

TRANSFORMATIONS OF LAMARCKISM: 200 YEARS TO THE *PHILOSOPHIE ZOOLOGIQUE*

THE TWENTY-THIRD ANNUAL
INTERNATIONAL WORKSHOP
ON THE HISTORY AND
PHILOSOPHY OF SCIENCE

Sunday-Wednesday, June 7-10, 2009

The workshop is accompanied by
an Art Exhibition **Webs of Life** by the artist
Anna Zeligowski
who explores the expressions of evolution
and development in everyday life and
in science.

The Sourasky Library Hall, Tel Aviv University
June 4-24, 2009: Sunday-Thursday, 9:00-19:00
Friday 9:00-12:00



Origin of Life Anna Zeligowski



Israel Science Foundation



The Israel Academy of Sciences and Humanities

Supporting

The Batsheva Workshop on the Current Status of Soft Inheritance in Biology



UNIVERSITY OF
OXFORD

Venues:

Tel Aviv University, Gilman Building, Hall 496, Tel. 03-6409198, www.tau.ac.il/humanities/cohn
The Van Leer Jerusalem Institute, 43, Jabotinsky St., Jerusalem, Tel. 02-5605222, www.vanleer.org.il

Admission is free

SUNDAY JUNE 7, AT TEL AVIV UNIVERSITY

9:30–10:30

GREETINGS AND OPENING LECTURE

Chair: **Noah Efron (Bar-Ilan University)**

Eva Jablonka and Snait Gissis (Tel Aviv University)

Ehud Gazit, Vice President for Research and Development, Tel Aviv University

Gabriel Motzkin, Director, The Van Leer Jerusalem Institute

A research programme for Lamarckism at the beginning of the 21st century

10:30–11:00 Coffee break

HISTORICAL SESSIONS I-V

11:00–12:30

I

Chair: **David Wool (Tel Aviv University)**

Pietro Corsi (Oxford University):

Early views of Lamarck, 1800–1830

Richard Burkhardt (University of Illinois):

Lamarck, Frédéric Cuvier, and Darwin on animal behavior and the inheritance of acquired characters

12:30–13:00 Coffee break

13:00–14:30

II

Chair: **Ohad Nachtomy (Bar-Ilan University)**

Sander Gliboff (Indiana University):

The golden age of Lamarckism, 1866–1926

Charlotte Weissman (Tel Aviv University):

Germinal selection: a Weismannian solution to Lamarckian problematics

14:30–15:30 Lunch break

15:30–17:45

III

Chair: **Iris Fry (Technion, Institute for Technology)**

Laurent Loison (University of Nantes):

The notions of plasticity and heredity among French Neo-Lamarckists (1879–1934), from complementarity to incompatibility

Snait Gissis (Tel Aviv University):

Lamarckism and the constitution of Sociology

Nils Roll-Hansen (University of Oslo):

Neo-Lamarckism as a factor in the Lysenko affair

MONDAY JUNE 8, AT TEL AVIV UNIVERSITY

IV
10:00–11:30

Chair: **Oren Harman (Bar-Ilan University)**

Elena Aronova (University of California, San Diego):

Is really the only good bug a dead bug? Entomology, acclimatization, and experimental Lamarckism in Russia

Arkady Markel (Novosibirsk State University):

Behavior, stress and evolution: (in light of selection experiments carried out in Novosibirsk) - A. L. Markel and L. N. Trut

11:30–12:00 Coffee break

V
12:00–13:45

Chair: **Alfred Tauber (Boston University)**

Adam Wilkins (Cambridge University)/ Scott Gilbert (Swathmore College):

The modern synthesis in the USA and the exclusion of soft inheritance

Marion J. Lamb (Independent Scholar, UK):

Attitudes to soft inheritance in Britain, 1930s-1970s

13:45–14:45 Lunch break

THE BAT SHEVA WORKSHOP ON THE CURRENT STATUS OF SOFT INHERITANCE IN BIOLOGY (SESSIONS VI-XI)

VI
14:45–16:15

Chair: **Joseph Neumann (Tel Aviv University)**

Sonia Sultan (Wesleyan University):

