

INTERNATIONAL SOCIETY FOR THE HISTORY, PHILOSOPHY, AND SOCIAL STUDIES OF BIOLOGY NEWSLETTER

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Twenty-third Issue

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President's Corner

Every other spring is particularly exciting for the Society as plans take shape for our biennial meeting. In this Newsletter you will find the first announcement of the program for the 2001 meeting at Quinnipiac University, which contains a genuinely exciting group of about 150 papers, prepared by participants from 21 countries. The program this year is a bit more intimate than in recent years, which means that we will have fewer conflicts and excellent opportunities for concerted discussion. Furthermore, a number of sessions are being set up especially to foster discussion by pre-posting papers and restricting the paper presentations to brief

summaries aimed at generating lively conversations. As one with vivid memories of the discussions in our early meetings, I appreciate Program Chair Douglas Allchin's efforts to encourage more intensive discussions in this year's meeting and look forward to the fruits of his labors. In brief, then, the biennial meeting, July 18-22, will be highly participatory and will cover topics ranging from agricultural experiment stations to visual images in zoology, from history of natural history to analysis of mechanisms in biology, from the nature of research groups to issues about regulatory laws. Great thanks are due to Douglas Allchin and to the members of the Program Committee (Jay Aronson, Kathy Cooke, Michael Dietrich, Elihu Gerson, Christiane Groeben, Pam Henson, Jane Maienschein, Sergio Martinez, and David Valone) for their vision and hard work in putting the program together.

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Marjorie Grene Prize Winner

The Marjorie Grene prize committee (Ronald Amundson, Philip Pauly, and David Rudge) recommend that the award be given in 2001 to Rasmus Winther, Indiana University, for his essay, "August Weismann on Germ-Plasm Variation." The paper makes the surprising argument that "Weismann was not a Weismannist" — that throughout his career he believed that external influences caused heritable variations. Winther demonstrates this claim through careful analysis of Weismann's publications stretching from the 1870s to the 1900s, showing that while his views on the causes of variation changed quite significantly over time, he continually held to the position that environment was the source of changes in the germ plasm. The paper combines historical and philosophical sophistication, and should change historians' views regarding the meanings of "acquired characters" in the late nineteenth century.

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Kathy Cooke and David Valone, co-chairs of the local arrangements committee, have done yeoman service to ensure that Quinnipiac University has everything in place to meet our needs and to make our stay pleasurable. We are delighted with the venue and expect the meeting arrangements to turn out very well. We hope very much that you will be able to join us at Quinnipiac and that you will register early (note that early registration saves you money!). While you are at it please help David and Kathy by completing all three forms requested — registration, housing and meals, travel information. Doing so will help us to make this meeting into one of the most enjoyable and productive meetings of the society to date.

I would also like to remind members that the Education Committee has organized a pre-conference workshop on Teaching History, Philosophy, and Social Studies of Biology to take place at Quinnipiac on Wednesday, July 18. Further details are available from Peter Taylor, Program in Critical and Creative Thinking, Graduate College of Education, University of Massachusetts, Boston, MA 02125, peter.taylor@umb.edu. If you plan to stay on campus and to attend this workshop, note that you can move into the dormitories on Tuesday, 17 July.

In this newsletter you will also find a slate of candidates for society offices and the ballot. Society by-laws require a mail ballot, so be sure to mail in your ballot by June 1. We have an excellent slate of candidates thanks to the fine work of the nominations committee, Lisa Lloyd (chair), Marilia Coutinho, and Gregg Mitman. Now the guidance of the society for the next two-to-four years depends on your vote.

Turning to one of the happiest duties of a president, I take great pleasure in announcing the award of the Marjorie Grene Prize. This prize is intended to advance the careers of younger scholars, and will be awarded to the best manuscript based on a paper presented at one of the previous two ISHPSSB meetings by someone who is,

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From the Program Chair

Dick Burian has already introduced you to the program in his comments. Well, I have had the additional privilege of getting to read every abstract — and I am really excited about the contributions and the session ensembles. After perusing the program, I trust you will share my enthusiasm.

Dick noted the “new” revived format of prepared discussion sessions. This is one way we are trying to foster discussion. I want to also note the roundtable discussions we have planned for Sunday morning. Many themes carry across several sessions and the informal sessions on the final morning will offer a further occasion for integrating thoughts. The spirit of the sessions will also be to sketch “Problems and Prospects” that might lead to further reflection or study — and perhaps collaboration among members present. While everyone looks forward to the presentations at any conference, much of the real “work” happens in the discussions that follow. We have done everything possible this year to enhance this dimension of our gathering. And the pleasant arboreal setting of the Quinnipiac campus is ideal, as well.

