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Word from the President

Each new ISHPSSB meeting offers the prospect of five days of rich discussions, and pleasant meetings with colleagues. Those of you who have already attended one ISH meeting know that it will hold a special place in your memory.

In introducing this meeting, my deep regret is that Werner Callebaut is not here in my stead: his premature death was a shock for us all. As Werner would have done, I would like to thank Frédéric Bouchard and Christophe Malaterre, the program co-chairs Rob Wilson and Mark Borrello, and all the members of the Program Committee. I am sure that we can be confident that the organization will be perfect and that the meeting will be a success!

I had a glance at the preliminary program and was struck by the diversity and richness of the issues that will be discussed. Striking also is the “pluridisciplinarity in action,” with so many interactions between biologists, philosophers and historians. One may possibly regret an imbalance between one category and another, but generally speaking the melting pot of different disciplines is working extremely well.

The most conspicuous characteristic of ISH is clearly visible when one enters into the details of the organized sessions: not only do they bring together scholars with diverse backgrounds, they also mix PhD students and senior scholars, and members from different institutions and different countries. It would be highly instructive to observe the changes from one meeting to another, how some interactions have faded and others have formed. If such a study were done, it would certainly reveal the dynamics of research in the field. It is exactly the same as if we were looking at a thinking brain with the latest imaging techniques!

Like all of you no doubt, I expect a lot from this meeting. My only regret is that I will be limited in space and time and unable to attend all the sessions!

Michel Morange
Word from the Program Committee

On behalf of the program committee, we are very pleased to welcome you to ISHPSSB 2015 in beautiful Montréal. We trust that you will find the program to continue the 32-year ISH tradition of assembling the most interesting and diverse work in the history, philosophy, and social studies of biology, and hope that you enjoy not just the program but the informal aspects of the conference as well.

This year we introduced a number of changes in response to member concerns and aimed to make the labyrinth of submission easier to navigate. We think that these changes have had an overall positive effect on the program’s structure, even if we inadvertently managed to create some of our own labyrinths along the way.

First, the new system of early, rolling submissions for organized sessions, introduced chiefly to encourage more people to submit such sessions rather than just individual papers, has facilitated more early interaction between ISH members in the process of making submissions and resulted in a program with more meaningfully-structured sessions. Second, the “rule of 2”, which allowed people to appear in any capacity in the program twice, in addition to serving as chair or organizer of a session, has promoted the mentorship role desired in organized sessions. Third, the simple division between organized sessions with “standard talks” format of 3 x 20 minute talks, each followed by 10 minutes of questions, together with making each session 90 minutes in length and the proximity of the rooms to one another, and “diverse formats” sessions, should make it easier for people to sample across simultaneous sessions.

We are also pleased to welcome Professors Sandra Harding and Ford Doolittle to ISH 2015 as plenary speakers on Monday and Wednesday afternoon, respectively.

Mark Borrello
University of Minnesota

Rob Wilson
University of Alberta

Welcome from the Local Organizing Committee

The appeal and strength of ISHPSSB is how it allows us to exchange ideas and approaches across disciplines in a professional yet relaxed atmosphere. For many of us, it is the favoured place where we try out new ideas, showcase novel scholarship, and more importantly find new like-minded colleagues and friends from all around the world.

In many ways, this makes Montréal the ideal place to hold our meeting. Formerly known as the Iroquois village of Hochelaga (meaning “beaver lake”), it was chosen as a settlement by the French in the 17th century, industrialized by the British in the 18th century, and from the 19th century on enriched and emboldened by waves of immigrants from across the world. This gives Montréal a very ISH-feel: different languages and different cultures sharing the wonders of personal and collective discovery.

We have aimed at making this meeting as pleasant and stimulating as can be.

If this works, this will be the result of an immense teamwork with many (many) people locally who have contributed countless time, effort and resources to make all of this possible, as well as the different committees of our Society and the Université du Québec à Montréal that is so kindly hosting the event.

Please take a moment, at your next cocktail with friends, to raise a glass (“Santé!”) to the student volunteers, organizational staff and assistants, sponsoring departments and organizations, and to all of you who have come to join us. We are delighted you are here to share with us the Montréal joie de vivre.

Bienvenue à Montréal et bon congrès!

Christophe Malaterre
Université du Québec à Montréal

Frédéric Bouchard
Université de Montréal
Hommage to Werner Callebaut

Werner Callebaut, the Scientific Director of The KLI Institute, Professor of Philosophy, President of the ISHPSSB, Editor-in-Chief of Biological Theory, and dear colleague of innumerable members of the academic community, died in Vienna, Austria, on November 6th, 2014, at the age of 62. We deplore the loss of a brilliant intellectual, a philosopher in its full meaning, and a sparkling mobilizer of ideas.

Since 2013, Werner had acted as the president of the International Society for the History, Philosophy, and Social Studies of Biology. For him his beloved “Ishkabibble” was almost an extended family. With much excitement he was planning, during his presidency, to cope with some of the pressing issues for the society, such as its “uncontrolled growth” (due to its formidable success), which he had felt was stretching the limits of its organizational capacities. He had also planned to work on reaching a better balance of philosophers, historians, and social scientists at future meetings. And, always striving for improvement, he had meant to increase the international representation in the society, reaching out to scholars from Eastern Europe and other regions. He was greatly looking forward to the 2015 meeting in Montréal, where he had expected to announce some of his plans for future development.

We owe Werner a lot. His sharp wits, his encyclopaedic knowledge, his critical stance, and his ever-caring attitude will be sorely missed. We will remember him standing in contemplation of a philosophical problem or an object of interest, often times – unfortunately – smoking one of his inevitable Gauloises cigarettes. Unwavering, he stood for freedom in academia, equal rights in society, and the primacy of science.

In commemoration of Werner Callebaut’s lasting contributions, the KLI Institute will establish a prize in Werner’s name, whose recipients shall be selected by a committee of the ISHPSSB and which shall be awarded during the society’s biennial meetings.

Gerd B. Müller
Chairman of the KLI Institute  |  Professor of Theoretical Biology, University of Vienna  |  President of the European Society for Evolutionary Developmental Biology
General Information

CAMPUS AND ROOMS
All activities except the Buffet dinner will be taking place on campus, in UQAM facilities. All sessions will be held in the J.-A.-DeSève (DS) building (320 Sainte-Catherine Est).
The plenary talks will be held in the Marie-Gérin-Lajoie auditorium, in the nearby Judith-Jasmin (J) building (access through the DS building, basement "M" floor).
All rooms are fully equipped with standard A/V equipment, and WiFi is available on the whole campus.

Conference rooms metro level and first floor | J.-A.-DeSève (DS) building

Conference rooms and registration | J.-A.-DeSève (DS) building
General Information

INFORMATION FOR PRESENTERS

Dates
Sunday July 5th to Friday July 10th 2015

Registration
Sunday 13:00 till 17:00 and Monday 8:00 till 9:00, in the hallway of the J.-A.-DeSève (DS) building (320 rue Sainte-Catherine Est). Registration is mandatory for all participants. You will receive your welcome package, name tag and program. Those who have yet to settle their bill for conference participation will be able to do so here. The registration desk will remain open all week for latecomers and to buy the book of abstracts, T-shirts, and tickets to the Buffet dinner.

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 required buildings, the sessions, the social events, as well as any food or drinks served during breaks and cocktails.

Video projectors
All rooms are equipped with a computer, a video projector and a sound system. All computers have Windows installed, will be powered on and connected to a video projector and sound system. You will need to bring your presentation on a USB stick 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; each presenter has 30 minutes, which should include 20 minutes of presentation and 10 minutes for discussion. You will have coloured signs to indicate the time remaining to the presenters.

Individual papers
Individual paper sessions 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 session
Recommended dimensions for posters are vertical “A0” (width x height = 841 x 1189 mm = 33.1 x 46.8 in) or vertical “E” (width x height = 864 x 1118 mm = 34 x 44 in). The display panels can accommodate larger posters if you wish, though not more than 1210 mm in width (48 in) and 2130 mm in height (84 in). Installation of the posters is on Sunday during registration in the lobby of Marie-Gérin-Lajoie Auditorium. Please make sure to arrive on time to install your poster.

WIFI AND SOCIAL MEDIA

WiFi
Anywhere within UQAM, you can connect to the WiFi network named “Visiteurs UQAM”, with the following case-sensitive login:
USERNAME: ishpssb2015
PASSWORD: V27z3nZ3
If you have trouble connecting, check the ISHPSSB2015 website under General Information for instructions (we know: you don’t have a connection yet, but a friend may be able to help), or come see us at the registration desk.

Social media
Receive last-minute updates, join the ongoing conversation and share your pictures on our social media platforms:
Twitter @ISHPSSB2015
facebook.com/ISHPSSB2015

Mobile platform
All the program information is easily accessible on your mobile device: simply connect to ishpssb2015.uqam.ca to keep track of upcoming sessions.
Getting Around

DOWNTOWN MONTREAL

The city’s highly developed public transit system (voted best in North America) as well as its public bicycle sharing system, the BIXI system (an abbreviation of “bicyclette” and “taxi”) make it a very manageable city for temporary visits. The conference venue is situated over the main subway interchange Berri-UQAM making it easy to go all over town for a quick shopping or eating trip (the public transit system is fully indexed in Google maps).

NOTE: All East-West streets start their numbering at Saint-Laurent and raise westward and eastward. Addresses west of Saint-Laurent are indicated as O. (Ouest), and all addresses on the east side are indicated as E. (Est). Note that in common Montreal parlance, west and east are not the actual geographic directions but rather the direction of the Saint-Lawrence river, so they are really south-west and north-east, respectively.

TRANSPORTATION

Métro

To access the conference venue (Berri-UQAM métro station) and for traveling downtown Montreal, the métro is an excellent option. Monday to Friday, it is open from 5:30 am to 12:30 am, and up until 1:00 am on Saturday (after the last metro, you can use the night bus system).

NOTE: Acquiring a daily, weekly or unlimited weekend pass for both the metro and the buses will also cover your bus trip to and from the airport!

Bus

The bus network of the Société de transport de Montréal (STM) offers several circuits. Check online for schedules of buses and bus lines serving the Berri-UQAM métro station (close to the conference venue).

Bicycle

BIXI is Montreal’s public bike system offering a bike-sharing service, 24 hours a day, 7 days a week. This service, at minimal cost, allows citizens and tourists to get a bike at one station, travel to their destination, and return the bike to a nearby station in the network. To easily find BIXI stations and availability, you can visit their website or download the app on your smartphone or tablet.

Taxis

Taxi Coop Montréal, 514 725-9885.
Taxi Diamond, 514 273-6331. The Taxi Diamond App is available both for Android and iOS.

NOTE: Taxi drivers normally get a tip of 15% and over. PAYMENT METHODS: Visa, MasterCard and American Express credit cards are accepted. Some drivers accept U.S. currency but provincial regulations require customers to pay in Canadian currency.

Downtown transportation (metro, bixi, bus)
LUNCH SPOTS
The following is a selection of close-by and easily accessible lunch spots, in addition to UQAM food services that include the Bistro Sanguinet (DS), the cafeteria Menus plaisirs (A-M629) and the student café Salon G (A-M950). For more eating and socializing options, please visit the “Getting around” tab on the ISHPSSB2015 website.

NOTE: Service is not included in your bill. The tipping etiquette in Montréal is to add 15% (or more) to the amount requested on your bill.

1. L’Artisan Piadiena
Italian (great piadine)
Walking distance from venue
3421, rue Saint-Denis
Plateau Mont-Royal
514 508-1433

2. La Brioche Lyonnaise
French brunches
Walking distance from venue
1593, rue Saint-Denis
Quartier Latin
514 842-7017

3. Cinémathèque Café Bar
Bistro (with patio)
Walking distance from venue
335, de Maisonneuve Blvd. E.
Quartier Latin
514 842-9763

4. Kazu
Japanese (Izakaya; expect lineup)
Concordia Metro
1862, rue Sainte-Catherine O.
Downtown
514 937-2333

5. Keyaki Sushi
Sushi bar
Walking distance from venue
2073, rue Saint-Denis
Quartier Latin
514 499-3041

6. Komiko Sushi
Sushi bar
Walking distance from venue
1246, rue Saint-Denis
514 985-3000

7. il Panino
Panini and salad
Walking distance from venue
271, rue Sainte-Catherine
514 845-3033

8. Le Pèlerin Magellan
International cuisine
Walking distance from venue
330, rue Ontario E.
Downtown
514 845-0909

9. Olive et Gourmando
Sandwiches (try The Cubain panini)
Metro Square-Victoria-OACI
351, Saint-Paul O.
Old Montréal
514 350-1083

10. Pacini
Italian cuisine
Walking distance from venue
1262, rue Saint-Denis
Quartier Latin
514 842-9139
Getting Around

1. Qing Hua
Chinese dumplings
Walking distance from venue
1019, Saint-Laurent Blvd.
Chinatown
514 903-9887

2. Ramen Misoya
Japanese noodle eatery
Métro Peel
2065A Bishop
Downtown
514 379-4888

3. Rotisserie Romados
Portuguese roasted chicken sandwiches
Take bus 55 North on Saint-Laurent Blvd. to go to restaurant, take bus 55 South on Saint-Urbain to come back to venue
115, rue Rachel E.
Plateau Mont-Royal
514 849-1803

4. Schwartz
World famous smoked meat sandwiches (expect lineup)
Walking distance from venue or
Take bus 55 North on Saint-Laurent Blvd. to go to restaurant, take bus 55 South on Saint-Urbain to come back to venue
3895, Saint-Laurent Blvd.
Plateau Mont-Royal
514 842-4813

5. Soupesoup
Soups & Sandwiches
Walking distance from venue
1228, rue Saint-Denis
Quartier Latin
514 544-5004

6. Vua Banh Mi
Sandwiches (cheap and tasty)
Walking distance from venue
1979, rue Saint-Denis
Quartier Latin
514 439-1231

7. Wilensky’s
Sandwiches (serving the Wilensky’s special hot sandwich since 1932)
Take bus 55 N on St-Laurent Blvd. to go to restaurant, take bus 55 S on St-Urbain to come back to venue
34, avenue Fairmount O.
Mile-End
514 271-0247

8. Yuan Vegetarien
Vegetarian (buffet option)
Lunch & Dinner available
Closed on Mondays
Walking distance from venue
2115, rue Saint-Denis
Plateau Mont-Royal
514 848-0513

9. Zyg Noodlery
Asian Noodles
Walking distance from venue
1748, rue Saint-Denis
Quartier Latin
514 284-2016

Montreal also offers a service of gourmet food-trucks: visit montreal.streetfoodquest.com to find one near the conference center.
Schedule

**Registration**
Sunday 13:00 till 17:00 and Monday 8:00 till 9:00, hallway of J.-A.-DeSève (DS) building (320 Sainte-Catherine Est).

**President’s welcome**
Sunday 17:00 till 18:00, Marie-Gérin-Lajoie auditorium (entrance through J.-A.-DeSève building: walk through the underground corridor to reach the auditorium located in the Judith-Jasmin (J) building).

Given by Michel Morange, president of ISHPSSB, with a few words from the Program Committee and the Local Organizing Committee; essential practical information about the conference will be communicated. This event is followed by the Welcome to Montreal cocktail, at the exit of the auditorium.

**Welcome to Montreal cocktail**
Sunday 18:00 till 20:00, lobby of Marie-Gérin-Lajoie auditorium
Open to all conference attendees. The Canadian universities sponsoring the event (see section “Partners of ISHPSSB 2015”) offer you a warm welcome to Montreal. Come and meet colleagues from around the world in an informal and festive atmosphere. Two drinks offered per person (you will receive two tickets at registration); additional drinks available for purchase at the bar.

