A historical epistemology for contemporary phage therapy
Thomas Bonnin, Université de Bordeaux, France

Against naturalistic theories of disease
Roger Sansom, Texas A&M University, USA

Understanding cancer progression and its control: An analysis of immune contribution to metastasis causality
Elena Rondeau, Immuno-ConcEpT laboratory, France; Thomas Pradeu, Immuno-ConcEpT laboratory, France

INDIVIDUAL PAPER SESSION

Cultural evolution

Chair: Sarah Richardson, Harvard University, USA

Cultural evolutionary theory needs an account of cultural information
Alejandro Gordillo-García, KU Leuven, Belgium

Does cultural selection have to be blind?
Ellen Clarke, University of Leeds, UK

What can cultural selection explain?
Azita Chellappoo, University of Cambridge, UK

INDIVIDUAL PAPER SESSION

Cultural studies of biology

Chair: Clemens Driessen, Wageningen University, Netherlands

Darwin and disenchantment
Bárbara Jiménez-Pazos, University of Leeds, UK

A Darwinian account of war literature
Andrew Moffatt, Florida State University, USA

Science "Fiction": The future according to the founders of modern biology
Luis Felipe Eguiarte Souza, University of Minnesota, USA

INDIVIDUAL PAPER SESSION

Mechanisms and causes in biology

Chair: Konstantinos Mekios, Stonehill College, USA

Mechanisms as causal pathways
Stavros Ioannidis, University of Athens, Greece

Contingency as a causal force (or not)
Alison K. McConwell, Stanford University, USA

Constitutive relevance discovery without interventions: Boole meets Bayes nets
Alexander Gebharter, University of Groningen, Netherlands

10 JULY
WED

KRISTINE BONNEVIES HUS

§ 4512

§ 4613

§ 4619

09:00-
10:30

DIVERSE FORMAT SESSION

Digital history and philosophy of science: The reconstruction of scientific phylomemories as a tool for the study of the life sciences

ID PRIZE CANDIDATE

Organizer: Thibault Racovski, CNRS/IHPST, France
Chair: Bernd Amann, Sorbonne University, France

Participants: Bernd Amann, Sorbonne University, France; David Chavalarias, CNRS/EHES/ISC-PIF, France; Ian Jeantet, University of Rennes 1, France; Thibault Racovski, CNRS/IHPST, France

TRADITIONAL SESSION

Cell theory, evolutionary theory, and the concept of individuality

Organizer: Sherrie L. Lyons, Union College, USA
Chair: Douglas Allchin, University of Minnesota, USA

Thomas Huxley's "upon animal individuality" and his critique of the cell theory
Sherrie L. Lyons, Union College, USA

John T. Bonner and the holobiont life cycle
Scott Gilbert, Swarthmore College, USA

Neo-energid model of eukaryotic cell: Integration of composite individuality
František Baluška, University of Bonn, Germany

TRADITIONAL SESSION

The role of non-epistemic values in scientific classification, part I

Organizer: Marc Ereshefsky, University of Calgary, Canada
Chair: David Ludwig, Wageningen University, Netherlands

The role of non-epistemic values for psychiatric classification and biomedical kinds
Ingo Brigandt, University of Alberta, Canada

Joint necessity of values and epistemic considerations: The case of paraoxonase
Stijn Conix, KU Leuven, Belgium

How non-epistemic values can be epistemically beneficial in scientific classification
Soohyun Ahn, University of Calgary, Canada

10 JULY
WED

KRISTINE BONNEVIES HUS

AD 1

AD 2

AD 3

§ 2203A

11:00-
12:30

DIVERSE FORMAT SESSION

Precision biology: Concepts and measurements

Organizer: Ana M. Soto, Tufts University School of Medicine, USA and Centre Cavallès, ENS, France
Chair: Carlos Sonnenschein, Tufts University School of Medicine, USA and Centre Cavallès, ENS, France

Participants: Carlos Sonnenschein, Tufts University School of Medicine, USA and Centre Cavallès, ENS, France; Ana M. Soto, Tufts University School of Medicine, USA and Centre Cavallès, ENS, France; Arnaud Pocheville, Université Toulouse III, France; Maël Montévil, Centre Pompidou, France

TRADITIONAL SESSION

Concepts and understanding in ecology, part II

Organizer: Rose Trappes, Bielefeld University, Germany; Philipp Haueis, Bielefeld University, Germany
Chair: Rose Trappes, Bielefeld University, Germany

What happens when philosophy of science and epistemology takes a closer look into ecological understanding?
Luana Polisel, Federal University of Bahia, Brazil

Understanding ecological theory
Soazig LeBihan, University of Montana, USA

Problems with the comparative approach to hypothesis testing in ecology
Samantha Wakil, University of North Carolina Chapel Hill, USA

INDIVIDUAL PAPER SESSION

Race in history

Chair: Ricardo Roque, University of Lisbon, Portugal

"These primitives, for whom life counts so little": Early social science racial categories, French military doctrine, and the introduction of West Africa combat troops into Europe during the First World War
Joe Lunn, University of Michigan-Dearborn, USA

Anti-essentialist arguments and the "essentialism myth" in the context of pre-Darwinian classification and stereotyping human categories
Edit Talpsepp-Randla, University of Tartu, Estonia

TRADITIONAL SESSION

New narratives in the history, philosophy, and social study of biological engineering

ID PRIZE CANDIDATE

Organizer: Dominic Berry, London School of Economics and Political Science, UK; Janella Baxter, University of Pittsburgh, USA

Chair: Lisa Onaga, Max Planck Institute for the History of Science, Germany

How the narrative of engineering in biology creates epistemic divides
Janella Baxter, University of Pittsburgh, USA

How do you get a project off the ground? Narrating and enacting value in synthetic biology
Robert Smith, University of Edinburgh, UK

Biotech as genre
Dominic Berry, London School of Economics and Political Science, UK

10 JULY
WED

KRISTINE BONNEVIES HUS

S 2621

S 3203

S 3213

S 3508

11:00-
12:30

INDIVIDUAL PAPER SESSION

Disease

The genesis, reception and development of the tumor angiogenesis research program
Adil El Aichouchi, University of Bordeaux, France

Prospects for philosophy of virology
Gregory J. Morgan, Stevens Institute of Technology, USA

Psychic disturbances at organic functions: About an anomaly in the relation between organ and function
Ruy J. Henriquez Garrido, Complutense University of Madrid, Spain

INDIVIDUAL PAPER SESSION

Natural selection and explanation

A new foundation for the force interpretation of evolutionary theory
Victor J. Luque, University of Valencia and UNED, Spain

Catching the protean concept of fitness and its metamorphoses
Nicolas Pastor, IHPST, France

Biology and the lawlike
Richard Creath, Arizona State University, USA

INDIVIDUAL PAPER SESSION

Evolution and morality

Chair: Anthony P. Smith, University of Utah, USA

The human nature of E. O. Wilson: A critical response from dialectical neo-Lamarckism
Alí Yólotl Sánchez Ramírez, UNAM, Mexico

The evolution of moral belief: Support for the Debunker's causal premise
Michael Dale, University of Texas at Austin, USA

Extracting morality from evolution: What a strong evolutionary moral realism means for moral facts
Sam Woolley, University of Auckland, New Zealand