The sessions and session abstracts (and list of participants) are now posted on the web.

<http://www.phil.vt.edu/ishpssb/2001/program.htm>

Please browse.

Here is a rough schedule of what's to follow:

ó ~April 16 — individual paper titles and abstracts to be posted on the website

ó ~May 1 — our target for posting the preliminary session schedule

ó June 1 — deadline for submitting papers to be posted on the web for prepared discussion

ó June 15 — pre-registration deadline

ó July 1 — final program schedule

ó July 18 — opening evening reception...

Looking forward to a convivial meeting,
Douglas Allchin

ISHPSSB 2001

Local Arrangements Details

Special Excursion

For those who arrive early, we have a special excursion planned . . . a 90-minute hike in nearby Sleeping Giant State Park -- to help introduce you to our lovely surroundings.

Shuttle Information

For shuttle service to Quinnipiac University, we suggest you use take Connecticut Limo Service, which runs hourly from local airports, to its regularly scheduled stop in North Haven, Connecticut. The limo will take you to the Holiday Inn, and we will run a shuttle from the Holiday Inn to Quinnipiac University. The trip from the

Holiday Inn to Quinnipiac is about a ten minute drive.

Hartford/Springfield's Bradley International Airport (\$25 one way or \$46 round trip)-1 and 1/2 hour one way (driving a rental car would take approximately 50 minutes).

New York JFK (\$43 one way or \$82 round trip)-2 and 3/4 hour one way.

New York La Guardia (\$43 one way or \$82 round trip)-3 hours one way.

Take the shuttle to North Haven Holiday Inn (201 Washington Avenue) where another shuttle will be available to take you to Quinnipiac University. While Hartford/Springfield is the most convenient, flying there may add a leg to your journey. If that is the case, one might prefer to take the shuttle from a New York airport.

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ISHPSSB 2001 at Quinnipiac University — July 18-22, 2001

Housing & Meal Reservation

*Register by **June 15, 2001** for reduced room rate.

*Consult the Accommodation and Meals pages online for more details at:

<http://www.phil.vt.edu/ishpssb/2001/housing.htm>

*If possible, please complete the following information online at: <http://www.phil.vt.edu/ishpssb/2001/dormform.htm>

Payment will be handled when you arrive at Quinnipiac.

Name _____

E-mail _____

phone _____ FAX _____

Arrival Date

Tuesday, July 17

Wednesday, July 18

Thursday, July 19

Friday, July 20

Saturday, July 21

Departure Date

Thursday, July 19

Fri, July 20

Saturday, July 21

Sunday, July 22

HOUSING

Sex: _____ female | _____ male

Smoking?: _____ non-smoking | _____ smoking

Handicapped?: _____ Please provide me a handicapped-accessible room.

Room type:

Single (\$25/night)

Double (\$18/night) — Please indicate roommate: _____

Linens:

I will bring my own linens, towels and pillow.

Please provide linens and towels (\$18 rental fee — includes sheets, blanket, pillow, towel and washcloth).

MEALS

Full Meal Option: Wednesday dinner — Sunday box lunch (\$70)

Note: Make reservations for the Saturday evening banquet on your conference registration form.

Alternatively, you may plan on purchasing separate meal vouchers for breakfast, lunch or dinner.

Additional Comments:

Return this form to:

Keith Benson (ISHPSSB Treasurer)

College Studies — Box 354330

University of Washington

Seattle WA 98195 USA

FAX: (206) 543-7400

Remember to also complete conference registration and travel information form.

Local Arrangements continued from page 2

We suggest that you make reservations with CT Limo at 1-800-472-5466. We also suggest that you visit the website and print and carry with you the suggestions available on line for meeting the shuttle and North Haven.

Hotel Information

Holiday Inn I-91, Exit 12 (Rte. 5) 201 Washington Avenue North Haven, CT 06473 (203) 239-4225 1-800-HOLIDAY. (This is a standard shuttle stop from the airports. ~15 minutes from campus).

Howard Johnson Motor Lodge. Rte. 15 (Wilbur Cross Parkway), Exit 60S/61N 2260 Whitney Avenue (Rte. 10) Hamden, CT 06518 (203) 288-3831 (~10 minutes from campus, on the bus route).