**Lunch breaks**
You are on your own for lunch, but we have planned long, three-hour breaks to give you ample time to relax, sit down for a meal, and enjoy the company of colleagues and friends. Turn to section “Getting around” for a look at a list and map of interesting lunch spots we have assembled, or check the ISHPSSB2015 website under “Getting around” for more details.

**Council meetings**
Monday, Thursday and Friday 13:00 till 15:00, room DS-1955
Council meetings are meetings of the ISHPSSB council during which administrative matters concerning the Society are dealt with. The council meetings are restricted to ISHPSSB Council members, that is to say the President of the society, the President-Elect, the Program Officer, the Secretary, the Treasurer, the Student Member of the Board of Directors, and six elected Directors.
Schedule

Monday plenary session – Sandra Harding
Monday 17:30 till 19:00, Marie-Gérin-Lajoie auditorium
Presentation by Sandra Harding: What is Objective Research for Social Justice Movements? See section “Plenary talks” for details on the presentation. This event is followed by the poster session and cocktail in the lobby of the auditorium.

Poster session and cocktail
Monday 19:00 till 20:30, lobby of Marie-Gérin-Lajoie auditorium
Open to all conference attendees. Come and see the posters while enjoying the cocktail right after Sandra Harding’s talk. Cast your vote for the Montreal best poster prize. One drink offered per person (you will receive a ticket at registration); additional drinks available for purchase at the bar.

Early career scholar mentoring lunch
Tuesday 13:00 till 15:00, room DS-R510
During this informal luncheon, students and early career members of the society meet, mingle, chat, and lunch with established scholars. Topics include navigating the job market, interdisciplinary publishing, collaborations between the life sciences and their history and philosophy, alternative careers, being a minority in the field, and more! You do not have to be a student to attend.

NOTE: lunch will only be provided to those who signed up to this event while registering online for the conference.


Graduate student members general meeting & student representative elections
Wednesday 13:00 till 14:00, room DS-R510
We will be electing our 2015-2017 Graduate Representative, who discusses and votes on ISH internal policies with faculty committee members on behalf of the student body, and is the default Chair on the Student Advisory Committee. The general meeting is also an opportunity for student members to give feedback regarding the student travel support funding and reimbursement process, a dossier which the current student rep has worked hard to advance.

Membership diversity meeting
Wednesday 14:00 till 15:00, room DS-R515
ISHPSSB is predicated on bringing together scholars from diverse disciplines, including historians, philosophers, and social scientists of the life sciences, as well as practicing biologists. In recent years, there has been a noticeable decrease in participation from some disciplines, which has been a cause of concern. Council members Emily Schultz and Alan Love will facilitate a discussion about the future of ISHPSSB and the prospects for maintaining and growing its disciplinary diversity.

Wednesday plenary session – W. Ford Doolittle
Wednesday 17:30 till 19:00, Marie-Gérin-Lajoie auditorium
Presentation by W. Ford Doolittle: Hugging the Tree of Life. See section “Plenary talks” for details on the presentation. This event is followed by the pub-night cocktail in a nearby location on campus.

Pub-night cocktail
Wednesday 19:00 till 20:30, “Le Département” bar, room A-M640
Open to all conference attendees. Come have a beer and pub-style fare on campus close to the auditorium (follow the signs) right after W. Ford Doolittle’s talk. The best poster Montreal prize will be announced: make sure to be there. One drink offered per person (you will receive a ticket at registration); additional drinks available for purchase at the bar.

Awards ceremony followed by ISHPSSB general meeting
Thursday 17:30 till 19:00, Marie-Gérin-Lajoie auditorium
The Awards ceremony and ISHPSSB general meeting are open to all members of ISHPSSB. During the Awards ceremony, the winners of the David Hull Prize, the Marjorie Grene Prize, and the recently created Werner Callebaut Prize will be announced. The General meeting that follows is an important meeting during which key matters that concern the Society are communicated to all members. In particular, this is when information about the next ISHPSSB meeting’s location is announced, newly elected council members and committee activities are announced, and financial reports are provided by the Treasurer. Every member of the Society is strongly encouraged to attend.
Schedule

Buffet dinner (“Cocktail dinatoire”)
Thursday 19:30 till 22:00, Salon Urbain, Place des arts (1600 rue Saint-Urbain)

Participation is restricted to those who have signed up and paid for this event at conference registration. This is the main festive event of the conference, featuring a fine-dining buffet and wine. It will be held off-campus, a short walk away to Place de Arts. How to get there from the ISHPSSB conference location: take a left exiting the DS building onto St-Catherine, then immediately turn right onto Sanguinet. Take the second left onto Maisonneuve, then walk about 5-8 minutes to St-Urbain street. The venue is slightly left, on the far side of the street, with a sign indicating “Place des Arts”.

Excursions in and around Montréal
Friday afternoon
There are plenty of activities in and around Montréal which are sure to grab your attention: tours, libraries, boat rides, and more! We can help find the best activity for your needs: either check out the ISHPSSB2015 website under “Program”, or come visit us at the registration desk. Note that if you would like to attend any of the excursions, you will need to do the booking yourself.

Plenary Talks

WHAT IS OBJECTIVE RESEARCH FOR SOCIAL JUSTICE MOVEMENTS?
Sandra Harding
Monday 17:30 till 19:00, Marie-Guérin-Lajoie auditorium

Social justice movements, such as feminism, anti-racism, decolonialism and postcolonialism, have produced a standpoint methodology more competent to maximize objectivity than the conventional requirement that natural and social science research be value-free. The need for “strong objectivity,” as a complement to the usual standards for value-free objectivity, arises when research communities lack diversity, and are isolated from relevant democratic social tendencies. Research that starts off questioning nature and social relations from the daily lives of economically and politically vulnerable groups can increase its own reliability and predictive power. Such research insists on the conventional goals of fairness to the data and to its severest criticisms. It retains central commitments of the conventional notion of objectivity while escaping its limitations. It also produces new conceptions of the “proper scientific self,” which are, of course, morally challenging. In the natural sciences, biologists have earliest and most extensively developed such methodology. This presentation will highlight these issues.

Biography
Sandra Harding is Distinguished Research Professor in Education and Gender Studies at UCLA. She received her undergraduate degree from Douglass College and her doctorate in philosophy from New York University. She taught for two decades in the Departments of Philosophy and Sociology at the University of Delaware, where she also directed the Women’s Studies Program for 8 years. She then taught for 19 years at UCLA, where she directed the UCLA Center for the Study of Women. She has written or edited 16 books and special journal issues on topics in feminist and postcolonial epistemology, philosophy of science and research methodology. Most recently she authored Sciences From Below: Feminism, Postcolonialities and Modernities (2008) and edited The Postcolonial Science and Technology Studies Reader (2011). Objectivity and Diversity: Another Logic of Scientific Research (University of Chicago Press, 2015) is her most recently completed book.
Plenary Talks

Harding has been a visiting professor at the University of Amsterdam, the Swiss Federal Institute of Technology, and The University of Costa Rica. She was a Distinguished Affiliate Professor of Philosophy at Michigan State University 2010-2014. She co-edited Signs: Journal of Women in Culture and Society 2000-2005. She was awarded the 2013 John Desmond Bernal Prize of the Society for the Social Studies of Science (4S); previous recipients include Thomas S. Kuhn, Robert Merton, Mary Douglas, and Joseph Needham. She has consulted to a number of international agencies, including the Pan American Health Organization, UNIFEM, the United Nations Commission on Science and Technology for Development, and UNESCO. She has lectured on over 300 campuses on six continents.

Plenary Talks

HUGGING THE TREE OF LIFE

W. Ford Doolittle

Wednesday 17:30 till 19:00, Marie-Guérin-Lajoie auditorium

For 30 years, gene sequences were used to construct phylogenetic trees without serious concern that different genes might actually have different evolutionary histories because of transfer “across species lines” (Lateral Gene Transfer, or LGT). But now comparative genomic data show LGT to be so frequent on an evolutionary time scale that a maximum of 5%, and possibly 0%, of the genes in any bacterial genome are likely to have the same history back to any last common bacterial ancestor. LGT is also not an insignificant force in the evolution of microbial eukaryotes. The effort to construct a universal Tree of Life (TOL) may thus be rendered futile, and we need to rethink what we want the TOL to do for us – underwrite systematics, prove the Theory of Evolution or recreate a history of speciation events and cell divisions back to the beginning of Life. Conflict among evolutionary biologists shows they have conflated these goals. My purpose in this talk will be to disentangle them.

Biography

W. Ford Doolittle was born in Urbana Illinois, the son of an art professor. He earned a BA in Biochemical Science from Harvard College in 1963 and a PhD in Biological Science from Stanford University in 1969, the focus of his studies being bacterial genetics. He joined the Department of Biochemistry and Molecular Biology at Dalhouse in 1971 and has been there ever since: he is now Professor Emeritus, but working full time. For 20 years he was the Director of the Program in Evolutionary Biology of the Canadian Institute for Advanced Research (CIFAR), and for seven, a CRC Chair. He was a Guggenheim Fellow and is a member of American Academy of Microbiology, a Fellow of the Royal Society of Canada, a member of the US National Academy of Sciences, an Institute Fellow of CIFAR and a Foreign Member of the Norwegian Academy of Science and Letters. He received a Bachelor of Fine Arts from the Nova Scotia College of Art and Design in 2013 and in 2014 he was awarded the Herzberg Gold Medal for Science and Engineering, the top award given by the Natural Sciences and Engineering Research Council of Canada.

Work of his laboratory spanned four decades and involved testing the endosymbiont hypothesis for the origin of chloroplasts, cyanobacterial and archaeal molecular genetics, the origin and early evolution of eukaryotes, lateral gene transfer in prokaryotes and its impact on phylogeny, and metagenomics. In parallel he has advanced theories about the origin of introns, “selfish DNA”, evolutionary ratchets, the Tree of Life, the nature of bacterial species and the misuse of function concepts in genomics. He currently concentrates almost entirely on conceptual issues at the intersections of genomics, microbiology, phylogenetics, and philosophy of biology.
SUNDAY JULY 5

13:00 – 17:00
LOBBY OF J.-A.-DESÈVE (DS) BUILDING
REGISTRATION

17:00 – 18:00
MARIE-GÉRIN-LAJOIE AUDITORIUM
PRESIDENT’S WELCOME

18:00 – 20:00
MARIE-GÉRIN-LAJOIE AUDITORIUM
WELCOME TO MONTRÉAL COCKTAIL

NOTE: the symbol ** indicates that, at time of publication, the attendance of this presenter has not been confirmed.
MONDAY JULY 6

LOBBY OF J.-A.-DESÈVE (DS) BUILDING
REGISTRATION

08:00 – 09:00

INDIVIDUAL PAPERS
ENVIRONMENTAL STUDIES: INTERDISCIPLINARY PERSPECTIVES

DS 1420
09:00 – 10:30

Evolution and (Aristotelian) virtue ethics
JOHN MIZZONI (Neumann University, United States)

Environment and quantum Darwinism
DENIZ ÖLÇEK (Middle East Technical University, Turkey)

Ethical dimensions in contents linked to ecosystem services in ecology teaching
DÁLIA MELOUSSA CONRADO (Universidade Federal da Bahia, Brazil); NEI NUNES-NETO (Universidade Federal da Bahia, Brazil)

INDIVIDUAL PAPERS
MEASURING EVOLUTIONARY FORCES

DS 1520
09:00 – 10:30

Challenges for determining which traits are selected for and to what degree
WES ANDERSON (Arizona State University, United States)

In search of invariance in evolutionary biology
JUN OTSUHA (Kobe University, Japan)

Quantifying form versus function in current evolutionary transitions
ROGER SANSOM (Texas A & M University, United States)
ORGANIZED SESSION / STANDARD TALKS

RANDOMIZED CONTROLLED TRIALS: THE PLACEBO PERSPECTIVE
Organizer(s): JEAN-FELIX GROSS (Université Jean Moulin Lyon 3, France); HAJIME FUJIMORI (IHPST/Université Paris 1 Panthéon-Sorbonne, France)

Why most sugar pills are not placebos
BENNETT HOLMAN (University of California, Irvine, United States)

Placebo effect and randomized controlled trials on acupuncture
WENBO LIANG (IHPST/Université Paris 1 Panthéon-Sorbonne, France)

Do we learn from history?
JEAN-FELIX GROSS (Université Jean Moulin Lyon 3, France)

BOUNDARIES AND LEVELS OF BIOLOGICAL ORGANIZATION (1)
Organizer(s): JON UMEREZ (University of the Basque Country, Spain)

From levels of organization to the organization of levels
MAEL MONTEVEL (Université Paris Diderot - Paris 7, France); MATTEO MOSSIO (IHPST/Université Paris 1 Panthéon-Sorbonne, France)

Regulation in biological systems
LEONARDO BICH (Instituto de Filosofia y Ciencias de la Complejidad, Citie); ALVARO MORENO (University of the Basque Country, Spain)

Teleology and biology: A scientific alternative to naturalization
NICOLE PERRIN (École Normale Supérieure, Centre Cavaillès, France)

TECHNOLOGY, CONSTRAINTS, AND EXAPTATION

Two kinds of exaptation: Structures and functions in an extended taxonomy of fitness
TELMO PIEVANI (Università degli Studi di Padova, Italy); ANDREA PARRAVICINI (Università degli Studi di Padova, Italy)

Patented technology as a model system for cultural evolution
MARK BEDAU (Reed College, United States)

Biological constraints do not entail cognitive closure
MICHAEL VLEIRCK (University of Johannesburg, South Africa)

INTERDISCIPLINARY PERSPECTIVES ON HUMAN NATURE

Social studies of science meet development: DOHaD and medicalization
FABRIZIO GUERRIERO MC MANUS (Universidad Nacional Autonoma de Mexico, Mexico)

Traditions of research on the definition of contagious disease
ROY JOSE HERNANDEZ GARRIDO (Universidad Complutense de Madrid, Spain)

Phenotypic regenesis and the inheritance of acquired characteristics: Obesity and type II diabetes mellitus as exemplars
EDWARD ARCHER (University of Alabama at Birmingham, United States)

EXPLANATION, COMPLEXITY, AND FUNCTION

Forms of explanation in genetics and embryology around 1900
ROBERT MEUNIER (Universität Kassel, Germany)

Complexity, organization and life in the philosophy of Sir Kenelm Digby
DEREK SKILLINGS (City University of New York, United States)

A better way to be a function pluralist
JUEN SARJON (City University of New York, United States)

SPECIES OF CONSEQUENCE? MULTIPLE PERSPECTIVES

Animals of consequence: Natural symbols
EMILY HUTCHISON (Princeton State University, United States)

Contrasting approaches in mitochondrial evolution: Implications for the tree of life debate
THOMAS BONNIN (University of Exeter, United Kingdom)

Species, scientific realism, and historical essences
MARION GODMAN (Cambridge University, United Kingdom)
**INDIVIDUAL PAPERS**

**FREE WILL, EPISTEMIC LEVERS AND NORMATIVE IMPLICATIONS IN EVOLUTIONARY PSYCHOLOGY**

Epistemic levers: Biological levers and knowledge in nonhuman species
Guillaume Beauvau (Yale University, United States); Frédéric-Isaëls Barville (University of Western Ontario, Canada)