TRADITIONAL SESSION

Pain, care and killing in animal research

ID PRIZE CANDIDATE

Organizer: Tarquin Holmes, London School of Economics, UK
Chair: Michael R. Dietrich, University of Pittsburgh, USA

The sleep of reason? The contested role of anaesthetics as a technology of care at the 1875 Royal Commission on Vivisection
Tarquin Holmes, London School of Economics, UK

It's a fine line between pleasure and pain: Comparing positive and negative animal welfare
Heather Browning, Australian National University, Australia

How researchers construct ethical narratives for negative animal experiences
Rebecca L. Walker, University of North Carolina at Chapel Hill, USA

10 JULY
WED

KRISTINE BONNEVIES HUS

S 4424

S 4613

S 4619

11:00-
12:30

INDIVIDUAL PAPER SESSION

Scientific discovery in context

Theory construction by exploration: From the PaJaMo experiment to the synthesis of protein
Hsiao-Fan Yeh, National Chung Cheng University, Taiwan

Interdisciplinarity and the role of differing conceptual contexts in research programs
Katherine Liu, University of Minnesota, USA

Whither the biosocial? Local epistemic goals and collective interests in integrative biosocial research
Olesya Bondarenko, University of Cambridge, UK

TRADITIONAL SESSION

Reconstitution as a more inclusive way of inheritance and its relation to current debates: Small RNAs, holobionts, and niche construction

ID PRIZE CANDIDATE

Organizer: Sophie Juliane Veigl, University of Vienna, Austria
Chair: Hanna Lucia Worliczek, University of Vienna, Austria

Reconstitution of chromatin modifications: Small RNAs and IAT
Sophie Juliane Veigl, University of Vienna, Austria

Extending reconstitution: Inheritance through population structure among holobionts
Javier Suárez, University of Barcelona, Spain & University of Exeter, UK

Niche construction as a process of wrecking the reconstitution and its consequences for ecological fitness
Adrian Stencel, Jagiellonian University, Poland & ImmunoConcept, France

TRADITIONAL SESSION

The role of non-epistemic values in scientific classification, part II

Organizer: Marc Ereshefsky, University of Calgary, Canada
Chair: David Ludwig, Wageningen University, Netherlands

Human values do and should shape all scientific classifications
Matthew H. Slater, Bucknell University, USA; Matthew Barker, Concordia University, Canada

How to balance contextual and epistemic values in scientific classification
Marc Ereshefsky, University of Calgary, Canada; Thomas Reydon, Leibniz Universität Hannover, Germany

Panel discussion

10 JULY
WED

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

14:30-
16:00

TRADITIONAL SESSION

Is organismic agency a mere heuristic?

Organizer: Hugh Desmond, KU Leuven, Belgium; Philippe Huneman, CNRS, France
Chair: Bendik Aaby, KU Leuven

Agency and environmental novelty
Hugh Desmond, KU Leuven, Belgium

A matter of priorities: Evolution, biology, and agency
Denis Walsh, University of Toronto, Canada

Agency, selection and adaptation: Finding a middle way
Tim Lewens, University of Cambridge, UK

TRADITIONAL SESSION

Function and health in ecology, part I

Organizer: S. Andrew Inkpen, Brandon University, Canada
Chair: W. Ford Doolittle, Dalhousie University, Canada

Ecological functions as contributions to ecosystem resilience
Antoine Dussault, Centre interuniversitaire de recherche sur la science et la technologie (CIRST) & Collège Lionel-Groulx, Canada

Ecological finalism without panglossism: The organizational account facing the challenge of the broad scope of ecological functions
Victor Lefevre, Pantheon-Sorbonne University, France and INCT IN-TREE, Brazil; Charbel El-Hani, Federal University of Bahia and INCT IN-TREE, Brazil

DIVERSE FORMAT SESSION

Philosophy, history, and social studies of the life sciences: A tribute to Jean Gayon, part I

Organizer: Francesca Merlin, CNRS & University of Paris 1 Panthéon-Sorbonne, France
Chair: Edna Suárez Díaz, Universidad Nacional Autónoma de México, Mexico

Participants:
Richard Burian, Virginia Tech, USA; Pierre-Olivier Méthot, Faculté de philosophie, Université Laval, Québec, Canada; David Depew, University of Iowa, USA; Victor Petit, Université de Technologie de Compiègne, France

INDIVIDUAL PAPER SESSION

Ethics of medical genomics

Personalized medicine: A science of the individual?
Sara Green, University of Copenhagen, Denmark

Carrier screening in Israel: Tay Sachs and other genetic disorders
Nurit Kirsh, The Open University of Israel, Israel

Art's take on CRISPR: An argument for artistic complications to the metaphors of genome editing
Nora S. Vaage, Maastricht University, Netherlands

10 JULY
WED

KRISTINE BONNEVIES HUS
S 2621

S 3203

S 3213

S 3508

14:30-
16:00

INDIVIDUAL PAPER SESSION

The microbiome

Chair: Saliha Bayir, University of Kassel, Germany

A farewell to unity: The case for context in host-microbiota research
Joseph Daniel Madison, Mayo Clinic Microbiome Program, USA

The human cognition at the era of the holobiont
Sonia Harzallah Debbabi, Independent scholar, Tunisia

Into the next stage of the microbiome revolution: Impact assessment of microbiome interventions
Eric Desjardins, University of Western Ontario, Canada

INDIVIDUAL PAPER SESSION

Explanations all over the place

Explanations in classical genetics: A model-theoretic account
Pablo Lorenzano, National University of Quilmes & CONICET, Argentina

A novel explanatory strategy in structural biology: Ensemble explanations of protein function
Jacob P. Neal, University of Pittsburgh, USA

A complementary grounding for contrasting topological explanation with mechanistic explanation
Zhang Xin, Peking University, China

INDIVIDUAL PAPER SESSION

Evolution and Society

Chair: Theodore Porter, UCLA, USA

Religious signaling as an evolutionary explanation: What formal modelling can add
Carl Brusse, University of Sydney, Australia

An exploration of the role of technology companies in cultural evolution: A case study of PCR
Louis Scott Cole, University of California, Davis, USA

Is there such a thing as biological altruism?
Topaz Halperin, The Hebrew University of Jerusalem, Israel

TRADITIONAL SESSION

New considerations on inheritance, heredity and transmission

Organizer: Antonine Nicoglou, Université de Tours & IHPST, France
Chair: Jonathan Weitzman and Pauline Andreu, University Paris 7 Denis Diderot, France

Inheritance as a set of evolved and evolving physiological processes
Francesca Merlin, Université Paris 1 Panthéon-Sorbonne, France; Livio Riboli-Sasco, Université Paris 1 Panthéon-Sorbonne, France

Genes and environment relationships in the understandings of inheritance
Antonine Nicoglou, Université de Tours & IHPST, France

Extended heredity and disease transmission
Gaëlle Pontarotti, Université Paris-Diderot & IHPST, France

ID PRIZE CANDIDATE

10 JULY
WED

KRISTINE BONNEVIES HUS
S 4424

S 4613

S 4619

14:30-
16:00

INDIVIDUAL PAPER SESSION

The biology of philosophy

Chair: Dan Molter, University of Utah, USA

B. Spinoza and J. P. Müller: How the Dutch philosopher inspired the father of contemporary physiology
Filip Adolf Albert Buyse, CSMBR, Italy