Four Points (Sheraton). I-84, Exit 25A East (Austin Road) I-84, Exit 26 West (Cheshire) 3580 East Main Street

Waterbury, CT 06705 (203) 573-1001 (~20 minutes from campus).

Courtyard (Marriott). I-91, Exit 15, Rte. 68 Wallingford, CT 06492 (203) 284-9400 1-800-321-2211 (~20 minutes from campus).

Days Inn of Hamden. 3400 Whitney Avenue Hamden, CT 06518 (203) 288-2505; 1-800-325-2525 (5 minutes from campus, or a 10-minute walk, but part of the walk is along a rather busy and unattractive road with no sidewalk.).

Omni New Haven Hotel. I-91, Exit 1 I-95, Exit 47 155 Temple Street New Haven, CT 06510 (203) 772-6664 (in New Haven, about 20 minutes from campus, along bus route).

Motel 6. I-91 N, Exit 7 270 Foxon Blvd. New Haven, CT 06512 (203) 469-0343 (probably the cheapest option, ~20 minutes from campus).

ISHPSSB 2001 at Quinnipiac Univ. — July 18-22, 2001 Travel Information Form

*If possible, please complete the following information online at: <http://www.phil.vt.edu/ishpssb/2001/limoform.htm>

Please remember to make your arrangements directly with the limosine service by July 1.

This form supplements your conference registration and housing reservation forms.

To help the limosine shuttle service plan passenger loads, please tell us about your travel plans if/when you can by going online and filling out the following information:

As an alternative, you can mail or fax a copy of this form to Kathy Cooke at the address and fax number below.

Name _____ E-mail _____

- I plan on driving or renting a vehicle.
 I plan on using limosine service. (Please complete below.)

Traveling through what airport or train station?

Arrival Date

- Tuesday, July 17
 Wednesday, July 18
 Thursday, July 19
 Friday, July 20
 Saturday, July 21

Departure Date

- Thursday, July 19
 Friday, July 20
 Saturday, July 21
 Sunday, July 22
 other

Flight/train arriving at (time): _____

Airline & flight # _____

Flight/train departing at: _____

Airline & flight # _____

You may also print this form and fax or mail it to:

FAX: (203) 582-3471

Kathy Cooke
Department of History
Quinnipiac University
Hamden, CT 06518

Please consult the travel page online for information on arranging your shuttle service.

Preliminary Program

Quinnipiac University, Hamden CT — JULY 18-22, 2001

(short titles, in alphabetical order) Schedule forthcoming. All paper assignments are still tentative.

Program Chair: Douglas Allchin (Q2001@tc.umn.edu) 2005 Carroll Ave., St. Paul MN 55104, USA || FAX: 612.626.8380

General Schedule

Weds, July 18

- _ Education Workshop (9-5)
- _ earlybird guided walk (3:30)
- _ evening reception

Thurs, July 19 — Sat, July 21

- _ paper sessions (9am-5:30pm)

Special Events

- _ Friday lunch: “Backstage at the Journals”
- _ Saturday afternoon “President’s Session”
- _ Saturday evening banquet

Sun, July 22

- _ “topical roundtable discussions (“Problems and Prospects”), ending by 11 am

NEW!

We’ve introduced two features at this year’s meetings to further foster discussion.

First, in returning to early practices of the Society, many members have designated their sessions (or papers) as **prepared discussion**. These are marked on the program pages here with a. Papers and questions for discussion will be posted on the web by June 1, and linked from the program listing page. These sessions will assume that participants have read the materials and come prepared to discuss them.

In addition, formal paper sessions will conclude on Saturday. Sunday morning will feature **roundtable discussions** on central themes that bridge several related sessions such as:

- Ontology in biology
- Role of historians, philosophers and sociologists in public policy settings
- Information and change
- Problems in 19th-20th-century history of biology
- Function, mechanism, reduction and explanation

Session Abstracts

Heredity in the 19th Century I: Human/Medical Contexts

Heredity in the 19th Century II: Species, Lineages & Hybrids

These sessions will discuss different approaches to the problem of hereditary transmission of physical and moral characters during the 19th century in Europe. Tackling conceptions and uses of heredity developed by members or groups of different traditions (medicine, psychiatry, breeders, hybridologists), we aim at showing the fluid state of the concept of heredity during the

period, and at trying to expose any common underlying structure, if any. || Carlos Beltran, John Waller, Laure Cartron, Richard Bellon, Pablo Lorenzano

Trying to Shape an Evolutionary Synthesis: 20th-century Variations (and Selection?) on a Theme