Clarifying contradictory results in free will belief measurements
Matthew Smith (University of British Columbia, Canada)

Historical functions and their normative implications
Louise Dauver (University of Pennsylvania, United States)

**EPISTEMOLOGY, OBJECTIVITY AND MARKETING IN BIOMEDICINE**

Applying epistemology to help bridge the translational gap
Jessica Bolker (University of New Hampshire, United States)

The objectivity of clinical trials outcomes
Roger Stanev (University of Ottawa, Canada)

Profitable little pills: Marketing biological sex and gender
Kate Grau (Indiana University Bloomington, United States)

**ORGANIZED SESSION / STANDARD TALKS**

**PROBABILITY AND CHANCE IN BIOLOGY**

Organizer(s): Joel Velasco (Texas Tech University, United States)

Adaptive dynamics, chaos, chance, and fitness
Charles Pence (Louisiana State University, United States)

Resolving puzzles about types and tokens in evolution with new probability concepts
Marshall Abrams (University of Alabama at Birmingham, United States)

A disunified account of objective probability in biology
Joel Velasco (Texas Tech University, United States)

**NEW PERSPECTIVES ON BIOLOGICAL INFORMATION**

Organizer(s): Brett Calcott (Arizona State University, United States); Karola Stotz (Macquarie University, Australia)

What makes causal relationships in biology “informational” relationships?
Karola Stotz (Macquarie University, Australia)

Biological specificity and biological information
Aruna Pochireddy (University of Sydney, Australia)

Crick information: In genomes and elsewhere
Paul Griffiths (Sydney University, Australia)

**COFFEE BREAK**

10:30 – 11:00
ORGANIZED SESSION / STANDARD TALKS
ARE YOU A ROMANTIC OR KILLJOY? (1) ISSUES IN COMPARATIVE PSYCHOLOGY
Organizer(s): RACHAEL BROWN (Macquarie University, Australia)

Even a fish could do it: Outgroup species and killjoy explanations
HAYLEY CLATTERBUCK (University of Wisconsin-Madison, United States)

Field and lab: Different methods, different questions, and different answers
KRISTIN ANDREWS (York University, Canada)

Romantics and killjoys on animal morality
SIMON FITZPATRICK (John Carroll University, United States)

ORGANIZED SESSION / DIVERSE FORMAT
NATURAL EXPERIMENTS
Organizer(s): CARLOS MARISCAL (Dalhousie University, Canada); S. ANDREW INKPEN (Harvard University, United States)

Participant(s):
CARLOS MARISCAL (Dalhousie University, Canada)
S. ANDREW INKPEN (Harvard University, United States)
YOEL STUART (University of Texas, Austin, United States)
ADRIAN CURRIE (University of Calgary, Canada)

ORGANIZED SESSION / STANDARD TALKS
WHERE BIOLOGY MEETS ANTHROPOLOGY (1): PHILOSOPHICAL DISCUSSIONS
Organizer(s): JAY ODENBAUGH (Lewis & Clark College, United States)

Causation in evolutionary anthropology
STEPHEN DOWNES (University of Utah, United States)

It’s all in the game: Optimality models and the rules of behavior
KENNETH BLAKE VERNON (University of Utah, United States)

Human nature, anthropology and the problem of variation
JAY ODENBAUGH (Lewis & Clark College, United States)

INDIVIDUAL PAPERS
ECOLOGY, EVOLUTION AND PHILOSOPHY
The relationship between ecology and evolutionary biology: A transpositional thesis
STEPHEN FRIESEN (Indiana University Bloomington, United States)

Hull and Ruse on positivism, historicism, and Darwin’s debt to philosophy
PHILIP HONENBERGER (Consortium for History of Science, Technology, and Medicine, United States)

Constructing causal models in biology: What are the rules?
BRIAN McLOONE (University of Wisconsin-Madison, United States)

INDIVIDUAL PAPERS
UNDERSTANDING FITNESS PHILOSOPHICALLY
Honest propensities: Is there a crack in the new foundation?
PETER TAKACS** (Florida State University, United States)

Rejecting replicators
KAREN KOVAKA (University of Pennsylvania, United States)

Hypothetical biological spaces and genetic accessibility
JASON ZINSER (University of Wisconsin-Madison County, United States)
INDIVIDUAL PAPERS
GENES, INDIVIDUALS AND CONTINGENCY
Can genes be Darwinian individuals?
HAIXIN DANG (University of Pittsburgh, United States)
Gene regulatory models with evolutionary genetics models: Two cases
STEVE ELLIOTT (Arizona State University, United States)
Biological individuality and the evolutionary contingency thesis
ALISON MCCONWELL (University of Calgary, Canada)

INDIVIDUAL PAPERS
CAUSATION, EXPLANATION AND INFORMATION IN BIOLOGY
Limiting cases for the new mechanists: Intralevel causation is insufficient for modeling complex biological systems
SARAH ROE (Southern Connecticut State University, United States); Bert Baumgaertner (University of Idaho, United States)
Causal explanation in genetics and the pathway concept
LAUREN ROSS (University of Pittsburgh, United States)
On the impossibility of measuring biological information
AGUSTÍN MERCADO-REYES (Universidad Nacional Autónoma de México, Mexico)

INDIVIDUAL PAPERS
SPECIES QUESTIONS: MISSING LINKS, NEW CONCEPTS, AND METAPHYSICS
Hypothetical common ancestors and the search for missing links
RICHARD JAVIER STEPHENSON (University of Cincinnati, United States)
The mechanism of neo-biological species concept: From reproductive isolation to communicative isolation
BO-CHI G. LAI (Da-Yeh University, Taiwan)
The relevance of the metaphysics of time and temporal persistence for the species problem and the organism problem
AUGUST MARTIN (Universiteit Leiden, Netherlands)
ORGANIZED SESSION / STANDARD TALKS
MODELING IN SYSTEMS BIOLOGY: SIMPLICITY VERSUS COMPLETENESS
Organizer(s): SARA GREEN (University of Copenhagen, Denmark); MELINDA FAGAN (University of Utah, United States)
Different types of explanatory mathematical analysis in systems biology
INGO BRIGANDT (University of Alberta, Canada)
Discovering design with simplified computational models
WILLIAM BECHTEL (University of California, San Diego, United States)
Large-scale modeling and the ideal of completeness
SARA GREEN (University of Copenhagen, Denmark)

LUNCH BREAK
COUNCIL MEETING | Room DS-1955

ORGANIZED SESSION / STANDARD TALKS
ARE YOU A ROMANTIC OR KILLJOY? (2) ISSUES IN COMPARATIVE PSYCHOLOGY
Organizer(s): RACHAEL BROWN (Macquarie University, Australia)
STANDARD TALKS
Explanatory constraints in comparative psychology
RACHAEL BROWN
What the crow cannot do: Assessing the “signature-testing” approach to comparative psychology
RACHAEL BROWN

Panel Discussion
ROMANTIC OR KILLJOY: WHERE TO FROM HERE?
KRISTIN ANDREWS, HAYLEY CLATTERBUCK, SIMON FITZPATRICK, MARTA HALINA, RACHAEL BROWN
Participant(s):
RACHAEL BROWN (Macquarie University, Australia)
MARTA HALINA (University of Cambridge, United Kingdom)
HAYLEY CLATTERBUCK (University of Wisconsin-Madison, United States)
KRISTIN ANDREWS (York University, Canada)
SIMON FITZPATRICK (John Carroll University, United States)

ORGANIZED SESSION / DIVERSE FORMAT
REPRESENTATIONS OF BIOLOGICAL INHERITANCE: A ROUNDTABLE
Organizer(s): FRANCESCA MERLIN (IHST/ Université Paris 1 Panthéon-Sorbonne, France)
Participant(s):
STAFFAN MÜLLER-WILLE (Exeter University, United Kingdom)
GREGORY RADICK (University of Leeds, United Kingdom)
LEILA PERIE (University of Toulouse 3, France)
ANNE-CECILE DAGAST (University of Toulouse 3, France)
GAËLLE PONTAROTTI (IHST/ Université Paris 1 Panthéon-Sorbonne, France)
LIVIO RIBOLI-SASCO (L’Atelier des Jours à Venir, France)

ORGANIZED SESSION / DIVERSE FORMAT
WHERE BIOLOGY MEETS ANTHROPOLOGY (2): PHILOSOPHICAL DISCUSSIONS
Organizer(s): MATT HABER (University of Utah, United States); JAY ODENBAUGH (Lewis & Clark College, United States)
Participant(s):
RICHARD BOYD (Cornell University, United States)
HEIDI COLLERAN (Institute for Advanced Study in Toulouse, France)
STEPHEN DOWNES (University of Utah, United States)
KENNETH BLAKE VERNON (University of Utah, United States)
JAY ODENBAUGH (Lewis & Clark College, United States)

ORGANIZED SESSION / STANDARD TALKS
EVOLUTION OF COOPERATION: NEW ROLES FOR SOCIAL, CULTURAL, AND COGNITIVE INTERACTIONS
Organizer(s): MARSHALL ABRAMS (University of Alabama at Birmingham, United States)
Bedouin hospitality: A case study in human altruism
BENJAMIN REILLY (Carnegie-Mellon University, Qatar)
The evolving relationship between social identity and cooperative group formation through New cultural history
PAUL SMALLINO (University of California, Davis, United States)
Modeling complex cultural interactions in cooperation: The coevolution of sustainable rice farming and religious practices in Bali
MARSHALL ABRAMS (University of Alabama at Birmingham, United States)
MONDAY JULY 6

ORGANIZED SESSION / STANDARD TALKS

FORMAL EPISTEMOLOGY AND EVOLUTIONARY BIOLOGY
Organizer(s): BENGT AUTZEN (University of Bristol, United Kingdom)

Is natural selection evidence for common ancestry?
ELLIOTT SOBER (University of Wisconsin-Madison, United States); MIKE STEEL (University of Canterbury, New Zealand)

Judgement aggregation and phylogenetics
JOEL VELOSTO (Texas Tech University, United States)

Dissolving the star tree paradox in Bayesian phylogenetics
BENGT AUTZEN (University of Bristol, United Kingdom)

ORGANIZED SESSION / STANDARD TALKS

DISCOURSES ON ORIGINS: A PHILOSOPHICAL INQUIRY
Organizer(s): PASCAL NOUVEL (Université Paul Valéry Montpellier III, France); GUILLAUME BAGNOLINI (Université Paul Valéry Montpellier III, France)

Origins without causes: On the phenomenological discourse on the origins of man
CLAUS NAEBERG (Universitetet i Bergen, Norway)

Paleoanthropology and the origins of man: The emergence of techniques and language according to André Leroi-Gourhan
ÅRLID UTAKER (Universitetet i Bergen, Norway)

A typology of discourses on origins
PASCAL NOUVEL (Université Paul Valéry Montpellier III, France)

ORGANIZED SESSION / STANDARD TALKS

TOPICS IN THE HISTORY OF GENETICS: MENDEL AND EXPERIMENTAL EVOLUTION
Organizer(s): YAFENG SHAN (University College London, United Kingdom)

Entwicklung oder Vererbung? A new analysis of Mendel’s Versuche
YAFENG SHAN (University College London, United Kingdom)

The great train crash of 1886
MICHAEL BUTTOLPH (University College London, United Kingdom)

Purposes and implications of early experimental evolution
KELE CABLE (University of Minnesota, United States)

ORGANIZED SESSION / STANDARD TALKS

WHAT ARE ECOLOGICAL COMMUNITIES, AND ARE THEY PRESERVABLE?
Organizer(s): CHRISTOPHER LEAN (Australian National University, Australia); ALKISTIS ELLIOTT-GRAVES (Rotman Institute, Canada)

Ecological community identity is not a function of emergent properties
CHRISTOPHER ELIOT (Hoberta University, United States)

Ecological communities are robust population networks
CHRISTOPHER LEAN (Australian National University, Australia)

Is Aldo Leopold’s “Biotic Community” an individual?
ROBERTA L. MILLSTEIN (University of California, Davis, United States)

ORGANIZED SESSION / STANDARD TALKS

FROM THE TISSUE ORGANIZATION FIELD THEORY OF CARCINOGENESIS TO A THEORY OF ORGANISMS AND BACK
Organizer(s): MAEL MONTÉVIL (Université Paris Diderot - Paris 7, France); MATTEO MOSSIO (IHPST/Université Paris 1 Panthéon-Sorbonne, France); ANA SOTO (Centre Cassaïle, École Normale Supérieure, France); CARLOS SÖNNENSCHEIN (Tufts University, United States)

The biological default state
ANA SOTO (Centre Cassaïle, École Normale Supérieure, France); MAEL MONTÉVIL (Université Paris Diderot - Paris 7, France); CARLOS SÖNNENSCHEIN (Tufts University, United States)

A novel framing principle for biology
MAEL MONTÉVIL (Université Paris Diderot - Paris 7, France); CARLOS SÖNNENSCHEIN (Tufts University, United States); ANA SOTO (Centre Cassaïle, École Normale Supérieure, France)

From a theory of organisms to carcinogenesis
CARLOS SÖNNENSCHEIN (Tufts University, United States); ANA SOTO (Centre Cassaïle, École Normale Supérieure, France); MAEL MONTÉVIL (Université Paris Diderot - Paris 7, France)
ORGANIZED SESSION / STANDARD TALKS

NOVELTY AND DISCONTINUITY IN EVOLUTION
Organizer(s): THIBAULT RACOVSKI (University of Exeter, United Kingdom)

Macroevolution and microevolution: Timescale and modeling in evolutionary biology
PHILIPPE HUNEMAN (IHPST/ Université Paris 1 Panthéon-Sorbonne, France)
The centrality of experiment in the historical science research program on evolutionary novelties
ALAN LOVE (University of Minnesota, United States)
On ambiguities in the definition of evolutionary novelties and their consequences for the debate on the extended evolutionary synthesis
THIBAULT RACOVSKI (University of Exeter, United Kingdom)

ORGANIZED SESSION / DIVERSE FORMAT

NORMS, KINDS, AND BIOLOGICAL PRACTICE
Organizer(s): THOMAS REYDON (Leibniz Universität Hannover, Germany)

Participant(s):
MATTHEW BARKER (Concordia University, Canada)
MARC BRESHEFSKY (University of Calgary, Canada)
P.D. MAGNUS (University at Albany, United States)
MATTHEW SLATER (Bucknell University, United States)
THOMAS REYDON (Leibniz Universität Hannover, Germany)

ORGANIZED SESSION / STANDARD TALKS

CANCER CAUSATION AND EXPLANATION
Organizer(s): KATHERINE LIU (University of Minnesota, United States); ANYA PLUTYNSKI (Washington University in St Louis, United States)

Rethinking cancer through modularity
KATHERINE LIU (University of Minnesota, United States)
Cancer as a process
JOHN DUPRE (University of Exeter, United Kingdom); MARTA BERTOLASO (Università Campus Bio-Medico, Italy)
Sexual conflict or genial genes? The seductive temptations of evolutionary explanations of gender disparities in cancer
ANYA PLUTYNSKI (Washington University in St Louis, United States)

ORGANIZED SESSION / STANDARD TALKS

ETHICAL DIMENSIONS OF PHILOSOPHY OF RACE
Organizer(s): ADAM HOCHMAN (Macquarie University, Australia); JON RØYNE KYLLINGSTAD (Norsk Teknisk Museum, Norway)

In defence of the metaphysics of race
ADAM HOCHMAN (Macquarie University, Australia)