From infusions to onions: Goethe's theory-building practice
Gábor Á. Zemplén, ELTE GTI & MTA BTK FI, Hungary

Bichat's two lives
Tobias Cheung, Humboldt-University Berlin, Germany

TRADITIONAL SESSION

Exploring biological ontologies through the interdisciplinary lens of ethnobiology

ID PRIZE CANDIDATE

Organizer: David Ludwig, Wageningen University, Netherlands
Chair: Luana Polisei, Federal University of Bahia, Brazil

Inter-ontological dialogue in conservation and intercultural education
Charbel N. El-Hani, Federal University of Bahia, Brazil

Comparative ontology: Exploring the limitations of cross-cultural pluralism
David Ludwig, Wageningen University, Netherlands

The garden, the museum, and the "ontological turn": Ethnobiology's concepts in the mirror of anthropological critique
Francisco Vergara-Silva, Universidad Nacional Autónoma de México, Mexico

TRADITIONAL SESSION

Beyond mendelians and biometricians

ID PRIZE CANDIDATE

Organizer: Yafeng Shan, Tel Aviv University, Israel
Chair: Ehud Lamm, Tel Aviv University, Israel

An overestimated departure: The legendary death of Raphael Weldon
Michael Buttolph, University College London, UK

From the biological world to statistical theories: Nineteenth-century lessons for twenty-first-century philosophy of biology
Charles H. Pence, Université catholique de Louvain, Belgium

Weldon, no biometrician?
Yafeng Shan, Tel Aviv University, Israel

10 JULY
WED

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

16:30-
18:00

TRADITIONAL SESSION

Averages, templates and types in past and present biosciences

ID PRIZE CANDIDATE

Organizer: Abigail Nieves Delgado, Ruhr University Bochum, Germany
Chair: Joeri Witteveen, Utrecht University, Netherlands & University of Copenhagen, Denmark

What is "normal"? Frederik Buytendijks reflections on 1920s animal psychology
Julia Gruevska, Ruhr-University Bochum & Friedrich-Schiller-University Jena, Germany

Cascades of comparability: "Trans-species shuttling strategies" in genomics research
James Lowe, University of Edinburgh, UK

From Galton to Facebook: Producing facial types in the study of human variation and identification
Abigail Nieves Delgado

TRADITIONAL SESSION

Function and health in ecology, part II

Organizer: S. Andrew Inkpen, Brandon University, Canada
Chair: Roberta Millstein, UC Davis, USA

Ecosystem function, dysfunction, and the concepts of disease
Tamar Schneider, University of California, Davis, USA

Dysfunction and health in ecology
S. Andrew Inkpen, Brandon University, Canada

Rivers, humans, and microbes: Ruth Patrick's limnological approach to measuring the health of ecological systems, 1940-1960
Lloyd Ackert, Drexel University, USA

DIVERSE FORMAT SESSION

Philosophy, history, and social studies of the life sciences: A tribute to Jean Gayon, part II

Organizer: Pierre-Olivier Méthot, Université Laval, Québec, Canada
Chair: Edna Suárez Díaz, Universidad Nacional Autónoma de México, Mexico

Participants: Staffan Müller-Wille, University of Exeter, UK; Francesca Merlin, CNRS & Université Paris 1 Panthéon-Sorbonne, France; Philippe Huneman, CNRS & Université Paris 1 Panthéon-Sorbonne, France; Hans-Jörg Rheinberger, Max Planck Institute for the History of Science, Germany

INDIVIDUAL PAPER SESSION

Ethics of medical genomics

Chair: Nora S. Vaage, Maastricht University, Netherlands

Indigeneity within datasets: DNA sequences journeys and genomic representations about the Karitiana people
Carlos Andrés Barragán, University of California, Davis, USA; James R. Griesemer, University of California, Davis, USA

Is it ever morally permissible to select for deafness in one's child?
Jacqueline Mae Wallis, University of Bristol, UK

From biological traces to forensic evidence: A comparative study
Barton Moffatt, Mississippi State University, USA

10 JULY
WED

KRISTINE BONNEVIES HUS

§ 2621

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16:30-
18:00

INDIVIDUAL PAPER SESSION

The investigation of genome structure

Artificial and natural reconstructions of evolution in the study of lateral gene transfer
Cédric Blais, University of King's College & Dalhousie University, Canada

Chromatin landscape, nuclear architecture, and genetic circuits: Integrating multiple perspectives of cell organization and behaviour
Andrew S. Reynolds, Cape Breton University, Canada

Sources of evolutionary contingency and entropy: Chance variation and genetic drift
T. Y. William Wong, University of Cambridge, UK

INDIVIDUAL PAPER SESSION

Stories, narrative and explanation

Chair: Robert Meunier, University of Kassel, Germany

What is "narrative possibility"?
Daniel G. Swaim, University of Pennsylvania, USA

Life stories, life structures, and systems of equations
Jesse Powell, Florida State University, USA

Noise in gene expression and the power of chance in explaining behavior at molecular and cellular levels
Marco Casali, University of Rome, Italy

INDIVIDUAL PAPER SESSION

Evolution and cooperation

Beyond cheating: The emotional component

Jonatan Garcia-Campos, UJED, Mexico; Paola Hernandez-Chavez, University of Pittsburgh, USA

Blind cooperation: The evolution of redundancy via ignorance
Makmiller Pedroso, Towson University, USA

Canguilhem's notion of "milieu" and its relevance for environmental epigenetics
Guillaume Pelletier, Université Laval, Canada

TRADITIONAL SESSION

On the origin of genes (by means of natural selection)

Organizer: Zdenka Brzović, University of Rijeka, Croatia
Chair: Predrag Šustar, University of Rijeka, Croatia

Mechanistic explanation and the "levels problem"
Predrag Šustar, University of Rijeka, Croatia; Zdenka Brzović, University of Rijeka, Croatia

Explanation in molecular biology: The explanatory force of the details
Vito Balorda, University of Rijeka, Croatia

Genes as natural kinds: Against mind-dependence and contextualism
Zdenka Brzović, University of Rijeka, Croatia

10 JULY
WED

KRISTINE BONNEVIES HUS

§ 4424

§ 4613

§ 4619

16:30-
18:00

INDIVIDUAL PAPER SESSION

The biology of philosophy

The hidden mechanisms of life: The transformation of the image of biology through the contributions of Emil du Bois-Reymond
Carlos Hugo Sierra, Open and Distance National University & University of Basque Country, Spain

"Playing with a dog:" Edward Stuart Russell on animal behavior
Kelly Hamilton, Saint Mary's College Notre Dame, USA

Dreaming of a universal biology
Massimiliano Simons, KU Leuven, Belgium

TRADITIONAL SESSION

Contesting entomological practices

Organizer: Dolly Jørgensen, University of Stavanger, Norway
Chair: Dolly Jørgensen

Summerbirds of indescribable beauty: At the margins of Merian's metamorphosis-pictures
André Krebber, University of Kassel, Germany

Entomological entanglements: The controversy over the beaver beetle parasite
Dolly Jørgensen, University of Stavanger, Norway