Evolutionary implications of individual plasticity

Scott Gilbert (Swathmore College):

Developmental symbiosis: co-development, variation, and natural selection

16:15–16:30 Coffee break

VII
16:30–18:00

Chair: **Nurit Kirsh (Ben-Gurion University of the Negev)**

Jan Sapp (York University, Canada):

Thinking laterally on the tree of life

Eva Jablonka (Tel Aviv University):

Epigenetic inheritance since the 1990's: the challenge of soft inheritance

18:00–19:00

Anna Zeligowski, artist, guided tour of the art exhibition "Webs of Life"

TUESDAY JUNE 9, AT THE VAN LEER JERUSALEM INSTITUTE

VIII
9:30–11:00

Chair: **Nadav Davidovitch (Ben-Gurion University of the Negev)**

Minoo Rassoulzadegan (University of Nice):

RNA-mediated 'flexible heredity' of epigenetic variation: from a white-tipped tail to familial diseases

Peter Gluckman (University of Auckland):

Maternal and transgenerational epigenetic effects in human health

11:00–11:15 Coffee break

IX
11:15–12:45

Chair: **Raphael Falk (The Hebrew University of Jerusalem)**

Konstantin Anokhin, Inna Shamakina (Institute of Normal Physiology, Moscow):

Lamarck's perspective on evolution of adaptive behavior: agenda for future research

Eran Shifferman (Tel Aviv University):

The roads *all* taken: a system approach to the study of the evolution of quantity estimation in the animal kingdom

12:45–13:15 Coffee break

X
13:15–14:45

Chair: **Joseph Heller (The Hebrew University of Jerusalem)**

Moshe Feldman (Weizmann Institute):

Instantaneous genetic and epigenetic alterations in the wheat genome caused by polyploidization

Marcello Buiatti (University of Firenze):

Plants: individuals or epigenetic cell populations?

14:45–15:45 Lunch break

XI
15:45–17:15

Chair: **Luisa Hirschbein (Institut Curie UMR 168 CNRS)**

Nathalie Balaban (The Hebrew University of Jerusalem):

Bacterial variability at the single cell level

Erez Braun (Technion, Institute for Technology):

Environmentally induced and stably inherited cellular adaptation to unforeseen challenge

WEDNESDAY JUNE 10, AT THE VAN LEER JERUSALEM INSTITUTE

THEORETICAL - PHILOSOPHICAL SESSIONS XII-XIII

XII
9:30–11:45

Chair: **Yemima Ben-Menahem (The Hebrew University of Jerusalem)**

Ohad Parnes (ZfL, Berlin and CEU, Budapest):

Between the innate and the acquired: the long and complicated liaison between immunology and Lamarckism

Ayelet Shavit (Tel-Hai College):

Mind the gaps: why niche construction processes are so rarely examined?

James Griesemer (University of California, Davis):

Heuristic reductionism and the relative significance of epigenetic inheritance in evolution

11:45–12:15 Coffee break

XIII
12:15–14:30

Chair: **Leo Corry (Tel Aviv University)**

Evelyn Fox Keller (MIT):

Self-organization, self-assembly, and the inherent activity of matter

Ehud Lamm (Tel Aviv University):

The meta-stable genome - a Lamarckian organ in a Darwinian world

Paul Griffiths (University of Sydney):

Can nature become plastic?

14:30–15:30 Lunch break

XIV
15:30–18:30

FUTURE PERSPECTIVES: ROUND TABLE AND GENERAL DISCUSSION

Chair: **Everett Mendelsohn (Harvard University)**

Summing up:

Raphael Falk (The Hebrew University of Jerusalem):

Evolution as progressing complexity

Dov Por (The Hebrew University of Jerusalem):

Lamarck's 'Force de la Nature' demystified; a third view of evolution

Luisa Hirschbein (Institut Curie UMR 168 CNRS):

Prokaryotic epigenetic inheritance

Simona Ginsburg (Open University, Israel):

Lamarck on the nervous system: past insights and future perspectives

Adam Wilkins (Cambridge University):

The 'inheritance of acquired traits' in the light of 21st century genetic/molecular knowledge: a geneticist's view

GENERAL DISCUSSION