Human races, biological realism, and “slippage”
JONATHAN KAPLAN (Oregon State University, United States)
Agential technologies and implicitly biased behaviors
NATALIA WASHINGTON (Purdue University, United States)

ORGANIZED SESSION / STANDARD TALKS

ARE HALF OF AMERICANS REALLY CREATIONISTS?
Organizer(s): MICHAEL WEISBERG (University of Pennsylvania, United States)

Criticismists’ criteria for credence: An account of the conflicting frameworks of evolution and creationism
EMILEN METZ (University of Pennsylvania, United States)
The disentanglement project
DAN KAHAN (Yale University, United States)
Probing public understanding and acceptance of evolution
MICHAEL WEISBERG (University of Pennsylvania, United States); DEENA SKOLNICK WEISBERG (University of Pennsylvania, United States); JANE REZNIK (University of Pennsylvania, United States)
MONDAY JULY 6

POSTER SESSION AND COCKTAIL | Lobby of Marie-Gérin-Lajoie auditorium

POSTER

CLAUDE BERNARD AND THE EXPERIMENTAL METHOD WITH LIVING ORGANISMS
ALAN DANTAS S. FELISBERTO (Universidade Estadual de Campinas, Brazil)

POSTER

EDWARD O. WILSON’S “CONVERSION”: A CURRENT POLEMIC ABOUT GROUP SELECTION
LUIZA ACCIARO (Universidade Federal de Bahia, Brazil); MARK BORRELLO (University of Minnesota, United States); JUAN MANUEL SÁNCHEZ ARTEAGA (Universidade Federal de Bahia, Brazil)

POSTER

WHAT PHILOSOPHY OF BIOLOGY GOT WRONG ON THE GAIA HYPOTHESIS
SEBASTIEN DUTREUIL (IHPST/ Université Paris 1 Panthéon-Sorbonne, France)

POSTER

THE SPACE OF EXPLANATIONS IN EVOLUTIONARY BIOLOGY AND ECOLOGY
PHILIPPE HUNEMAN (IHPST/ Université Paris 1 Panthéon-Sorbonne, France)

POSTER

FROM DUALISM TO MULTIPLICITY: SEEING BCL-2 FAMILY PROTEINS AND CELL DEATH WITH NEW EYES
ABDEL AOUACHERIA (CNRS/ENS-Lyon, France); GUSTAVE THEILHABER (CNRS/ENS-Lyon, France)

POSTER

COULD IVAN IVANOVICH SCHMALHAUSEN’S CONCEPTIONS OF EVOLUTION IN THE 1940’S BE RELATED TO THE IDEA OF “PHENOTYPIC PLASTICITY”?
CINTIA GRAZIELA SANTOS (Universidade de São Paulo, Brazil)

ERASMUS DARWIN’S AND LAMARCK’S CONCEPTIONS ON EVOLUTION: A COMPARISON
PEDRITA DONDA (Universidade de São Paulo, Brazil)

REASSESSING THE STATUS OF HOLOBIOMTS IN EVOLUTION
SHIJIAN YANG (Karnan University, China); ZHIPING CAO (Karnan University, China)

FROM CLASSIFICATORY TO QUANTITATIVE CONCEPTS IN THE STUDY OF SOCIALITY IN ANIMALS: AN EPISTEMOLOGIC VIEW
LUCIA C. NECO (Universidade de São Paulo, Brazil); CHARBEL EL-HANI (Universidade Federal de Bahia, Brazil); HILTON F. JAPYASSU (Universidade Federal de Bahia, Brazil)

GREEN TRAVELLING
DENIZ ÖLÇEK (Middle East Technical University, Turkey)

AT THE BIO-ANTHROPOLOGICAL CROSSROADS: A COMPARISON OF THE USE OF NICHE CONSTRUCTION THEORY (NCT) IN ARCHAEOLOGY AND EVOLUTIONARY BIOLOGY
FRANCISCO VERGARA-SILVA (Universidad Nacional Autónoma de México, Mexico)

PHYLOGENETIC ANALYSIS USING A NOVEL THEORETICAL MORPHSPACE FOR FUNGI SHOWS MULTIPLE ORIGINS OF MULTICELLULARITY ACHIEVED BY MULTIPLE ROUTES
DAVID CRAWFORD** (University of Bristol, United Kingdom)
POSTER
HISTORY, INTEGRATION, AND THE BIOLOGICAL CHARACTER CONCEPT
SHARI MONNER (University of Western Ontario, Canada)

POSTER
TWO WAYS OF THINKING ABOUT MODULARITY
LUCAS MATTHEWS (University of Utah, United States); KENNETH BLAKE VERNON (University of Utah, United States)

POSTER
REMTENESS, UNCERTAINTY, AND NATURAL INSTRUMENTS: THE INFERENTIAL
STRUCTURE OF PROXY RECORDS
KIMBERLY BRUMBLE (Indiana University Bloomington, United States)

POSTER
MULTIPLE REALIZATION REVISITED: A MECHANISTIC SOLUTION
WEI FANG (University of Sydney, Australia)
TUESDAY JULY 7

**ORGANIZED SESSION / DIVERSE FORMAT**

**TRANSMISSION AND INHERITANCE**

Organizer(s): ANTONINE NICOGLOU (LabEx “Who am I”, France); FRANCESCA MERLIN (IHPST, Université Paris 1 Panthéon-Sorbonne, France); ALEXANDRE PELUFFO (Pôle Études, LabEx “Who Am I”, France); OLIVIER PUTOIS (LabEx “Who Am I”, France)

Participants:
- ANTONINE NICOGLOU (LabEx “Who am I”, France)
- FRANCESCA MERLIN (IHPST, Université Paris 1 Panthéon-Sorbonne, France)
- ALEXANDRE PELUFFO (Pôle Études, LabEx “Who Am I”, France)
- OLIVIER PUTOIS (LabEx “Who Am I”, France)

- **Time-scales analysis as a way to distinguish transmission mechanisms from inheritance**
  - FRANCESCA MERLIN & LIVIO RIBOLI SASCO

- **Distinction of the timings of development: A way to characterize inheritance?**
  - ANTONINE NICOGLOU

- **Finding genes: What does it mean and how can we do it? An illustration using an ongoing research project in genetics**
  - ALEXANDRE PELUFFO

- **How does early psychological development articulate inheritance and transmission? When psychoanalysis meets epigenetic models**
  - OLIVIER PUTOIS

**INDIVIDUAL PAPERS**

**SPECIES ORIGINS, MUTUAL AID AND ORGAN DONATION**

- **Alfred Russel Wallace and the problems of the origin of species**
  - KOEN TANGHE (University of Gent, Belgium)

- **Kropotkin’s theory of mutual aid: Implications and current evidence**
  - GEORGE STAMETS (Florida State University, United States)

- **Ego depletion and organ donation**
  - SARA KOLMES (Florida State University, United States)
<table>
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<tr>
<th>Time</th>
<th>Session / Format</th>
<th>Title</th>
<th>Organizer(s)</th>
<th>Participant(s)</th>
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<tr>
<td>09:00 – 10:30</td>
<td>ORGANIZED SESSION / DIVERSE FORMAT</td>
<td>PHYSICAL SCIENCE APPROACHES TO ORGANISMAL DEVELOPMENT</td>
<td>ALAN LOVE (University of Minnesota, United States); WILLIAM C. WIMSATT (University of Minnesota, United States)</td>
<td>KARL NIKLAS (Cornell University, United States); ROBERT BATTERMAN (University of Pittsburgh, United States); ALAN LOVE (University of Minnesota, United States); WILLIAM C. WIMSATT (University of Minnesota, United States); FRANCOIS FAGOTTO (McGill University, Canada)</td>
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<td>ORGANIZED SESSION / STANDARD TALKS</td>
<td>HETEROGENEITY AND THE PROBLEM OF ECOLOGICAL PREDICTION</td>
<td>ERIC DESJARDINS (University of Western Ontario, Canada)</td>
<td>ANTOINE C. DUSSAULT (Université de Montréal, Canada); BRENT SINCLAIR (University of Western Ontario, Canada)</td>
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<td>ORGANIZED SESSION / STANDARD TALKS</td>
<td>DRAWN FROM LIFE: VISUAL CONSTRUCTIONS OF BIOLOGICAL KNOWLEDGE FROM EARLY MODERN ALCHEMY TO VICTORIAN BOTANY</td>
<td>DONALD OPITZ (DePaul University, United States); AGUSTÍN MERCADO-REYES (Universidad Nacional Autónoma de México, Mexico)</td>
<td>AGUSTÍN MERCADO-REYES (Universidad Nacional Autónoma de México, Mexico); JOAN STEIGERWALD (York University, Canada); DONALD OPITZ (DePaul University, United States)</td>
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<td>ORGANIZED SESSION / STANDARD TALKS</td>
<td>THE QUEST FOR AFFINITY: FOUR PRE-DARWINIAN VIEWS OF NATURE</td>
<td>ALETA QUINN (University of Pittsburgh, United States); AARON NOVICK (University of Pittsburgh, United States)</td>
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<td>ORGANIZED SESSION / STANDARD TALKS</td>
<td>THE CELL AND CONCEPTIONS OF INDIVIDUALITY IN THE 19TH CENTURY</td>
<td>MARION THOMAS (Université de Strasbourg, France); FRANÇOIS DUCHESNEAU (Université de Montréal, Canada)</td>
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<td>ORGANIZED SESSION / STANDARD TALKS</td>
<td>COSTLY SIGNALING THEORY: EXPERIMENTAL AND THEORETICAL PERSPECTIVES</td>
<td>JUSTIN BRUNER (Australian National University, Australia); HANNAH RUBIN (University of California, Irvine, United States)</td>
<td>JUSTIN BRUNER (Australian National University, Australia); HANNAH RUBIN (University of California, Irvine, United States); CAI LIN O'CONNOR (University of California, Irvine, United States); SIMON HUTTEGGER (University of California, Irvine, United States); DAVID KALKMAN (University of California, Irvine, United States); CARL BRUSSE (Australian National University, Australia); ELLIOTT WAGNER (Kansas State University, United States)</td>
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TUESDAY JULY 7
ORGANIZED SESSION / STANDARD TALKS
LIFE, THE UNIVERSE AND ALL THAT: TAKING ASTROBIOLOGY SERIOUSLY
Organizer(s): KELLY SMITH (Clemson University, United States)
Astrobiology and the nature of the question about minimal chemical life
MARK SEDAU (Reed College, United States)
Finding value outside Earth
DAVID SUAREZ PASCAL (Universidad Nacional Autónoma de México, Mexico)
Philosophy through an astrobiological lens
KELLY SMITH (Clemson University, United States)

ORGANIZED SESSION / BEYOND MECHANISMS
The big picture: Contextualization and extrapolation in basic research
TUDOR BAETIU (Universidade do Vale do Rio dos Sinos, Brazil)
Non-mechanistic and non-causal explanation in a causal-mechanical world
STUART GLENNAN (Butler University, United States)
On the role of unactualized possibilities in biological explanation
LANE DESAUTELS (University of Notre Dame, United States)

ORGANIZED SESSION / SOCIAL AND EPISTEMIC VALUES IN EVOLUTION (1)
Organizer(s): CARLA FEHR (University of Waterloo, Canada); INGO BRIGANDT (University of Alberta, Canada)
Adaptationism in action: The logic of research questions
ELISABETH LOYD (Indiana University, United States)
Evolutionary psychology: A positive project for the logic of research questions
EVAN ARNET (Indiana University, United States)
A scientific theory’s purpose: Social values in theory acceptance
INGO BRIGANDT (University of Alberta, Canada)

ORGANIZED SESSION / DIVERSE FORMAT
Organizer(s): HALLAM STEVENS (Nanyang Technological University, Singapore); SARAH RICHARDSON (Howard University, United States)
Participant(s):
MICHAEL DIETRICH (Dartmouth College, United States)
LAURA FRANKLIN-HALL (Stanford University, United States)
AMY HINTEMBERGER (Warwick University, United Kingdom)
MICHEL MORANGE (École Normale Supérieure, Centre Cavaillès, France)
SAHOTRA SARKAR (University of Texas at Austin, United States)

ORGANIZED SESSION / STANDARD TALKS
THE USE AND ABUSE OF FUNCTION CONCEPTS IN GENOMICS
Organizer(s): STEFAN LINQUIST (University of Guelph, Canada)
Junk and the genome
T. RYAN GREGORY (University of Guelph, Canada)
The ENCODE kerfuffle
W. FORD DOOLITTLE (Rutgers University, United States)
How best to reform function-talk in genomics?
STEVEN LINQUIST (University of Guelph, Canada)

ORGANIZED SESSION / STANDARD TALKS
WHY IS BEHAVIORAL GENETICS SO CONTROVERSIAL?
Organizer(s): JAMES TABERY (University of Utah, United States)
Accumulating and circulating knowledge about genes and environments in animal behavior genetics
NICOLE NELSON (University of Wisconsin-Madison, United States)
Controversy in behavior genetics: A structural account
AARON PANOFSKY (UCR, United States)
His nature, her nurture, or what good are conceptual critiques for tackling practical concerns about the development of gendered individuals?
PETER TAYLOR (University of Massachusetts-Boston, United States)
INTERNATIONAL SOCIETY FOR THE HISTORY, PHILOSOPHY, AND SOCIAL STUDIES OF BIOLOGY

TUESDAY JULY 7

ORGANIZED SESSION / DIVERSE FORMAT
RETHINKING REPRODUCTION
Organizer(s): MONIKA PIOTROWSKA (University at Albany, SUNY, United States)
Participant(s):
ELLER CLARKE (University of Oxford, United Kingdom)
MARION BLUTE (University of Toronto, Canada)
PIERRICK BOURRAT (University of Sydney, Australia)

FUNCTIONS, TELEOLOGY, AND NORMATIVITY AT VARIOUS LEVELS OF ORGANIZATION (1)
Organizer(s):
SOPHIA ROUSSEAU-MERMANS (IHPST/ Université Paris 1 Panthéon-Sorbonne, Université de Montréal, Canada);
ANTOINE C. DUSSEAUT (Université de Montréal, Canada)
Participant(s):
ETIENNE ROUX (IHPST/ Université Paris 1 Panthéon-Sorbonne, France)
BRANDON CONLEY (Cornell University, United States)
SOPHIA ROUSSEAU-MERMANS (IHPST/ Université Paris 1 Panthéon-Sorbonne, Université de Montréal, Canada)
VICTOR LEFÈVRE (IHPST/ Université Paris 1 Panthéon-Sorbonne, France)

ORGANIZED SESSION / DIVERSE FORMAT
ECOLOGICAL APPROACHES TO ORGANISIMAL DEVELOPMENT
Organizer(s): THOMAS PRADEU (Université de Bordeaux, France)
Participant(s):
THOMAS PRADEU (Université de Bordeaux, France)
KARINE PREVOT (Université Paris-Ouest Nanterre La Défense, France)
SCOTT GILBERT (Sweet Briar College, United States)
EHAB ABOUHEIF (McGill University, Canada)

ORGANIZED SESSION / STANDARD TALKS
EVOLUTIONARY MODELING IN BIOLOGY AND THE BEHAVIORAL SCIENCES (1): FITNESS AND INCLUSIVE FITNESS
Organizer(s):
CAILIN O’CONNOR (University of California, Irvine, United States)
Quantitative and population genetics methodologies in the inclusive fitness debate
HANNAH RUBIN (University of California, Irvine, United States)
How game-theoretic models of social behavior (should) track fitness
PATRICK FORBER (Tufts University, United States)
Invariance and symmetry in evolutionary dynamics
SIMON HUTTEGGER (University of California, Irvine, United States)