Obligatory collector and imperial traveller: The entomological practices of Margaret Elizabeth Fountaine between 1892 and 1940
Leore Joanne Green, University of Cambridge, UK

TRADITIONAL SESSION

Social interactions: Contemporary issues

ID PRIZE CANDIDATE

Organizer: Lucia Carvalho Neco, La Trobe University, Australia
Chair: Lucia Carvalho Neco, La Trobe University, Australia

How different are societies? Developing a descriptive model of social complexity
Lucia Carvalho Neco, La Trobe University, Australia

When altruism is no longer altruistic
Jorge Piaia Mendonça Júnior, La Trobe University, Australia

Revisiting the Westermarck Effect
Rob Wilson, La Trobe University, Australia

10 JULY
WED

KRISTINE BONNEVIES HUS
AUDITORIUM 3

\$ 4424

12:30-
1:30

LUNCH EVENT

**Graduate
Students General
Meeting**

Organizers: Maria Ferreira,
Celso Neto, Evan Arnet and Ariel
Roffe

13:30-
14:30

LUNCH EVENT

**Membership
Development
Committee
Meeting**

Organizers: Ingo Brigandt and
Alan Love

Participants:
Tara Abraham, Kele Cable, Ruey-
Lin Chen, Sara Green, Daniel
Hicks, Philip Honenberger,
Siobhan McManus, Staffan
Müller-Wille, Emilie Raymer,
Sarah Richardson, Judy Johns
Schloegel, Emily Schultz, Rick
Shang

THURSDAY

08:00
REGISTRATION
Please register in the lobby

09:00	TRADITIONAL SESSION Networks and the ontology of the theory of evolution by means of natural selection, part I	TRADITIONAL SESSION Revisited & undone: Fresh perspectives on molecules and life in the 20th century, part I	TRADITIONAL SESSION Stability and migration of research strategies within and across different levels of scientific organization, part I <small>ID PRIZE CANDIDATE</small>	DIVERSE FORMAT SESSION Individuals out of interactions: Reproduction, symbiosis and syntrophic consortia	DIVERSE FORMAT SESSION Individuation, process, and scientific practices	INDIVIDUAL PAPER SESSION Humans, animals and research in between	INDIVIDUAL PAPER SESSION Genomics, populations and ethics	INDIVIDUAL PAPER SESSION Science and the public in 20th century biology	INDIVIDUAL PAPER SESSION Evidence	INDIVIDUAL PAPER SESSION Opening epistemic spaces	TRADITIONAL SESSION Unpacking molecular metaphors: Information, programs and codes <small>ID PRIZE CANDIDATE</small>	INDIVIDUAL PAPER SESSION Anthropocene
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10:00
COFFEE BREAK

11:00	TRADITIONAL SESSION Networks and the ontology of the theory of evolution by means of natural selection, part II	TRADITIONAL SESSION Revisited & undone: Fresh perspectives on molecules and life in the 20th century, part II	TRADITIONAL SESSION Stability and migration of research strategies within and across different levels of scientific organization, part II <small>ID PRIZE CANDIDATE</small>	INDIVIDUAL PAPER SESSION Genetics and the public	INDIVIDUAL PAPER SESSION Artificial intelligence	INDIVIDUAL PAPER SESSION Individuals	TRADITIONAL SESSION The concept of the environment in biology: Historical, philosophical, and sociological perspectives, part I <small>ID PRIZE CANDIDATE</small>	TRADITIONAL SESSION Tracing regeneration <small>ID PRIZE CANDIDATE</small>	INDIVIDUAL PAPER SESSION Evidence in context	INDIVIDUAL PAPER SESSION Discovery of structures	INDIVIDUAL PAPER SESSION Theories about biological theories	INDIVIDUAL PAPER SESSION 20th century technologies of control
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12:00
LUNCH BREAK

13:00											LUNCH EVENT ISHPSSB Newly Elected Council Meeting	
14:00						LUNCH EVENT Program Committee Meeting						

15:00	INDIVIDUAL PAPER SESSION Ideas and tools of 20th century biology	INDIVIDUAL PAPER SESSION Levels of organization	INDIVIDUAL PAPER SESSION Process of individuation	DIVERSE FORMAT SESSION Philosophy in an Age of GWAS, Polygenic Prediction, and SNP Heritability <small>ID PRIZE CANDIDATE</small>	TRADITIONAL SESSION The cultivation of the future: Dystopia, utopia, and plants as technologies <small>ID PRIZE CANDIDATE</small>	DIVERSE FORMAT SESSION An interdisciplinary roundtable on: Collecting experiments: Making big data biology <small>ID PRIZE CANDIDATE</small>	TRADITIONAL SESSION The concept of the environment in biology: Historical, philosophical, and sociological perspectives, part II <small>ID PRIZE CANDIDATE</small>	TRADITIONAL SESSION Regeneration across the scales of complex living systems <small>ID PRIZE CANDIDATE</small>	INDIVIDUAL PAPER SESSION Evidence	INDIVIDUAL PAPER SESSION Process of individuation	TRADITIONAL SESSION Conceptual integration in biology	INDIVIDUAL PAPER SESSION Microscopic research
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16:00

KBH, LOBBY

BREAKS
Coffee is served in the lobby of Kristine Bonnevie hus

This event is open to all attendees

16:00

GEORG SVERDRUPS HUS, AD 1

SPECIAL EVENT
General Meeting & Awards Ceremony

Participation with pre-purchased ticket

19:00

SALT

SPECIAL EVENT
Conference dinner

11 JULY
THU

KRISTINE BONNEVIES HUS
AD 1

AD 2

AD 3

S 2203A

09:00-
10:30

TRADITIONAL SESSION

Networks and the ontology of the theory of evolution by means of natural selection, part I

Organizer: François Papale, Université de Montréal, Canada; Sorbonne Université, CNRS & Museum National d'Histoire Naturelle, France
Chair: Philippe Huneman, CNRS & Université Paris 1 Panthéon-Sorbonne, France

Microbiomes to memes and back: ITSNTS theory and a deeper Darwinism
W. Ford Doolittle, Dalhousie University, Canada

Beyond genealogy: How networks enable a modelling of the extended present
Nathalie Gontier, University of Lisbon, Portugal

Redefining units of selections as networks of interactions: An ontological inquiry
François Papale

TRADITIONAL SESSION

Revisited & undone: Fresh perspectives on molecules and life in the 20th century, part I

Organizer: Mathias Grote, Humboldt University, Germany; Lisa Onaga, Max Planck Institute for the History of Science, Germany
Chair: Angela Creager, Princeton University, USA

Where does the history of molecular biology begin? Configuring continuity vs. discontinuity in the historiographies of plant physiology, cell biology, and biochemistry
Daniel Liu, Berlin Institute for Cultural Inquiry, Germany

The power of phosphate: Energy and the "cellular economy" in twentieth-century biochemistry
Gina Surita, Princeton University, USA

Of microscopes and molecules
Soraya de Chadarevian, UCLA, USA

TRADITIONAL SESSION

Stability and migration of research strategies within and across different levels of scientific organization, part I