ORGANIZED SESSION / STANDARD TALKS
TOPICS IN THE HISTORY OF GENETICS (1)
Organizer(s):
MARSHA RICHMOND (Wayne State University, United States)
Two different ways of doing science: Bateson, Morgan and the chromosome theory (1910-1926)
LILIAN AL-CHUEY PEREIRA MARTINS (Universidade de São Paulo de Ribeirão Preto, Brazil)
Women’s work in British genetics (1900-1950): The John Innes Horticultural Institute and the Edinburgh Institute of Animal Genetics
MARSHA RICHMOND (Wayne State University, United States)
Selfish genes: A tipping point for evolutionary theory?
MYRNA PEREZ SHELDON (Rice University, United States)

COFFEE BREAK

10:30 – 11:00

DS 1520
11:00 – 12:30

DS 1525
11:00 – 12:30

DS 1540
11:00 – 12:30

DS 1545
11:00 – 12:30

DS M240
11:00 – 12:30

DS M320
11:00 – 12:30
ORGANIZED SESSION / STANDARD TALKS
FROM COMPLEX TO SIMPLE: EVOLUTION BY SIMPLIFICATION, AND ITS PHILOSOPHICAL IMPLICATIONS
Organizer(s): MAUREEN O’MALLEY (University of Sydney, Australia)
- The early eukaryote garden of Eden and the loss of complexity
  MAUREEN O’MALLEY (University of Sydney, Australia)
- The origin of Metazoa: A genomics and cell biology approach, or why things are never ever so simple
  ISAIAS RUIZ-TRÍFILLO (Institut de Biologia Evolutiva (CSIC-Universitat Pompeu Fabra), Spain)
- Learning from our mistakes: Convergent simplification and the kingdom Fungi
  JEREMY WIDEMAN (University of Exeter, United Kingdom)

ORGANIZED SESSION / STANDARD TALKS
LINEAGES ACROSS THE LIFE SCIENCES: EPISTEMOLOGICAL AND ONTOLOGICAL ISSUES
Organizer(s): CELSO ANTONIO ALVES NETO (Leibniz Universität Hannover, Germany); THOMAS REYDON (Leibniz Universität Hannover, Germany)
- The species problem problem and the no solution solution
  MATT HABER (University of Utah, United States)
- Stem cell lineages: Past, present and future
  MELINDA FAGAN (University of Utah, United States)
- Lineages as units of evolvability
  CELSO ANTONIO ALVES NETO (Leibniz Universität Hannover, Germany)

ORGANIZED SESSION / STANDARD TALKS
SLIPPERY CREATURES: ZOOPHYTES, ANIMALCULES, AND SPERMATOZOA IN THE 19TH CENTURY
Organizer(s): LYNN NYHART (University of Wisconsin-Madison, United States)
- Zoophytes, analogies, and classifications: A long journey through the order of nature
  BARTLOMIEJ SWIATCZAK (University of Science and Technology of China, China)
- "An animalcule in my blood": The rhetoric of early germ theory
  DANIELLE CORIACI (University of South Carolina, United States)
- Spermatic fluidity: The analogical method in the study of generation (1830-1850)
  LYNN NYHART (University of Wisconsin-Madison, United States)

ORGANIZED SESSION / DIVERSE FORMAT
AUTHORS MEET CRITICS: IN SEARCH OF MECHANISMS (2013)
Organizer(s): RUEY-LIN CHEN (National Chung Cheng University, Taiwan)
- Participant(s):
  LINDSEY DARDEN (University of Maryland, College Park, United States)
  CARL F. CRAVER (Washington University in St. Louis, United States)
  LENA KÄSTNER (Humboldt-Universität zu Berlin, Germany)
  HOLLY ANDERSEN (Simon Fraser University, Canada)
  SHINKUCHI MATSUMOTO (Tokei University, Japan)
  HSIAO-FAN YEH (National Chung Cheng University, Taiwan)
ORGANIZED SESSION / STANDARD TALKS
THINKING ABOUT CELLS (1): WHAT ARE CELLS AND HOW DO WE KNOW?
Organizer(s): JANE MAIENSCHEIN (Arizona State University, United States); KARL MATLIN (University of Chicago, United States)

A century of cells
JANE MAIENSCHEIN (Arizona State University, United States)

Cell heredity, epigenetics, and structural inheritance
JAN SAPP (York University, Canada)

What can we learn from stem cells? Induced pluripotent stem cells as models in cancer research
LUCIE LAPLANE (Institut Gustave Roussy, France); ALLAN SEKE (Institut Gustave Roussy, France)

ORGANIZED SESSION / STANDARD TALKS
DEHUMANIZATION (1): NEW APPROACHES TO UNDERSTANDING THE POLITICS OF HUMAN NATURE
Organizer(s): MARIA KRONFELDNER (Central European University, Hungary); ROBERT A. WILSON (University of Alberta, Canada)

The contingency of method, or can essentialism be progressive?
RON AMUNDSON (University of Hawaii at Hilo, United States)

Metaphysical misfits: Dehumanization reconsidered
DAVID LIVINGSTONE SMITH (University of New England, United States)

The concept of human nature in light of contemporary dehumanization studies
MARIA KRONFELDNER (Central European University, Hungary)

LUNCH BREAK
12:00 - 13:30
13:00 - 15:00

ORGANIZED SESSION / DIVERSE FORMAT
THE EPISTEMIC AND METHODOLOGICAL UPSHOTS OF HISTORICITY
Organizer(s): ADRIAN CURRIE (University of Calgary, Canada)

Participant(s):
CAROL CLELAND (University of Colorado Boulder, United States)
DEREK TURNER (Connecticut College, United States)
ERIC DESJARDINS (University of Western Ontario, Canada)

LUNCH BREAK
12:00 - 13:30
13:00 - 15:00

ORGANIZED SESSION / DIVERSE FORMAT
BIOLOGICAL COLLECTIVISM, PSYCHOLOGY, AND THE CULTS OF THE GREAT WAR
Organizer(s): SNAIT B. GISSIS (Tel Aviv University, Israel)

Participant(s):
SNAIT B. GISSIS (Tel Aviv University, Israel)
ROBERT M. BRAIN (University of British Columbia, Canada)
DEBBIE WEINSTEIN (Brown University, United States)
CORNELIUS BORCK (Universität zu Lübeck, Germany)

ORGANIZED SESSION / DIVERSE FORMAT
COMPLEXITY AND PROGRESS IN EVOLUTION?
Organizer(s): KELLY SMITH (Clemson University, United States)

Participant(s):
DAN MCSHEA (Duke University, United States)
CARLOS MARISCAL (Dalhousie University, Canada)
HUGH DESMOND (Katholieke Universiteit Leuven, Belgium)

ORGANIZED SESSION / STANDARD TALKS
EVOLUTIONARY MODELING IN BIOLOGY AND THE BEHAVIORAL SCIENCES (2): GAMES AND LIMITING ASSUMPTIONS
Organizer(s): CAILIN O’CONNOR (University of California, Irvine, United States)

Participant(s):
THOM SCOTT-PHILLIPS (Duke University, United Kingdom)
RORY SMEAD (Northeastern University, United States)

Studying the real origins of communication and language: Models and experiments
STEFAN WINTER (University of California, Irvine, United States)

Social behavior and evolving games
HUGH DESMOND (Katholieke Universiteit Leuven, Belgium)

Strategic thinking in biology
CAILIN O’CONNOR (University of California, Irvine, United States)
ORGANIZED SESSION / STANDARD TALKS
MODELING REAL PATTERNS IN BIOLOGY
Organizer(s): COLLIN RICE (Lycoming College, United States)
Causal patterns and actual causes
ANGELA POTOCHNIK (University of Cincinnati, United States)
Four pillars of statisticalism
ANDRE ARIEW (University of Missouri, United States); DENIS WALSH (University of Toronto, Canada); MOHAN MATTHEN (University of Toronto, Canada)
Biological patterns, idealization, and counterfactuals
COLLIN RICE (Lycoming College, United States)

TOPICS IN THE HISTORY OF GENETICS (2)
Organizer(s): MARSHA RICHMOND (Wayne State University, United States)
Are international networks enough? The genetics of indigenous populations in Mexico in the mid-1960s
EDNA SUÁREZ-DÍAZ (Universidad Nacional Autónoma de México, Mexico)
The changing face of (medical) geneticists in Canada (1947–1990)
BILL LEEMING (OCAD University, Canada)
Human genetics in Mexico during the Cold War
ANA BARAHONA (Universidad Nacional Autónoma de México, Mexico)

EXPERIMENTAL DESIGN IN THE LIFE SCIENCES AROUND 1900
Organizer(s): JUTTA SCHICKORE (Indiana University, United States); GARLAND ALLEN (Washington University, United States)
The experimental error of field trials: From conceptualization to computation
GIUDITTA PAROLINI (Technische Universität Berlin, Germany)
Randomization? Fisher, “Student”, and the Society for Psychological Research
NANCY HALL (University of Delaware, United States)
“Controlled experiments” in late 19th-century biomedicine
JUTTA SCHICKORE (Indiana University, United States)

ORGANIZED SESSION / STANDARD TALKS
PRESEVATION AND TRANSFORMATION IN CULTURAL EVOLUTION
Organizer(s): MATHIEU CHARBONNEAU (Konrad Lorenz Institute for Evolution and Cognition Research, Austria)
If we are all cultural Darwinians what’s the fuss about? Selection versus attraction in cultural evolution
ABELTRO ACERB (Technische Universiteit Eindhoven, Netherlands); ALEX MESSONI (University of Torino, Italy)
Attracting trouble: Disambiguating the concept of cultural attractors in cultural evolution
ANDREW BUSKELL (University of Cambridge, United Kingdom)
(Re)integrating modification processes to the origins of cumulative culture
MATHIEU CHARBONNEAU (Konrad Lorenz Institute for Evolution and Cognition Research, Austria)

ORGANIZED SESSION / STANDARD TALKS
TYING EXPLANATIONS TO MODELS IN NEUROSCIENCE
Organizer(s): ERIC HOCHESTEIN (Washington University in St. Louis, United States)
Why no model is ever a mechanistic explanation
ERIC HOCHESTEIN (Washington University in St. Louis, United States)
Perspectives on the brain
MAYNORA CHIRIMUTA (University of Pittsburgh, United States)
Graphing the brain’s dark energy: Network analysis in the search for neural mechanisms
CARL F. CRAVER (Washington University in St. Louis, United States)

FUNCTIONS, TELEOLOGY, AND NORMATIVITY AT VARIOUS LEVELS OF ORGANIZATION (2)
Organizer(s): ANTOINE C. DUSSAULT (Université de Montreal, Canada); SOPHIE ROUSEAU-MERMIANS (HPSTI/ Université Paris 1 Panthéon-Sorbonne, Université de Montreal, Canada)
Participant(s): ANTOINE C. DUSSAULT (Université de Montreal, Canada); SEBASTIEN OUTREUIL (HPSTI/Université Paris 1 Panthéon-Sorbonne, France); NEI NUNES-RETO (Universidade Federal do Rio de Janeiro, Brazil); ALVARO MORENO (University of the Basque Country, Spain)
ORGANIZED SESSION / STANDARD TALKS
“ORGANIC PHYSICS”: PHILOSOPHICAL BIOLOGY AND ANTHROPOLOGY IN SCHELLING, TROXLER AND HEGEL
Organizer(s): BARBARA ORLAND (Universität Basel, Switzerland)
Periods and rhythm as biological phenomena
BRIGITTE HILMER (Universität Basel, Switzerland)
Hegel, Schelling and Troxler on sensibility and irritability
CHRISTIAN STEINER (Universität Basel, Switzerland)
Dialectic of the soul: Platonic heritage in Schelling’s philosophy of nature
MARIO SCHÄRLI (Universität Basel, Switzerland)

ORGANIZED SESSION / DIVERSE FORMAT
EXTENDING CHARLES DARWIN’S CONTEXT
Organizer(s): RICHARD DELISLE (University of Lethbridge, Canada)
Participant(s):
RICHARD DELISLE (University of Lethbridge, Canada)
RICHARD BELLON (Michigan State University, United States)
THIERRY HOQUET (Université Jean Moulin Lyon 3, France)
RICHARD RICHARDS (University of Alabama, United States)

ORGANIZED SESSION / DIVERSE FORMAT
SCAFFOLDING WERNER CALLEBAUT’S NATURALISTIC TURN
Organizer(s): LINNDA CAPORAEL (Rensselaer Polytechnic Institute, United States)
Participant(s):
JOSEPH D. MARTIN (Michigan State University, United States)
WILLIAM C. WIMSATT (University of Minnesota, United States)
JAMES GRIESEMER (University of California, Davis, United States)
LINNDA CAPORAEL (Rensselaer Polytechnic Institute, United States)
MASSIMO MAIOCCHI (University of Chicago, United States)

ORGANIZED SESSION / STANDARD TALKS
THINKING ABOUT CELLS (2): HOW DO CELLS WORK?
Organizer(s): JANE MAIENSCHEIN (Arizona State University, United States); KARL MATLIN (University of Chicago, United States)
Explaining the “pulse of protoplasm”: The search for molecular mechanisms of protoplasmic streaming
MICHAEL DIETRICH (Dartmouth College, United States)
Regulating cell death
ANDREW REYNOLDS (Cape Breton University, Canada)
Mitochondrial form and the search for the mechanism of oxidative phosphorylation
KARL MATLIN (University of Chicago, United States)

ORGANIZED SESSION / STANDARD TALKS
DEHUMANIZATION (2): NEW APPROACHES TO UNDERSTANDING THE POLITICS OF HUMAN NATURE
Organizer(s): MARIA KRONFELDNER (Central European University, Hungary); ROBERT A. WILSON (University of Alberta, Canada)
Ability expectations, ability privilege, ability power and ableism: A tool for and against de-humanization
GREGOR WOLBRING (University of Calgary, Canada)
Subhumanizing the defective: Dehumanization, disability, and eugenics
ROBERT A. WILSON (University of Alberta, Canada)
Dehumanization: A dialog
MARIA KRONFELDNER (Central European University, Hungary); RON AMUNDSON (University of Hawai‘i at Hilo, United States); DAVID LIVINGSTONE SMITH (University of New England, United States); ROBERT A. WILSON (University of Alberta, Canada); GREGOR WOLBRING (University of Calgary, Canada)

INDIVIDUAL PAPERS
GRAPPLING WITH SPECIES
Towards an old-fashioned account of reference for biological species names
JERZY BRZOZOWSKI** (Universidade Federal do Pará, Brazil)
De-extinction and the conception of species
LEONARD FINKELMAN (University College, United States)
Species are probabilistic processes
BECKEIT STEINER (University of Michigan, United States)
INDIVIDUAL PAPERS

HUMAN NATURE, LANGUAGE AND CAUSATION IN THE MIND

The evolutionary criterion of human nature
JESSICA LAIMANN (University of Oxford, United Kingdom)

Returning language to biology by the way of culture
TERESA BLASCO MÁÑEZ (Universidad de Oviedo, Spain)

Two-way causation in human mind biological organization
XIMENA GONZALEZ-GRANDON** (Universidad Nacional Autónoma de México, Mexico)

ANIMAL SENSING, NEURONAL PLASTICITY AND IMAGINATION IN PRACTICE

Kin selection, multi-level selection, and the truth: Why kin selection may be the better account of the evolution of cooperation despite (sometimes) being false
ARMIN SCHULZ (University of Kansas, United States)