Organizer: Steve Elliott, Arizona State University, USA; William Bausman, University of Geneva, Switzerland; Caterina Schürch, Ludwig-Maximilians-Universität München, Germany
Chair: Sabina Leonelli, University of Exeter, UK

Making health big data research possible: On "data curation-research" and the development of new digital data re-use practices
Niccolò Tempini, University of Exeter, UK

Research projects and rationales
Steve Elliott, Arizona State University, USA

Making theories work
Caterina Schürch, Ludwig-Maximilians-Universität München, Germany

ID PRIZE CANDIDATE

DIVERSE FORMAT SESSION

Individuals out of interactions: Reproduction, symbiosis and syntrophic consortia

Organizer: Derek Skillings, University of Pennsylvania, USA
Chair: Leonardo Bich, University of the Basque Country, Spain

Participants:
Jonathan Grose, University of Southampton, UK
Derek Skillings, University of Pennsylvania, USA
Leonardo Bich, University of the Basque Country, Spain

11 JULY
THU

KRISTINE BONNEVIES HUS
S 2621

S 3203

S 3213

S 3508

09:00-
10:30

DIVERSE FORMAT SESSION

Individuation, process, and scientific practices

Organizer: Ruey-Lin Chen, National Chung Cheng University, Taiwan
Chair: Alan Love, University of Minnesota, USA

Participants:
Marie I. Kaiser, University of Bielefeld, Germany
C. Kenneth Waters, University of Calgary, Canada
Ruey-Lin Chen, National Chung Cheng University, Taiwan

INDIVIDUAL PAPER SESSION

Humans, animals and research in between

Chair: Susanne Bauer, University of Oslo, Norway

Rethinking early American genetics and its contexts: The Castle-East controversy and fancy mouse vs. corn breeding
Sunguk Jung, University of Toronto, Canada

"Servants of science": The lives of Rose, Farce and Tarzan, chimpanzees at the Pasteur Institute of Kindia (Guinea) during the French colonial period
Marion Thomas, Université de Strasbourg, France

INDIVIDUAL PAPER SESSION

Genomics, populations and ethics

Stability and the looping effects of human kinds
Riana Betzler, University of Cambridge, UK

The many faces of the postgenomic revolution
Stephan Guttinger, London School of Economics, UK

The failure of research guidelines and the CRISPR babies: An historical review and analysis of key human embryo policy guidelines and why they can be ineffective
Kirstin R. W. Matthews, Rice University, USA

INDIVIDUAL PAPER SESSION

Science and the public in 20th century biology

Chair: Alex Aylward, University of Leeds, UK

Shark attack! The sensationalizing of ecological issues
Martin Bremer, Florida State University, USA

Cooperation and competition in big biology: The Human Genome Project (1990-2003)
Marina Schütz, Ludwig-Maximilians-Universität München, Germany

11 JULY
THU

KRISTINE BONNEVIES HUS

S 4424

S 4512

S 4613

S 4619

09:00-
10:30

INDIVIDUAL PAPER SESSION

Evidence

From underdetermination to explanation in biology and climate science
David Montminy, University of Montreal, Canada

Error repertoires and the role of negative knowledge in biology
Douglas Allchin, University of Minnesota, USA

Evidence in default
Mike Dacey, Bates College, USA

INDIVIDUAL PAPER SESSION

Opening epistemic spaces

The evolution of multicellularity and lineage pluralism
Celso Neto, University of Calgary, Canada; Makmilller Pedroso, Towson University, USA

Preliminary considerations for an epistemology of organoids
Heams Thomas, INRA/AgroParisTech, France

TRADITIONAL SESSION

Unpacking molecular metaphors: Information, programs and codes

ID PRIZE CANDIDATE

Organizer: Gry Oftedal, University of Oslo, Norway
Chair: Gry Oftedal, University of Oslo, Norway; Ulrich Stegmann, University of Aberdeen, UK

Genetic information in the 1950s
Ulrich Stegmann, University of Aberdeen, UK

Making sense of “genetic programs”
Mihnea Capraru, Nazabayev University, Kazakhstan

The role of the histone code in epigenetics
Gry Oftedal, University of Oslo, Norway

INDIVIDUAL PAPER SESSION

Anthropocene

Anthropocene and the systemic dimension of biological functions. The case of epigenetics, horizontal gene transfer, and antibiotic resistance
Flavio D’Abramo, Max Planck Institute for the History of Science, Germany

Major evolutionary transitions, human evolution and transnaturalization
Siobhan Guerrero Mc Manus, National Autonomous University of Mexico, Mexico

11 JULY
THU

KRISTINE BONNEVIES HUS

AD 1

AD 2

AD 3

S 2203A

11:00-
12:30

TRADITIONAL SESSION

Networks and the ontology of the theory of evolution by means of natural selection, part II

Organizer: François Papale, Université de Montréal, Sorbonne Université, CNRS & Museum National d’Histoire Naturelle, France
Chair: Philippe Huneman, CNRS & Université Paris 1 Panthéon-Sorbonne, France

A practical guide for universal Darwinism
Stefan Linquist, University of Guelph, Canada

Turning evolutionary biology into a network science
Éric Baptiste, Sorbonne Université, CNRS, Museum National d’Histoire Naturelle, EPHE & Université des Antilles, France

TRADITIONAL SESSION

Revisited & undone: Fresh perspectives on molecules and life in the 20th century, part II

Organizer: Mathias Grote; Lisa Onaga
Chair: Angela Creager, Princeton University, USA

Synthesizing molecules, assembling cells – toward a “plug-and-play” life science, 1970–1980s
Mathias Grote, Humboldt-Universität zu Berlin, Germany

On apples and omnivores: Molecular recipes for silkworm food in 20th century Japan
Lisa Onaga, Max Planck Institute for the History of Science, Germany; Hannah Landecker, UCLA, USA

Fat mice: Revisiting umami, monosodium glutamate, and the molecular gut
Sarah E. Tracy, The New School University, USA

TRADITIONAL SESSION

Stability and migration of research strategies within and across different levels of scientific organization, part II

ID PRIZE CANDIDATE

Organizer: Steve Elliott; Caterina Schürch
Chair: Nathan Crowe, University of North Carolina Wilmington, USA

Investigating marine invertebrates: The Naples Zoological Station and its research program 1873–1913
Katharina Steiner, University of Zurich, Switzerland

Why do biologists use the methodologies that they do?
William Bausman, University of Geneva, Switzerland

Extended commentary on all papers from the double session
Hans-Jörg Rheinberger, Max Planck Institute for the History of Science, Germany

INDIVIDUAL PAPER SESSION

Genetics and the public

Chair: Chistina Brandt, Friedrich-Schiller Universität Jena, Germany

Bridging between biology and law: European GMO law as a case for applied &HPS
Martin Stefan Wasmer, Leibniz University Hannover, Germany

Correcting life in the post-genomic era? The rise of genome editing in South Korea
Doogab Yi, Seoul National University, South Korea

Misconceptions behind visual representations in the teaching of evolution in Mexico
Jordan William Cruz Castillo, Universidad Nacional Autónoma de México, Mexico

11 JULY
THU

KRISTINE BONNEVIES HUS

S 2621

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S 3213

S 3508

11:00-
12:30

INDIVIDUAL PAPER SESSION

Artificial intelligence

Chair: Fridolin Gross, Universität Kassel, Germany

Reproducibility in machine learning: The case of AlphaFold
Dijana Magđinski, University of Bielefeld, Germany

Automated judgments: Historicizing algorithms and AI in biomedicine
Ariane Hanemaayer, Brandon University, Canada

Humans, animals, and robots: An evolutionary perspective to moral agency and responsibility
Tomi Kokkonen, University of Helsinki, Finland

INDIVIDUAL PAPER SESSION

Individuals

Chair: Matt Haber, University of Utah, USA

Organisms and Darwinian individuals: A metaphysical perspective
Johannes Martens, Université Catholique de Louvain, Belgium

An immunological view of organismal identity
Bartłomiej Swiatczak, University of Science and Technology of China, China

How to be unique
Adrian Currie, University of Exeter, UK; Andrew Buskell, University of Cambridge, UK

TRADITIONAL SESSION

The concept of the environment in biology: Historical, philosophical, and sociological perspectives, part I

ID PRIZE CANDIDATE

Organizer: Jan Baedke, Ruhr University Bochum, Germany; Tatjana Buklijas, University of Auckland, New Zealand
Chair: Scott F. Gilbert, University of Helsinki, Finland

Reciprocal, experienced and fit: Environmental debates in early 20th century theoretical biology
Jan Baedke, Ruhr-University Bochum, Germany

The environment: An ambiguous concept in Waddington's biology?
Laurent Loison, Institut d'Histoire et de Philosophie des Sciences et des Techniques & French National Center for Scientific Research, France

Environments of 21st century medicine
Tatjana Buklijas, University of Auckland, New Zealand

TRADITIONAL SESSION

Tracing regeneration

ID PRIZE CANDIDATE

Organizer: Kate MacCord, Marine Biological Laboratory, USA
Chair: Andrew Inkpen, Brandon University, Canada

Germ line regeneration in metazoans
Kate MacCord, Marine Biological Laboratory, USA; B. Duygu Özpolat, Marine Biological Laboratory, USA

Comparing regeneration and steady state dynamics of hematopoietic stem cells: What is the data telling us?
Leila Perié, Sorbonne Universités, France

Stemness in homeostasis, regeneration, and cancer
Lucie Laplane, IHPST, CNRS & Université Paris 1 Panthéon-Sorbonne, France

11 JULY
THU

KRISTINE BONNEVIES HUS

S 4424

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11:00-
12:30

INDIVIDUAL PAPER SESSION

Evidence in context

What is evidence for sustainability? Engaging theories and shaping practices in sustainability science
Guido Caniglia, Konrad Lorenz Institute for Evolution and Cognition Research, Austria

Observation and experiment in agricultural meteorology
Giuditta Parolini, Technische Universität Berlin, Germany

Two senses of relative importance and the testability of empirical adaptationism
Mingjun Zhang, University of Pennsylvania, USA

INDIVIDUAL PAPER SESSION

Discovery of structures

Abel Salazar's contributions on the structure (and function) of the Golgi region in mammalian cells
Maria Strecht Almeida, University of Porto, Portugal

The only real units in existence? Biological individuals and the transplantation experiments of Leo Loeb (1869–1959)
Sibylle Obrecht, University of Zurich, Switzerland

INDIVIDUAL PAPER SESSION

Theories about biological theories

The chimerical nature of scientific theories
Michael Bradie, Bowling Green State University, USA

Comprehension as compression: Understanding understanding
John S. Wilkins, University of Melbourne, Australia

Ontology and symmetry of evolutionary theories
Jun Otsuka, Kyoto University, Japan

INDIVIDUAL PAPER SESSION

20th century technologies of control

Chair: Carlos Santana, University of Utah, USA

Transplantation and tomatoes: Retracing Anne McLaren's cold war search for graft hybrids
Matthew Holmes, University of Cambridge, UK

Engineering the environment: Plants, phytotrons, and climate control in the cold war
David P. D. Munns, The City University of New York, USA

The art of growing old: Environmental manipulations, physiological temporalities and the advent of Microcebus murinus as a primate model of aging
Lucie Gerber, University of Lausanne, Switzerland

11 JULY
THU

KRISTINE BONNEVIES HUS
AD 1

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AD 3

S 2203A

14:30-
16:00

INDIVIDUAL PAPER SESSION

Ideas and tools of 20th century biology

Element analyses or rats' tail-raising: Total synthesis and determination of insulin in China, 1958–1972
Jing Zhu, East China Normal University, China

A feeling for the neuron: The status of the “discrete-gating picture” in Hodgkin and Huxley’s model of the action potential
Andrew Bollhagen, University of California, USA

Evolution in contention: The mobilization of scientific creationism in Mexico (1973–2000)
Jorge Armando Romo Bonilla, National Autonomous University of Mexico, Mexico

INDIVIDUAL PAPER SESSION

Levels of organization

Chair: Davide Serpico, University of Genoa, Italy

Self-organization as level property: Towards a non-eliminativist reductionist approach to organizational closure
Emilio Cáceres, UNED, Spain/ UNED, Spain

Interactionism through and interlevel relational perspective
Jon Umerez, University of the Basque Country, Spain

Mapping experimental biology: From the laboratory to the biological world
Gabriel Vallejos Baccelliere, Universidad de Santiago de Chile, Chile; Maurizio Esposito, Universidad de Santiago de Chile, Chile

INDIVIDUAL PAPER SESSION

Process of individuation

Chair: André Krebber, University of Kassel, Germany

How does plant reproduction challenge sexual criteria of biological individuality?
Quentin Hiernaux, Université Libre de Bruxelles, Belgium

3D/4D metaphysical equivalence: Lessons from the species debate for the metaphysics of change and persistence
María Cerezo, University of Murcia, Spain

Partial proper functions
John Matthewson, Massey University, New Zealand

DIVERSE FORMAT SESSION

Philosophy in an Age of GWAS, Polygenic Prediction, and SNP Heritability

ID PRIZE CANDIDATE

Organizer: Lucas J. Matthews, University of Virginia, USA
Chair: Lucas J. Matthews, University of Virginia, USA

Participants:
Lucas J. Matthews, University of Virginia, USA; Jonathan M. Kaplan, Oregon State University, USA; Carl F. Craver, Washington University, USA; James G. Tabery, University of Utah, USA

11 JULY
THU

KRISTINE BONNEVIES HUS
S 2621

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S 3213

S 3508

14:30-
16:00

TRADITIONAL SESSION

The cultivation of the future: Dystopia, utopia, and plants as technologies

ID PRIZE CANDIDATE

Organizer: John Lidwell-Durnin, University of Oxford, UK
Chair: Ageliki Lefkadiou, Norsk Teknisk Museum, Norway

A high mountain utopia: History of ecology at the Finse research station in Norway
Peder Anker, New York University, USA

Plants as solutions to our projected problems: Rising carbon dioxide levels, nutrient deficiencies, food security
Yilmaz Özlem, Istanbul Technical University, Turkey

Debates over plant physiology, population, and potatoes as a staple crop before the Great Famine in Ireland
John Lidwell-Durnin, University of Oxford, UK

DIVERSE FORMAT SESSION

An interdisciplinary roundtable on: Collecting experiments: Making big data biology