Early nervous systems and animal sensing
FRED KEIJZER (Rijksuniversiteit Groningen, Netherlands)

Neuronal plasticity, language and free will
BERNARD FELTZ (Université catholique de Louvain, Belgium)

FROM CELL THEORY TO COMPLEX SYSTEMS: ON METAPHORS AND MECHANISMS

On the relationship between metaphors and mechanistic explanations: Informational concepts in molecular biology
TOMOKO ISHIDA (Keio University, Japan)

Evo-devo mechanisms revisited: A process account
JAN BAEDKE (Ruhr-Universität Bochum, Germany); FABRIZIO GUERRERO MC MANUS (Universidad Nacional Autónoma de México, Mexico)

MODELING, RACE AND CONCEPTION: BIOLOGICAL AND MEDICAL PERSPECTIVES

Concrete biological models and distributed modeling
PIERRE-LUC GERMAIN (Istituto Europeo di Oncologia, Italy)

The risks of using, or not using, race concepts in medicine
SEAN VALLES (Michigan State University, United States)

Between natural conception and reproductive medicine
MAYA FISHER (Tel Aviv University, Israel)

INDUSTRIALIZING REPRODUCTION

Organizer(s):
JESSE OLSZYNKO-GRYN (University of Cambridge, United Kingdom)

Cold collaborations: Sperm cryopreservation and refrigeration in the lab, farm, and clinic (1938-1968)
BRIDGET GURTLER (Princeton University, United States)

“As simple as buying a lipstick”? The market for pregnancy testing in Britain (1965-1988)
JESSE OLSZYNKO-GRYN (University of Cambridge, United Kingdom)

Buying time: The infertility industry and the biology of reproductive aging (1978-2000)
JENNA HEALEY (Yale University, United States)

PRACTICAL APPROACHES TO INTEGRATING PHILOSOPHY AND ECOLOGICAL RESEARCH

Organizer(s):
GILLIAN CROZIER (Laurentian University, Canada)

Integrating ecology and philosophy in an interdisciplinary research centre
ALBRECHT SCHUITE-HOSTEDDE (Laurentian University, Canada)

Using decision theoretic software to integrate ethics into the training of ecological researchers
GILLIAN CROZIER (Laurentian University, Canada)

Uncertainty and ethical decision making in ecological research: Lessons from the physical sciences
DYLAN GAULT (Laurentian University, Canada)
ORGANIZED SESSION / STANDARD TALKS
RISK PERCEPTION: ISSUES IN PUBLIC HEALTH AND MEDICAL PRACTICE
Organizer(s): ANNICK OPINEL (Institut Pasteur, France)
Risk perception and the individualization social determinants of health
JONATHAN KAPLAN (Oregon State University, United States)
Suspected adverse events after immunisation, subsequent public health policy process and risk perception: The case of hepatitis B in France and MMR in UK (1998-2010)
ANNICK OPINEL (Institut Pasteur, France); HELEN BEDFORD (University College London, United Kingdom)
JESSICA HOUF (University of Utah, United States)

ORGANIZED SESSION / STANDARD TALKS
RETHINKING PHILOSOPHY OF BIOLOGY BEFORE BIOLOGY
Organizer(s): CHARLES WOLFE (Universiteit Gent, Belgium)
Biology and its conceptual foundations: From the distribution of vital functions to transformism
ANDREA GAMBAROTTO (IHPST/Université Paris 1 Panthéon-Sorbonne, France)
Uncovering the laws of vital organization with chemistry? The case of nutrition in the 19th century
CÉCILIA BOGNON (IHPST/Université Paris 1 Panthéon-Sorbonne, France)
Philosophy of ecology long before ecology: Kant’s idea of an organized system of organized beings
GEORG TOEPFER (Zentrum für Literatur- und Kulturforschung Berlin, Germany)

INDIVIDUAL PAPERS
PERSPECTIVES ON THE ENVIRONMENT: POLITICS, ECONOMICS AND PHILOSOPHY
Environment, ethics and politics: The planetary oligarchic caste and its instrumental use of the sustainable development model
DONATO BERGANDI (Muséum national d’Histoire naturelle, France)
The levels of selection and the instability of individualism in environmental philosophy
JOHN BAIL (Northeastern University, United States)
The most dismal part of the dismal science: The role of environmental economics in conservation planning
CARLOS SANTANA (University of Pennsylvania, United States)
INDIVIDUAL PAPERS
CULTURE, EVOLUTION, AND ECOLOGY
Attraction is to culture what adaptation is to biology
THOM SCOTT-PHILLIPS (Dulwich University, United Kingdom)

Zen and the science of cultural evolution
COLIN GARVEY (Rensselaer Polytechnic Institute, United States)

Things Don’t Fall Apart: Ecological Selection And Functional Explanation In Social Science
ADRIEN BOUTEL (University of Cambridge, United Kingdom)

INDIVIDUAL PAPERS
EXPERIMENTATION AND DOCUMENTATIONS
Animal welfare is subjective welfare
HEATHER BROWNING (Australian National University, Australia)

“Because they tell such an amazing story”: Documentary filmmakers’ collaborative relationships with biologists
ELEANOR LOUSON (York University, Canada)

The irreducibility of Piaget
JOHN COLLIER (University of KwaZulu-Natal, South Africa)
INDIVIDUAL PAPERS
CAUSALITY, CONSERVATION AND CITIZEN SCIENCE

Selecting among ontologically different causes: Toward an account of the pragmatics of causal selection
BRIAN HANLEY (University of Calgary, Canada)

Were there fishes on the Ark? Re-thinking the ark conservation concept at aquaria
CHRIS ZARPENTINE (Wilkes University, United States); SAMANTHA MUKA (University of Pennsylvania, United States)

Can you help me fold this? Proteins, computer architecture, and citizen science
SHAWN MILLER (University of California, Davis, United States)

INDIVIDUAL PAPERS
SELF, EUGENICS, AND ESSENTIALISM

From word to practice: Eugenic language in sterilization legislation (1905-1945)
LUKE KERSTEN (Carleton University, Canada); LAURA DAVIS (Queen's University, Canada)

The self in scientific psychiatry
SERIFE TEKIN (Daemen College, United States)

Rejecting sex essentialism: Cases from biology
ELEANOR GILMORE-SZOTT (University of Utah, United States)

INDIVIDUAL PAPERS
MORALITY, ALTRUISM AND COMMUNICATION BETWEEN GROUPS

The evolution of morality as a cluster of nonmoral capacities and practices
TOMI KOKKONEN (University of Helsinki, Finland)

Strong altruism and the egalitarian transitions
JOHANNES MARTENS (University of Bristol, United Kingdom)

Communication between groups and collective entities
SHAWN SIMPSON (City University of New York, United States)

INDIVIDUAL PAPERS
THEORIES AND WORLD VIEWS

The Weltanschauung of Ernst Haeckel vs. the worldview of St. George Mivart and the impact of theory on research
GERALD RAU (National Chung Cheng University, Taiwan)

Is relational essentialism really essentialism?
ANNA VAUGHN (University of Utah, United States)

Homology, identity, compositionality, and non-transitivity
JOYCE HAVSTAD (Field Museum of Natural History, United States); OLIVIER RIEPPEL (Field Museum of Natural History, United States); LEANDRO ASSIS (Universidade Federal de Minas Gerais, Brazil)

INDIVIDUAL PAPERS
BIOMARKERS, INDIVIDUALIZED MEDICINE AND ETIOLOGICAL THEORIES

Multi-modal discordance and the ontology of biomarker research
SPENCER HEY (McGill University, Canada); BRIANNA BARSANTI-INNES (McGill University, Canada)

Evidence and individualized medicine
MEGAN DELHANTY (University of Calgary, Canada)

Re-evaluating concepts of biological function/dysfunction in clinical medicine: How are etiological theories useful?
BENJAMIN CHIN-YEE (University of Toronto, Canada)

INDIVIDUAL PAPERS
THEORY AND PRACTICE AND “CHANCE AND NECESSITY” IN BIOLOGY

“Emerging concept” in developmental biology
YOSHINARI YOSHIDA (Kyoto University, Japan)

Untangling the role of theory and mathematics in biological modeling: An amendment to Giere’s framework
KIMBERLY DEBRUWER (Rice University, United States)

Forty years after “Le hasard et la nécessité” of Jacques Monod
NAOKI SATO (University of Tokyo, Japan)
ORGANIZED SESSION / DIVERSE FORMAT
SOCIAL EPIGENETICS (1): SCIENTIFIC EVIDENCE
Organizer(s): MAURIZIO MELONI (Institute for Advanced Study, United States); EVA JABLONKA (Tel Aviv University, Israel)
Participant(s):
MOISHE SZEFF (McGill University, Canada)
EVA JABLONKA (Tel Aviv University, Israel)
MICHAEL MEANEY (McGill University, Canada)
SARAH RICHARDSON (Harvard University, United States)

ORGANIZED SESSION / STANDARD TALKS
EXPLAINING A FOUR BILLION YEAR OLD PHENOMENON (1): LIFE AND ITS CHEMICAL ORIGINS
Organizer(s): CHRISTOPHE MALATERRE (Université du Québec à Montréal, Canada); CAROL CLELAND (University of Colorado Boulder, United States)
A legacy of Aristotle: Metabolism-first vs. genes-first theories of the origins of life
CAROL CLELAND (University of Colorado Boulder, United States)
The plague of equilibrium in modern origin of life theories
ELIZABETH GRIFFITH (University of Maryland, United States)
Making sense of “chemical evolution”
CHRISTOPHE MALATERRE (Université du Québec à Montréal, Canada)

ORGANIZED SESSION / DIVERSE FORMAT
DEBATING DARWIN
Organizer(s): MICHAEL RUSE (Florida State University, United States); ROBERT RICHARDS (University of Chicago, United States)
Participant(s):
MICHAEL RUSE (Florida State University, United States)
ROBERT RICHARDS (University of Chicago, United States)
DAVID SEPkoski (McPherson Institute for the History of Science, Germany)
GREGORY RADICK (University of Leeds, United Kingdom)

ORGANIZED SESSION / DIVERSE FORMAT
BRINGING RACE/ETHNICITY TO PUBLIC FORA
Organizer(s): AGELIKI LEFKADITOU (Universitetet i Oslo, Norway); PHIL LORING (Norsk Teknisk Museum, Norway); EDNA SÁU ER DÍAZ (Universidad Nacional Autónoma de México, Mexico)
Participant(s):
HALLVARD FOSSHEIM (Universitetet i Bergen, Norway)
ADAM HOCHMAN (Macquarie University, Australia)
JON ROYNE KYLLINGSTAD (Norsk Teknisk Museum, Norway)
AGELIKI LEFKADITOU (Universitetet i Oslo, Norway)
PHIL LORING (Norsk Teknisk Museum, Norway)
EDNA SÁU ER DÍAZ (Universidad Nacional Autónoma de México, Mexico)

ORGANIZED SESSION / STANDARD TALKS
ON THE BLOOD, FORMATO FOETU AND STEM CELLS
Walter Needham’s Disquisitio Anatomica de Formatu Foetu
ASHLEY INGLEHART (Indiana University Bloomington, United States)
Descartes on the heart, blood, and Harvey
JORDAN TAYLOR (University of Pennsylvania, United States)
Early conceptualisation of the embryonic stem cell
CHERYL LANCASTER (Durham University, United Kingdom)

ORGANIZED SESSION / STANDARD TALKS
EPISODES OF HISTORY OF BIOLOGY IN SCIENCE EDUCATION
Organizer(s): MARIA EL ICE BRZEZINSKI PRESTES (Universidade de São Paulo, Brazil)
Charles Darwin and the electric fishes: History and nature of science in teaching young people and adults
GERDA MAISA JENSEN (Universidade de São Paulo, Brazil)
Alfred Russel Wallace in the classroom: A historical case to learn botany through discursive interactions
ROSA ANDREA LOPES DE SOUZA (Universidade de São Paulo, Brazil)
Charles Bonnet studies on parthenogenesis in a virtual teaching object for undergraduate students
FIL I PE FARIA BERCOT (Universidade de São Paulo, Brazil)
WEDNESDAY JULY 8

ORGANIZED SESSION / STANDARD TALKS
PROPAGATING RESEARCH RESULTS
Organizer(s): ELIHU GERSON (Tremont Research Institute, United States)
From the tragedy of the commons to public goods and n-person games
JASON OAKES (University of California, Davis, United States)
Data journeys in biology
SABINA LEONELLI (University of Exeter, United Kingdom)
Propagating new data collection and analysis techniques
ELIHU GERSON (Tremont Research Institute, United States)

ORGANIZED SESSION / STANDARD TALKS
NEW DIMENSIONS IN THE PHILOSOPHY OF PSYCHIATRY
Organizer(s): NATALIA WASHINGTON (Purdue University, United States)
Philosophy of psychiatry after diagnostic kinds
KATHRYN TABB (Columbia University, United States)
Let a thousand ontologies bloom
PHOEBE FRIESEN (Graduate Center, City University of New York, United States)
Individualism as a solution to paternalism in psychiatric practice
NATALIA WASHINGTON (Purdue University, United States)

ORGANIZED SESSION / STANDARD TALKS
DISCUSSIONS ABOUT CONCEPTUAL AND EPISTEMIC ISSUE IN BIOHACKING
Organizer(s): GUILLAUME BAGNOLINI (Université Paul Valéry Montpellier III, France); PASCAL NOUVEL (Université Paul Valéry Montpellier III, France)
The biohacking: A new scientific method?
GUILLAUME BAGNOLINI (Université Paul Valéry Montpellier III, France)
The biohacker as dislocated self
SARAH CHOUKAH (Université de Montréal, Canada)

ORGANIZED SESSION / STANDARD TALKS
OF FROGS, MICE, AND MEN: A COMPARATIVE LOOK AT THE PUBLIC PERCEPTION OF CLONING, GENETIC ENGINEERING, AND TRANSGENESIS IN THE UNITED STATES AND EUROPE
Organizer(s): NATHAN CROWE (University of North Carolina at Wilmington, United States)
Controversies about cloning in the 1970s: Futures, fraud, and facts surrounding nuclear transplantation in the United States
NATHAN CROWE (University of North Carolina at Wilmington, United States)
Contingencies, risks and anticipation: How cloning and genetic engineering changed the public reception of science and technologies in the 1970s and early 1980s
CHRISTINA BRANDT (Ruhr-Universität Bochum, Germany)

INDIVIDUAL PAPERS
PERSPECTIVES ON HUMAN EVOLUTION
Beyond standard body?
PEGGY TESSLER (Bibliothèque de l’Université Paris I Panthéon-Sorbonne, France)
Niche construction and neoteny: The evolution of language within an updated evolutionary research program
FRANCESCO SUMAN (Università degli Studi di Padova, Italy)
Human self-domestication hypothesis: Developmental considerations
BERNARDO YÁÑEZ (Centro de Estudios Filosóficos, Políticos y Sociales Vicente Lombardo Toledano, Mexico);
VERA JOSÉ LUIS (Escuela Nacional de Antropología e Historia, Mexico)

INDIVIDUAL PAPERS
EVOLUTIONARY PSYCHOLOGY: SEX DIFFERENCE, LANGUAGE AND INTENTIONALITY
Reconceptualizing transgenerational stability and change in the context of evolutionary psychology of sex differences
EWELINA SOKOŁOWSKA (Uppsala universitet, Sweden)
Saltationism and over-simplification: Biolinguistics and the evolution of the faculty of language
ERIC MUSZYŃSKI (Université du Québec à Montréal, Canada)
Evolutionary psychology, normativity, and dynamic ecologies: An exapted theory of intentionality
JOHN ATYTALLA (University of Ottawa, Canada)
INDIVIDUAL PAPERS
PRACTICE AND ASSESSMENT IN ENVIRONMENT AND EVOLUTION
The fallacy of accident and the case of adaptationism
CATHERINE HUNDLEY (University of Windsor, Canada)