Organizer: Bruno J. Strasser, University of Geneva, Switzerland
Chair: Michael R. Dietrich, University of Pittsburgh, USA

Participants:
Edna Suárez-Díaz, UNAM, Mexico; Joel Hagen, Radford University, USA; James Griesemer, UC Davis, USA

TRADITIONAL SESSION

The concept of the environment in biology: Historical, philosophical, and sociological perspectives, part II

ID PRIZE CANDIDATE

Organizer: Jan Baedke; Tatjana Buklijas
Chair: Scott F. Gilbert, University of Helsinki, Finland

Malaria as an “environmental” disease: Swahili and bio-medical conceptions from Zanzibar, 1950–2018
Melissa Graboyes, University of Oregon, USA

To broaden or to narrow: Teratologists and competing definitions of the Environment and Birth Defects (1956–1970)
Heather Dron, Stanford University, USA

The environment in the emergence of amniocentesis in West Germany
Birgit Nemeč, Heidelberg University, Germany

TRADITIONAL SESSION

Regeneration across the scales of complex living systems

ID PRIZE CANDIDATE

Organizer: Frederick R. Davis, Purdue University, USA
Chair: Frederick R. Davis, Purdue University, USA

How images shape the concept of regeneration in microbial communities
Anna Clemencia Guerrero, Arizona State University, USA

Restoration, regeneration, and novel ecosystems
Carlos Santana, University of Utah, USA

Regeneration across the scales of complex living systems
Jane Maienschein, Arizona State University & Marine Biological Laboratory, USA

11 JULY
THU

KRISTINE BONNEVIES HUS

S 4424

S 4613

S 4619

14:30-
16:00

INDIVIDUAL PAPER SESSION

Evidence

Empirical support and relevance for models of the evolution of cooperation: Problems and prospects

Archie Fields III, University of Calgary, Canada

Configuration of hypotheses with trace observations forms paleobiology's epistemic challenge

John Alexander Sime, University of Pennsylvania, USA

TRADITIONAL SESSION

Conceptual integration in biology

Organizer: Aaron Novick, Dalhousie University, Canada
Chair: Kathleen Creel, University of Pittsburgh, USA

The return of the cell: What's so special about evo-devo?

Jeremy Wideman, Dalhousie University, Canada

Is phenomics the epistemic superstar of biological/biomedical research?

Eve A. Roberts, University of King's College, Canada

"Species" without species: a patchwork approach to thinking about microbial species

Aaron Novick, Dalhousie University

INDIVIDUAL PAPER SESSION

Microscopic research

From gut to glass: Microbial cultures and biological ontologies

Charles A. Kollmer, Princeton University, USA

Classifying evidence and representation: Two status types of cell biological data images

Yin Chung Au, National Cheng Kung University, Taiwan

Cell culture and the (re-) articulation of biological time

Rosine Judith Kelz, Institute for Advanced Sustainability Science, Germany

11 JULY
THU

KRISTINE BONNEVIES HUS

S 3203

S 4521

GEORG SVERDRUPS HUS

AD 1

12:30-
14:30

LUNCH EVENT

ISHPSSB Newly Elected Council Meeting

Organizer: Marsha L. Richmond

Participants:

Marsha L. Richmond, Rachel Ankeny, Laura Perini, Greg Radick, Edna Suárez-Díaz, Sophia Efstathiou, Ingo Brigandt, Nick Hopwood, Roberta Millstein, Sarah Richardson; and five newly elected members

13:30-
14:30

LUNCH EVENT

Program Comittee Meeting

Organizer: Sophia Efstathiou and Edna Suárez-Díaz

Participants:

Bruno Strasser, Matt Haber, Charbel El-Hani, Sophia Efstathiou, Edna Suárez-Díaz, Sara Green

16:00-
17:30

SPECIAL EVENT

General Meeting & Awards Ceremony

Open to all attendees

FRIDAY

08

REGISTRATION
Please register
in the lobby

09:00

TRADITIONAL SESSION
Natural selection:
Revisiting its explana-
tory role in the devel-
opment of evolutionary
biology, part I

TRADITIONAL SESSION
Philosophy in biology
and medicine: Biological
individuality and fetal
parthood, part I

DIVERSE FORMAT SESSION
Novel Perspectives on
the Major Transitions

TRADITIONAL SESSION
Research on human
embryos and fetuses
in the mid-twentieth
century

TRADITIONAL SESSION
The machine meta-
phor in nanobiology:
Molecular motors

10:00

COFFEE BREAK

ID PRIZE CANDIDATE

11:00

TRADITIONAL SESSION
Natural selection:
Revisiting its explana-
tory role in the devel-
opment of evolutionary
biology, part II

TRADITIONAL SESSION
Philosophy in biology
and medicine: Selected
effects and dysfunction,
part II

INDIVIDUAL PAPER SESSION
Molecular biology
beyond the usual
suspects

INDIVIDUAL PAPER SESSION
Understanding
explanation

TRADITIONAL SESSION
From gene regula-
tory networks to
dynamic mechanistic
explanations

DIVERSE FORMAT SESSION
Philosophy of biol-
ogy before and after
“biologie”

ID PRIZE CANDIDATE

12:00

LUNCH BREAK

13

14:00

KBH, LOBBY

BREAKS
Coffee is served in
the lobby of Kristine
Bonnievies hus

18 JULY
FRI

KRISTINE BONNEVIES HUS
AD 1

AD 2

S 3213

S 4613

09:00-
10:30

TRADITIONAL SESSION

Natural selection: Revisiting its explanatory role in the development of evolutionary biology, part I

Organizer: Richard G. Delisle, University of Lethbridge, Canada
Chair: Richard G. Delisle, University of Lethbridge, Canada

Natural selection as a (mere) auxiliary hypothesis in Charles Darwin's *The Origin of Species*
Richard G. Delisle, University of Lethbridge, Canada

Creative evolution and natural selection: Darwinian and Anti-Darwinian Bergsonisms in 20th-century biology
Emily Herring, University of Leeds, UK

Recasting natural selection: Osborn and the orthogenetic view of life
David Ceccarelli, University of Rome Tor Vergata, Italy

TRADITIONAL SESSION

Philosophy in biology and medicine: Biological individuality and fetal parthood, part I

Organizer: Elseltijn Kingma, University of Southampton, UK
Chair: Elseltijn Kingma, University of Southampton, UK

Part, process and pregnancy
Paul E. Griffiths, University of Sydney, Australia

Pregnancy, parthood and proper overlap
Alexander Geddes, University of Southampton, UK

One or two? A process perspective on pregnant individuals
Anne Sophie Meincke, University of Southampton, UK

DIVERSE FORMAT SESSION

Novel Perspectives on the Major Transitions

ID PRIZE CANDIDATE

Organizer: Walter Veit, University of Bristol, UK
Chair: Walter Veit, University of Bristol, UK

Participants:
Walter Veit, University of Bristol, UK; Eörs Szathmáry, Eötvös Loránd University, Hungary; Pierrick Bourrat, Macquarie University, Australia

TRADITIONAL SESSION

Research on human embryos and fetuses in the mid-twentieth century

Organizer: Nick Hopwood, University of Cambridge, UK; Solveig Jülich, Uppsala University, Sweden
Chair: Nick Hopwood; Solveig Jülich

Human embryology between "monkey gynaecology" and "egg hunts"
Nick Hopwood, University of Cambridge, UK

The rise and fall of the fetal-placental empire: Human fetal research in Sweden, 1950–1970
Solveig Jülich, Uppsala University, Sweden

Lives worth living: Swedish debates about fetal and animal research in the 1970s
Helena Tinnerholm Ljungberg, Uppsala University; Per-Anders Svärd, Örebro University, Sweden

18 JULY
FRI

KRISTINE BONNEVIES HUS
S 4619

09:00-
10:30

TRADITIONAL SESSION

The machine metaphor in nanobiology: Molecular motors

Organizer: Guglielmo Militello, University of the Basque Country, Spain
Chair: Sara Marie Ehrenreich Green, University of Copenhagen, Denmark

Studying biological mechanisms that transform energy into work: Dynein motors as exemplars
William Bechtel, University of California, USA

Structural and organizational conditions for being a machine
Guglielmo Militello, University of the Basque Country, Spain

On why, after all, it might be better not to conceive biological parts as machines
Matteo Mossio, Université Paris 1 Panthéon-Sorbonne, France

12 JULY
FRI

KRISTINE BONNEVIES HUS
AD 1

AD 2

S 2203A

S 2621

11:00-
12:30

TRADITIONAL SESSION

**Natural selection:
Revisiting its explanatory
role in the development
of evolutionary
biology, part II**

Organizer: Richard G. Delisle,
University of Lethbridge,
Canada
Chair: Richard G. Delisle,
University of Lethbridge,
Canada

Was R. A. Fisher a selectionist?
Alex Aylward, University of
Leeds, UK

**Theodor Ziehen's (1862–1950)
philosophy for Bernhard
Rensch's (1900–1990) modern
synthesis**
Georgy S. Levit, Kassel
University, Germany

TRADITIONAL SESSION

**Philosophy in biology
and medicine: Selected
effects and dysfunction,
part II**

Organizer: Peter Takacs,
University of Sydney, Australia
Chair: Peter Takacs, University
of Sydney, Australia

**Assessing fitness functions in
selected effects accounts of
psychological dysfunction**
Peter Takacs, University of
Sydney, Australia

**The fundamental problem with
evolutionary definitions of
disease**
Joshua Christie, University of
Sydney, Australia

**Why medical dysfunction
is (still) not selected effects
dysfunction**
Elselijn Kingma, University of
Southampton, UK

INDIVIDUAL PAPER SESSION

**Molecular biology
beyond the usual
suspects**

**RNA-DNA hybridization:
A story of invention and
vanished recognition**
Susie Fisher, The Open
University of Israel, Israel

INDIVIDUAL PAPER SESSION

**Understanding
explanation**

**Vindicating metaethical natu-
ralism: The case for final causes
in the life sciences**
Lane DesAutels, Missouri
Western State University, USA

**An explanatory role for brute
facts in biology**
Constantinos Mekios, Stonehill
College, USA

**The case of mechanistic expla-
nation in molecular biology:
Abstraction or idealization?**
Martin Zach, Charles University,
Czech Republic

12 JULY
FRI

KRISTINE BONNEVIES HUS
S 3508

S 4613

11:00-
12:30

TRADITIONAL SESSION

**From gene regula-
tory networks to
dynamic mechanistic
explanations**

Organizer: James DiFrisco, KU
Leuven, Belgium
Chair: Johannes Jaeger,
Complexity Science Hub, Austria

**Beyond networks: Dynamical
explanations in evo-devo**
James DiFrisco, KU Leuven,
Belgium

**Dynamical modularity of the
genotype-phenotype map**
Johannes Jaeger, Complexity
Science Hub, Austria

**Developmental mecha-
nisms beyond the embryo:
Reproduction and evolvability
in mammals**
Silvia Basanta Martínez,
Complutense University of
Madrid, Spain

DIVERSE FORMAT SESSION

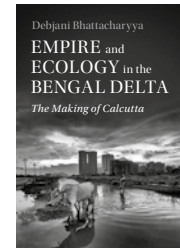
**Philosophy of biol-
ogy before and after
“biologie”**

ID PRIZE CANDIDATE

Organizer: Cécilia Bognon-
Küss, Université Paris 7 Diderot,
France and IHPST (CNRS),
France
Chair: Charles T. Wolfe, Ghent
University

Participants:
Charles T. Wolfe, Ghent
University; Boris Demarest,
Universität Heidelberg,
Germany; Philippe Honenberger,
University of Nevada, USA; Lynn
Nyhart, University of Wisconsin,
USA; Georg Toepfer, Leibniz-
Zentrum für Literatur- und
Kulturforschung, Germany

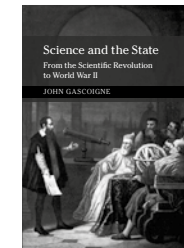
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The Making of Calcutta

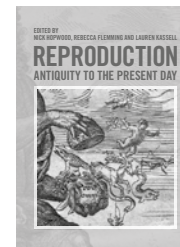
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Drexel University, Philadelphia



Science and the State

From the Scientific Revolution to World War II

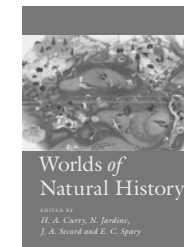
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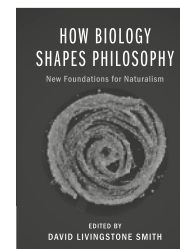
Antiquity to the Present Day

Editors: Nick Hopwood,
University of Cambridge
 Rebecca Flemming, *University of Cambridge*
 Lauren Kassell, *University of Cambridge*



Worlds of Natural History

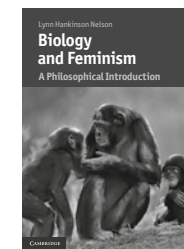
Editors: Helen Anne Curry,
University of Cambridge
 Nicholas Jardine, *University of Cambridge*
 James Andrew Secord, *University of Cambridge*
 Emma C. Spary, *University of Cambridge*



How Biology Shapes Philosophy

New Foundations for Naturalism

Editor: David Livingstone Smith,
University of New England, Maine



Biology and Feminism

A Philosophical Introduction

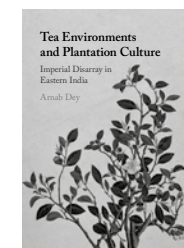
Author: Lynn Hankinson Nelson,
University of Washington



Cultivating Commerce

Cultures of Botany in Britain and France, 1760–1815

Author: Sarah Easterby-Smith,
University of St Andrews, Scotland



Tea Environments and Plantation Culture

Imperial Disarray in Eastern India

Author: Arnab Dey, State University of New York, Binghamton

ISHPSSB 2019 is supported by



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UiO • Life Science
University of Oslo

The ISHPSSB 2019 *Program booklet* is published in Oslo, July 2019. The book cover and interiors are designed by Frode Helland. The text is typeset in 10/13 pt Dover Serif Text from Tiny Type Co and a custom grotesque typeface drawn especially for ISHPSSB 2019. The maps are drawn by Benjamin Hickethier. The booklet is printed on 100 g Munken Cream by GP Trykk.