Sticky matters of fact: On the production of “material” knowledge
JULIA HEUNENMANN (Bauhaus-Universität Weimar, Germany)

What physics needs to learn from biology
MARTIN BREMER (Florida State University, United States)

ORGANIZED SESSION / DIVERSE FORMAT
SOCIAL EPIGENETICS (2): SOCIAL AND POLITICAL IMPLICATIONS
Organizers: MAURIZIO MELONI (Institute for Advanced Study, United States); EVA JABLONKA (Tel Aviv University, Israel)
Participants:
FRANCES CHAMPAGNE (Columbia University, United States)
BECKY MANSFIELD (Ohio State University, United States)
MAURIZIO MELONI (Institute for Advanced Study, United States)
GIUSEPPE TESTA (IED and University of Milan (Fondazione Semm), Italy)

ORGANIZED SESSION / DIVERSE FORMAT
EXPLAINING A FOUR BILLION YEAR OLD PHENOMENON (2): PARADOXES AND THEORIES ON THE ORIGINS OF LIFE
Organizers: CHRISTOPHE MALATERRE (Université du Québec à Montréal, Canada); CAROL CLELAND (University of Colorado Boulder, United States)
Participants:
ELIZABETH GRIFFITH (University of Maryland, United States)
STEVEN BRENNER (Foundation for Applied Molecular Evolution, United States)
CAROL CLELAND (University of Colorado Boulder, United States)
CHRISTOPHE MALATERRE (Université du Québec à Montréal, Canada)

ORGANIZED SESSION / DIVERSE FORMAT
PROCESS AND METABOLISM
Organizer(s): JOHN DUPRE (University of Exeter, United Kingdom)
Participants:
DANIEL NICHOLSON (University of Exeter, United Kingdom)
STEPHAN GUTTINGER (University of Exeter, United Kingdom)

ORGANIZED SESSION / DIVERSE FORMAT
HEREDITY AND TRANSMISSION: DISCUSSION ACROSS THE DISCIPLINES (LABEL “WHO AM I?”)
Organizer(s): ANTOINE NICOGLOU (LabEx “Who am I?”, France); JEAN GAYON (HPSTU, Università Paris 1 Panthéon-Sorbonne, France); FRANCOIS VILLA (Université Paris Diderot – Paris 7, France); JONATHAN WEITZMAN (Université Paris Diderot – Paris 7, France)
Participants:
JEAN GAYON (HPSTU, Università Paris 1 Panthéon-Sorbonne, France)
FRANCOIS VILLA (Université Paris Diderot – Paris 7, France)
JONATHAN WEITZMAN (Université Paris Diderot – Paris 7, France)

LUNCH BREAK

GRADUATE STUDENT MEMBERS GENERAL MEETING | Room DS-R510
MEMBERSHIP DIVERSITY MEETING | Room DS-R515

INDIVIDUAL PAPERS
DISUNITY, CULTURE AND EVOLUTION
The disunity of cultural group selection
OLIVER MORIN (Central European University, Hungary)
The “final wave” model for the evolution of cognitively modern humans: A multi-level approach
ANDREA PARRAVICINI (Università degli Studi di Padova, Italy); TELMO PIEVANI (Università degli Studi di Padova, Italy)

Normative cognition and the disunification of moral judgment: Ontogenetic and phylogenetic perspectives
IVAN GONZALEZ-CABRERA (Australian National University, Australia)
INDIVIDUAL PAPERS

BIOCHEMISTRY BETWEEN DISCIPLINES

Portraying the immune self: Between “Panama-blots” and protein microarrays
MARIA STRECHT ALMEIDA (Universidade do Porto, Portugal)

Pharmaceutical biochemistry: The research program of George Hitchings and Gertrude Elion (1940s-1950s)
THIBAUT SERVANT-FINE (Université Claude Bernard Lyon 1, France)

Interfield research on plant growth hormones
CATERINA SCHÜRCH (Ludwig-Maximilians-Universität München, Germany)

MECHANISMS AND DESIGN IN PRACTICE

The flat vs. the dimensioned view of constitutive mechanisms
BEATE KRICKEL (Ruhr-Universität Bochum, Germany)

Design and variation in synthetic biology
TERO IJÄS (University of Helsinki, Finland)

Reconstructing concepts: A new approach to the problem of referential stability
CORINNE BLOCH (Marquette University, United States)

ETHICS, EXPERIMENT AND CONFIRMATION IN ENVIRONMENTAL STUDIES

Generalizing and confirming multi-proxy reconstructions: A case study in data-laden simulations, uncertainty, and methodology
KIMBERLY BRUMBLE (Indiana University Bloomington, United States)

A duty to cognitively enhance animals
YASHA ROHWER (Oregon Institute of Technology, United States)

The very idea of a natural laboratory: A philosophical assessment
STEPHEN FRIESEN (Indiana University Bloomington, United States)

INDIVIDUAL PAPERS

EVOLUTIONARY EXPLANATIONS: TREE DIAGRAMS, EVO-DEVO AND PLURALISM

Neo-Darwinism and evo-devo: An argument for theoretical pluralism in evolutionary biology
LINDSAY CRAIG (Temple University, United States)

Darwin’s tree diagram and its relation to his argumentative strategy and the doctrine of chance
JUAN L. BOUZAT (Bowling Green State University, United States)

What evolutionary explanations can’t do
SUBRENA SMITH (University of New Hampshire, United States)

STRATEGIES AND LIMITS OF MODELS AND THEORIES IN BIOLOGY

Evolutionary models in a post-theory-centric philosophy of cancer biology
MATTHEW SLAYTON (University of Chicago, United States)

Affective management strategies: Emotion, care and control in the construction of beagles as biological models
EVA GIRAUD (Keio University, United Kingdom); GREGORY HOLLIN (University of Nottingham, United Kingdom)

NEGATIVE RESULTS, MEDICAL PROGRESS AND ADVERSE EVENTS: INTERDISCIPLINARY INSIGHTS ON BIOMEDICINE

Negative results in biomedicine: The biomedical community’s response to the Paxil scandal
LAURA SIEGER (Indiana University Bloomington, United States)

The ideal of scientific progress and the DSM
STÉEVE DEMAZEUX (Université Béziers Montagut, France)

Suspected adverse events after immunisation, subsequent public health policy process and risk perception: The case of hepatitis B in France and MMR in UK (1998-2010)
ANNICK OPINEL (Institut Pasteur, France); HELEN BEDFORD (University College London, United Kingdom)
INDIVIDUAL PAPERS

MAKING BIOLOGY PUBLIC AND MAKING PUBLIC BIOLOGY

Speaking on “large subjects”: Philosophy, democracy, and the American biologist as public intellectual in the early 20th century
JUDY JOHNS SCHLOEGEL (Independent Scholar, United States)

François Magendie: From dogmatic empiricism to the practice of experimental reasoning
JOSE LUIS GONZÁLEZ RECIO (Universidad Complutense de Madrid, Spain); RUTH GARCÍA (Universidad Complutense de Madrid, Spain)

Hatching standards of Gallus gallus: Creating pathogen-free birds for research
MIGUEL LOPEZ-PALETA (Universidad Nacional Autónoma de México, Mexico)

INDIVIDUAL PAPERS

EXPERIMENTATION, ETHICS AND SOCIAL ENGINEERING

Reflections on harm/benefit analysis in research involving nonhuman animal subjects: Can sympathy and dissent guide a refinement of Bateson’s Cube?
GILLIAN CROZIER (Laurentian University, Canada); GILLY GRIFFIN (Canadian Council on Animal Care, Canada)

From social engineering to bioethics: Human genetics and society in Denmark and Germany in the 2nd half of the 20th century
DIRK THOMASCHKE (Carl von Ossietzky Universität Oldenburg, Germany)

From informed to informing materials: Drugs as tools for exploring cancer mechanisms and pathways
ETIENNE VIGNOLA-GAGNE (McGill University, Canada); ALBERTO CAMBROSIO (McGill University, Canada); PETER KEATING (Université du Québec à Montréal, Canada)

ORGANIZED SESSION / STANDARD TALKS

IS THE BRAIN A PREDICTION MACHINE? EXPLORING THE BAYESIAN REVOLUTION IN NEUROSCIENCE
Organizers: MADELEINE RANSOM (University of British Columbia, Canada)

Three problems for the predictive coding theory of attention
MADELEINE RANSOM (University of British Columbia, Canada)

Evaluating the predictive coding model of dreaming
SINA FAZELPOUR (University of British Columbia, Canada)

Predicting emotions, emotional predicting
MARK MILLER (University of Edinburgh, United Kingdom)
INDIVIDUAL PAPERS
19TH- AND 20TH-CENTURY PERSPECTIVES ON CELL THEORY
Darwin’s reasoner: Chauncey Wright as philosopher of biology
TREVOR PEARCE (University of North Carolina at Charlotte, United States)

Protoplasmic structure and the end (?) of cell theory in the 1890s
DANIEL LIU (University of Wisconsin-Madison, United States)

Exploratory investigation in the philosophy of C.S. Peirce
NIALL ROE (University of Calgary, Canada)

INDIVIDUAL PAPERS
EVOLUTION AND PHILOSOPHY
Popper’s puzzlement over evolutionary theory
MEHMET ELGIN (Mugla Sitki Kocman University, Turkey)

An improved relational semantics of biological modalities
MAXIMILIAN HUBER (Université de Genève, Switzerland)

Disciplinology: Or what Wikipedia thinks of philosophy and the natural science
TYLER BRUNET (Dalhousie University, Canada)
INDIVIDUAL PAPERS

MODELING POPULATIONS AND GAMES

Population genetics and mechanism
LUCAS MATTHEWS (University of Utah, United States)

Modeling evolutionary games in populations with demographic structure
XIANGDI LI (Max Planck Institute for Demographic Research, Germany); ANNETTE BAUDISCH (Max Planck Institute for Demographic Research, Germany); ARNE TRAULSEN (Max Planck Institute for Evolutionary Biology, Germany)

The explanatory payoffs of multiple realization in cognitive neuroscience
MARIA SERBAN** (University of Pittsburgh, United States)

INDIVIDUAL PAPERS

HISTORY, NATURAL HISTORY AND HUMAN NATURE

Urban anthropological fieldwork in "mixed-race" communities, Australia (1940-1965)
KATHRYN TICEHURST (University of Sydney, Australia)

Kraepelin not interested in biological explanations of insanity? says Hopkins psychiatrist: Adolf Meyer's psychobiological view of dementia praecox and critique of Emil Kraepelin
SUSAN LAMB (McGill University, Canada)

Why did Ernst Haeckel copy Wilhelm Giesbrecht's copepod drawings?
KATHARINA STEINER (Universität Zürich, Switzerland)

INDIVIDUAL PAPERS

TREES AND LINEAGES: INTERDISCIPLINARY PERSPECTIVES

The priest and the tree: Augustin Augier's "botanical tree" (1801) as an image of divine Creation
NILS PETTER HELLSTRÖM (Uppsala universitet, Sweden)

A tree of trees
MARIE FISLER (Muséum national d'Histoire naturelle, France); GUILLAUME LECOINTRE (Muséum national d'Histoire naturelle, France); PIERRE DARLU (Muséum national d'Histoire naturelle, France); CÉDRIC CRÉMIÈRE (Muséum d'histoire naturelle du Havre, France)

Ontological frameworks for species pluralism
JUSTIN BZOVY (University of Western Ontario, Canada)

INDIVIDUAL PAPERS

EXPERIMENTATION AND PRACTICE IN THE FIELD, THE LAB AND THE CLINIC

Data creation and research environments: Implications for the re-use of open data
LOUISE BEZUIDENHOUT (University of Easter, United Kingdom)

Disseminating behavioral genetics research to the public: Evidence-based recommendations
SUSAN LAMB (McGill University, Canada)

Singularization in the cancer clinic: Genomics, targeted therapies and emerging diagnostic entities and configurations
PASCALE BOURRET** (Aix-Marseille Université, France); ALBERTO CAMBROISIO (McGill University, Canada); PETER HEATING (Université du Québec à Montréal, Canada); STEENNE VIGNOLA-GAGNE (McGill University, Canada)

INDIVIDUAL PAPERS

ETHICS, RACE, AND USE-INHERITANCE

Pragmatic naturalism and the is-ought challenge
JORGE DESGUERA GAMBA (Purdue Rote University, United States)

Carleton Coon and the modern synthesis
DAVID DEPEW (University of Iowa, United States); JOHN JACKSON (University of Colorado Boulder, United States)

Spencer, use-inheritance, and the end of liberalism
STEPHENV ENGELMANN (University of Brisco at Chicago, United States); MATTHEW DEIFUSS (University of Illinois at Chicago, United States)

INDIVIDUAL PAPERS

MODULARITY, HIERARCHIES AND VISUAL THINKING: ANALYZING APPROACHES TO BIOLOGY

The persistence of hierarchical organization in biological thought
DANIEL BROOKS** (Westfälische Wilhelms-Universität Münster, Germany)

Modularity and the limits of mechanistic explanation in biology
STAVROS IOANNIDIS (University of Athens, Greece)

Visual thinking in genetics: A case of genetic maps in Seymour Benzer
YOSHI ISHIBA (Oita University, United States)
INDIVIDUAL PAPERS
EXPLANATION AND METHODOLOGY IN EVOLUTION AND ECOLOGY
Evolutionary explanations
SUSANNE HIEKEL (Universität Duisburg-Essen, Germany)
A normative approach to resolving methodological issues in invasion biology
ERIC ROGERS (University of Cincinnati, United States)
On the importance of answering the right question: A defence of statistical explanations in evolutionary theory
MARION DURAND (University of Toronto, Canada)

ORGANIZED SESSION / STANDARD TALKS
MECHANISMS OF EVOLUTION
Organizer(s): ERIC SAIDEL (George Washington University, United States)
Speciation mechanisms, genomes, and reproductive isolation
LINDLEY DARDEN (University of Maryland, College Park, United States)
Natural selection, mechanistic explanation and the statistical interpretation
FERMIN FULDA (University of Toronto, Canada)
Mechanistic explanation without mechanisms
ERIC SAIDEL (George Washington University, United States)

INDIVIDUAL PAPERS
INTERACTORS, IMMUNOLOGY AND CANCER: LEVELS OF SELECTION QUESTIONS?
Immunological individuation and units of selection
DANIEL MOLTER (University of Utah, United States)
Pluralism and the levels of selection in cancer: Toward a genomic model
JOSEPHI WU (Duke University, United States)
The return of the interactor
AUSTIN BOOTH (Dalhousie University, Canada)

INDIVIDUAL PAPERS
MODELING EMERGENCE IN SYSTEMS BIOLOGY
Mechanistic explanation in systems biology: Cellular networks
DANA MATTHIESSEN (Georgetown University, United States)
Canalization and developmental processes: Beyond a neopreformationist interpretation of the cryptic genetic variability
FLAVIA FABRIS (Sapienza – Università di Roma, Italy)
Multicellularity and the type of functional integration for organismal interaction
ARGYRIS ARNELLOS (Konrad Lorenz Institute for Evolution and Cognition Research, Austria)

COFFEE BREAK
**International Society for the History, Philosophy, and Social Studies of Biology**

**Thursday, July 9**

### Individual Papers: Evolution Across Borders: Politics and Education

- **The topic of evolution in textbooks of the socialist school in Mexico (1932-1941)**
  - **Eriska Torrens** (Universidad Nacional Autónoma de México, Mexico)
  - **Ma. Alicia Villela** (Universidad Nacional Autónoma de México, Mexico)

- **An evolutionary analysis of Strawsonian reactive attitudes**
  - **Andrew Moffatt** (Florida State University, United States)

- **Darwinism immigrates to America: A transnational social history of ideas**
  - **Adam Shapiro** (Birkbeck, University of London, United Kingdom)

### Individual Papers: Systems Biology from Descartes and Spallanzani to Digital Databases

- **Activities versus ontological parsimony in Descartes’s biological mechanisms**
  - **Barnaby Hutchins** (Universiteit Gent, Belgium)

- **From systems to biology: A bibliographic analysis to reveal the history of systems biology (1992-2013)**
  - **Yawen Zou** (Arizona State University, United States)

- **Lazzaro Spallanzani studies on plant reproduction: A case study on the role of theory in interpreting observations and experiments**
  - **Maria Elise Bierzynski Prestes** (Universidade de São Paulo, Brazil)

### Individual Papers: Emergence: Agency, Vitalism and Holobionts

- **The birth of the holobiont: Multi-species birthing through mutual scaffolding and niche construction**
  - **Lynn Chiu** (University of Missouri, United States)

- **The discreet charm of eighteenth-century vitalism and its avatars**
  - **Charles Wolfe** (Universiteit Gent, Belgium)

- **Minimal agency and its discontents**
  - **Alex Djedovic** (University of Toronto, Canada)

### Individual Papers: Biomedical Ethics and Non-Human Empathy

- **A matter of national dignity? Tuberculosis, North Korean defectors, and the politics of disease management**
  - **Kyuri Kim** (Korea Advanced Institute of Science and Technology, Korea)
  - **Bum Soon Park** (Korea Advanced Institute of Science and Technology, Korea)

- **A Study in nature: STS reflections on the Tuskegee syphilis study**
  - **Margaret Curnutte** (Baylor College of Medicine, United States)

- **In defense of bottom-up approaches to animal empathy**
  - **Felix Aube Beaudoin** (Université Laval, Canada)

### Individual Papers: Fitness, Feminist Values and Drift

- **Evolutionary explanations of female sexuality: Combining feminist values and new empirical perspectives**
  - **Esther Rosario** (University of Alberta, Canada)

- **Selection as an explanatory shortcut and the nature of evolutionary accidents**
  - **Fridolin Gross** (Humboldt-Universität zu Berlin, Germany)
  - **Pierre-Luc Germain** (Istituto Europeo di Oncologia, Italy)

- **Abstraction and probabilities in evolutionary theory: Why drift is not purely (or perhaps even primarily) a function of population size**
  - **Jessica Pfeifer** (University of Maryland, Baltimore County, United States)

### Individual Papers: Early Modern Nature

- **Productive nature as an epistemological principle in 18th-century Naturphilosophie**
  - **Josh Lalonde** (University of Ottawa, Canada)

- **The contamination of the rhinoceros image after Dürer’s woodcut**
  - **Roberto De Andrade Martins** (Universidade de São Paulo, Brazil)

- **Rediscovering nature through the visual culture of the Royal Botanical Expedition to New Spain (1767-1803)**
  - **Diana Heredia** (Universidad Nacional Autónoma de México, Mexico)
**INDIVIDUAL PAPERS**

**SOCIALITY AND COMMUNICATION**

Only following orders: Are instructions the most primitive kind of semantic content?  
OLIVER LEAN (University of Bristol, United Kingdom)

“The enlightened step of rationing”: Bill Hamilton, the theory of inclusive fitness, and perceptions of a post-World War II population crisis  
SARAH SWENSON (University of Oxford, United Kingdom)

The explanatory utility of “meaning” and “reference” if animal communication is indexical: A sceptical analysis  
DAVID KALKMAN (Australian National University, Australia)

**GENETIC DIVERSITY, SOCIAL EMOTIONS AND SEXUAL DESIRE IN EVOLUTIONARY CONTEXT**

Genetic diversity among humans: A human rights issue?  
BENJAMIN GREGG (University of Texas at Austin, United States)

Emotions in social contexts in primate societies: An evolutionary approach  
ALBA LETICIA PEREZ-RIUZ (Centro de Estudios Filosóficos, Políticos y Sociales Vicente Lombardo Toledano, Mexico)

Science and sexual desire  
SHARYN CLOUGH (Oregon State University, United States)

**ORGANIZED SESSION / STANDARD TALKS**

**DE-EXTINCTION**

Organizers: MARKKU OKSANEN (University of Eastern Finland, Finland)

De-extinct species as property objects and as wildlife  
MARKKU OKSANEN (University of Eastern Finland, Finland)

De-extinction and the finality of extinction  
HELENA SIIPI (University of Turku, Finland)

De-extinction, biodiversity loss, and artificial species selection  
DEREK TURNER (Connecticut College, United States)

**BEYOND “INFORMATIONISM” AND MACHINE MODELS: RADICALLY RETHINKING THE PHYSICAL BASIS OF LIVING SYSTEMS**

Organizers: LENNY MOSS** (University of Exeter, United Kingdom)

A renewed physicalism for organismic biology?  
SANDHRA SARKAR (University of Texas at Austin, United States)

Evolution of development was empedoclean, not cybernetic  
STUART NEWMAN (New York Medical College, United States)

**WORLDS APART? ARISTOTELIAN AND CONTEMPORARY BIOLOGICAL EXPLANATION AND THE PRIMACY OF THE ORGANISM**

Organizers: ANNE PETERSON (University of Utah, United States)

Aristotle on bodies, souls and ways of life  
JAMES LENNOX (University of Pittsburgh, United States)

Mechanism or hylomorphism? A plea for organisms  
DENIS WALSH (University of Toronto, Canada)

Reproduction, form, and organism in Aristotle’s metaphysics and biology  
ANNE PETERSON (University of Utah, United States)

**LUNCH BREAK**

12:30 - 15:30

13:00 - 15:00

**COUNCIL MEETING | Room DS-1955**
ORGANIZED SESSION / STANDARD TALKS

ONTOMETRY AND EPSTEMOLOGY OF IDENTIFYING CHARACTERS AND GENES
Organizer(s): SHUNICHI MATSUMOTO (Tokai University, Japan); ALAN LOVE (University of Minnesota, United States)

Beyond the dichotomy of individual and kind: The reproducible-persistent-module (RPM) theory of homology
DAICHI SUZUKI (University of Tsukuba, Japan); SENJI TANAKA (Keio University, Japan)

Cystic fibrosis as a case study for the identification of the gene
SHUNICHI MATSUMOTO (Tokai University, Japan)

The experimental individuation of genes
RUET-LIN CHEN (National Chung Cheng University, Taiwan)

FAILURE IN SCIENCE
Organizer(s): ANN-SOPHIE BARWICH (Center for Science and Society, Columbia University, United States)

Explicit failure
STUART FIRESTEIN (Columbia University, United States)

Intrinsic hidden constraints in data-intensive biology
ISABELLA SARTO-JACKSON (Konrad Lorenz Institute for Evolution and Cognition Research, Austria)

"Simply" failure or delayed success? Mapping smells in the brain
ANN-SOPHIE BARWICH (Center for Science and Society, Columbia University, United States)

EVOLUTIONARY NEUROLOGY, HEREDITARIANISM, AND THE FORMATION OF MEDICAL GENETICS
Organizer(s): STEPHEN CASPER (Clarkson University, United States)

Time, deep history, and the evolutionary neurology of nervous disease
STEPHEN CASPER (Clarkson University, United States)

Epidemic encephalitis and the invention of the sub-cortical subject in interwar Britain
KENNETH KROKER (York University, Canada)

From evolutionary neurology to genetics: Tracing the deep history of Down's syndrome
ANDREW HOGAN (McGill University, United States)

INDIVIDUAL PAPERS

EXPLORING ECOLOGICAL THEORY

History Earth: How the geo-physical globe put together our planet
SIMON WHITEHOUSE (Florida State University, United States)

Telling the origins of the neutral theory of ecology
WILLIAM BAUSMAN (University of Minnesota, United States)

From Pierre-Joseph Van Beneden (1809-1894) to microbiome: History of commensalism
BRICE POIREAU (Laboratoire Sciences, Société, Historique, Éducation et Pratiques, France)

HUMAN NATURE, MORAL NORMS AND SOCIOBIOLOGY

Looking for moral norms in all the wrong places? On the nature and significance of nonhuman animal "entangled normativity"
ANDREW FENTON (California State University, Fresno, United States)

Sociobiology and the staying power of inflammatory rhetoric: How scientific objections became a "delayed scientific critique"
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Evolution, human nature, and the location problem
JOSHUA FILLER (Rock College, United States)

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CORY LEWIS (University of Toronto, Canada)
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JAMES DIFRISCO (Katholieke Universiteit Leuven, Belgium)

**After interaction: Why interdependence is difficult to think about, and why to do it anyways**

KRITI SHARMA (University of North Carolina at Chapel Hill, United States)

**Why do scientific laws tend to ignore species?**

SINAN SENCAN (University of Calgary, Canada)

**ORGANIZED SESSION / STANDARD TALKS**

**EXPERIMENTS IN GENETICS EDUCATION: REPORTS FROM ACROSS THE DISCIPLINES**

Organizer(s): GREGORY RADICK (University of Leeds, United Kingdom)

**The Useful Genetics project: Let's stop wasting our students**

ROSIE REDFIELD (University of British Columbia, Canada)

**The educational debt of school biology? Evidence that students’ intentions to fix the racial achievement gap are affected by subtle racial framings of monogenic diseases**

SIRIAN DODOVAN (Stanford University, United States)

**The Weldonian alternative: Steps towards a de-Mendelized, developmentalist curriculum in genetics (and towards students less prone to genetic determinism)**

GREGORY RADICK (University of Leeds, United Kingdom)

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**HEALTH, DISEASE, AND WELL-BEING**

Organizer(s): SALLY WASMUTH (Indiana University – Purdue University Indianapolis, United States)

**Between illness and disease: Towards a more holistic holism?**

JAMES KRUEGER (University of Redlands, United States)

**Medical normativity between anthropology and politics**

PHILLIP HONEBERGER (Consortium for History of Science, Technology, and Medicine, United States)

**A normative scale of compensatory action**

SALLY WASMUTH (Indiana University – Purdue University Indianapolis, United States)

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**COOPERATION, SIGNALS, AND MORAL NORMS**

Organizer(s): BEN FRASER (Australian National University, Australia)

**The stability of the egalitarian social contract: Bully control and social cohesion in early man**

JUAN BRUNER (Australian National University, Australia)

**Norms, gods, and social complexity**

KIM STERELNY (Australian National University, Australia)

**Mismatch and moral conflict**

BEN FRASER (Australian National University, Australia)

**COFFEE BREAK**

**AWARDS CEREMONY AND ISHPSSB GENERAL MEETING | Marie-Gérin-Lajoie auditorium**

**BUFFET DINNER (“COCKTAIL DÎNATOIRE”) | Salon Urbain, Place des arts**
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<td><strong>Empirical Ethics and Natural Normativity?</strong></td>
<td>Jeroen Hopster (Universiteit Utrecht, Netherlands)</td>
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<td>Evolutionary debunking in ethics: The empirical turn</td>
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<td>Evolutionary debunking of fairness norms</td>
<td>Elizabeth O’Neill (University of Pittsburgh, United States)</td>
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<td>Erik Anderson (Furman University, United States)</td>
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<td>Autism, sociality, and human nature</td>
<td>Gregory Holhum (University of Nottingham, United Kingdom)</td>
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<td>Minimal and narrative aspects of the self</td>
<td>Victor Romero Sanchez (Universidad Juarez del Estado de Durango, Mexico)</td>
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<td>Thomas Heams (AgroParisTech, INRA, France)</td>
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<td>Stochastic gene expression and fitness</td>
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<td>Looping effects in the case of medical empathy</td>
<td>Riana Betzler (University of Cambridge, United Kingdom)</td>
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<td>Consider the mosquito</td>
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DAVID AKLE (Universidad Nacional Autónoma de México, Mexico); ERICA TORRENS (Universidad Nacional Autónoma de México, Mexico)
Public understanding of biotechnology in the age of evo-devo
RAMSEY AFFIFI (University of Toronto, Canada)
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MARIA REBOLODE GOMEZ** (University of Minnesota, United States)

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TATIANA TAVARES DA SILVA (Universidade de São Paulo, Brazil); MARIA ELICE BRZEZINSKI PRESTES (Universidade de São Paulo, Brazil); MELIO RIZZO (Universidade de São Paulo, Brazil)

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Organizer(s): SABINA LEONELLI (University of Exeter, United Kingdom); RACHEL ANKENY (University of Adelaide, Australia)
Participant(s):
RASMUS GRONFELDT WINTHER (University of California, Santa Cruz, United States)
EDMUND RAMSDEN (Queen Mary University of London, United Kingdom)
ROBERT KIRK (University of Manchester, United Kingdom)
NATHAN CROWE (University of North Carolina at Wilmington, United States)
SABINA LEONELLI (University of Exeter, United Kingdom)
RACHEL ANKENY (University of Adelaide, Australia)
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RASMUS G. WINTHER
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CHRISTOPHER PEARSON (Southern Illinois University Edwardsville, United States)
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EVE ROBERTS (Dalhousie University, Canada)

COFFEE BREAK

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CELSO ANTONIO ALVES NETO (Leibniz Universität Hannover, Germany)
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CATHERINE KENDIG (Missouri Western State University, United States)

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KAMURAN OSMANOGLU (University of Kansas, United States)
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CHRISTINA STISO (Indiana University, United States)
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QUANYING LI (Sun Yat-sen University, China); PIERRICK BOURRAT (University of Sydney, Australia)

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EHUD LAMM** (Tel Aviv University, Israel)
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LEONORE FLEMING** (Utica College, United States)

Population-level and organism-level causal processes in natural selection
STEVE ESCH (University of Pennsylvania, United States)

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**ISHPSSB PROGRAM**

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LOCAL ORGANIZING TEAM
Mathieu Charbonneau – UQAM-CIRST
Registration, program and event support team coordination
Martine Foisy – CIRST
Administrative coordination
Sophie Laberge – UQAM
Facilities coordination and public relations
Pierre-Olivier Méthot – Université Laval
Call for abstract communication and excursion coordination
Eric Muszynski – UQAM
Program, conference package and social media coordination

EVENT SUPPORT TEAM
Alexandre Langlais-Bourassa – UQAM
Alexandre Pettigrew-Mille – UQAM
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Graphic design
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Social media

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Financial affairs management
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Nancy Pimentel – Salon Urban
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Anik Giroux – Saltimbanques
Coffee breaks, cocktails and dining
Mélanie Gélinas – Saltimbanques
Coffee breaks, cocktails and dining
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Dining buffet
Mathieu Despatys – Julien-Leblanc Traiteur
Dining buffet
Éric McNabb – Julien-Leblanc Traiteur
Dining buffet

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Promotional items

EXCURSIONS
Sébastien Hotte – Guidatour
Reservations coordination
Élana Maigne – Lachine Rapids tour
Reservations coordination
Anna Dysert – McGill Osler Library
Liaison Librarian