This session considers three cases in the development of evolutionary thinking in the first part of the 20th century, each at the intersection of various disciplines. The first case concerns the emergence of agricultural research on the evolution of insecticide resistance (1914-mid 1940s) and its subsequent influence on Dobzhansky’s genetics. The second case considers the effort of Richard Goldschmidt and others to integrate development and evolution through the study of homeotic mutants. The third case focuses on alternative approaches to evolution and behavior — the neoDarwinian reduction championed by David Lack and the emphasis on populations pioneered by Wynne-Edwards. The work in separate fields, each related to evolution — and not always successful — helps reframe our understanding of the Evolutionary Synthesis, as conventionally portrayed in folk histories by biologists. || Mark Borello, Michael Dietrich, John Cecatti

Moments of Note: Constructing New Systems in 20th-century Biology

Certain moments of historical change exhibit uncommon drama.

This session examines three such episodes from 20th-century biology: the migration of physicists into biology, the emergence of bioweapons research, and the debate about domains in systematics. The cases offer an occasion for reflecting on factors shaping historical innovation at the intersection of disciplines, all against a backdrop of trends in 20th-century biology. || Tara Abraham, Gerald Fitzgerald, Sherrie Lyons

(Mis)Interpreting Analogies: ‘Design’, ‘Contrivance’ and ‘Group’

Analogies are common in biology, in developing and conveying ideas, as well as in structuring theoretical categories and thinking. The inherent incompleteness of analogies also allows for flexibility in interpretation and, sometimes, error. This session explores three cases of analogy in evolutionary concepts and arguments: the notion of intelligent ‘design’, Darwin’s use of ‘contrivance’, and the elusive meaning of ‘group’ in group selection. || Kiersten Feil, Richard England, A. Shavit

Analogies & Constructions in Biology Education

To a good extent the claims scientists make about the natural world are shaped by the system of cultural values predominant in their society. Consequently, students of biology do not only learn about the

continued on next page

natural world - they also learn about cultural convictions and practices as if they were a part of nature. Metaphors in textbooks and other educational contexts are thus not just isolated lexical phenomena. On the one hand they help to create new models of understanding. On the other hand they can remain invisible and help to construct a distorted, but apparently objective truth. This session examines educational constructions of the human immune system, human fertilization, microbiology, and heteronormativity regarding sexual orientation. || Dorthe Ohlhoff, Carmen James Schifellite, Steve Fifield

Conservation I: Biodiversity, the Very Idea

Conservation II: Framing Parks and Reserves Policy

Conservation III: Problems and Strategies

The biodiversity concept integrates so many facets of life on earth that it may well serve as the locus of the next great synthesis in biology. Ironically, this achievement may coincide with the greatest loss of its subject matter in tens of millions of years, making biodiversity also the most salient moral issue of the 21st century. These sessions address the nature of biodiversity and its conservation. Part I examines the sometimes problematic notion of biodiversity. Part II focuses on how to operationalize the biodiversity concept in designing nature reserves and park systems. Part III addresses several "internal" questions about the relevance of biodiversity and its measures. || David Roche, Uta Eser, Irama Nunez & Ana Barahona, James Maclaurin, David Castle, M—nica Vizcaino, James Justus, Justin Garson, Kim Cuddington, Chris Kelley

By 'Design'?

This session examines what evolutionists mean by 'design': first, by examining the structure of functional explanations, and then by analyzing the role of reverse engineering in interpreting adaptation. || Arno Wouters, Robert Richardson

Making Ecological Objects I & II

The state of ecological objects is constituted in manifold ways — scientifically and morally, among others. This session provides reflections on the making of ecological objects, its changes, driving forces, actors, and central concepts. The general theme can be stated as follows: Ecology has always grappled with the need to define objects scientifically and at the same time to present environmental — instrumental as well as moral — significance of objects and measures in order to maintain ecological objects within the human realm. A demand for keeping all parts, the function or the health of ecological systems has been expressed for a long time. The making of ecological objects also constitutes different role models for ecologically informed environmental action within the ecologist's community, expanding into the realm of environmental philosophy, too. Concepts and programs have been changed and challenged, respectively, ever since. Reasons for 'keeping all the parts' are reconsidered up to now, especially facing ecosystem function, ecosystem health, and the historicity and uniqueness of ecological objects. These and other issues shall be discussed by a variety of case studies from different locations and time periods, thus bringing together philosophers and historians of ecology, and practicing ecologists. It shall also facilitate the communication of scholars from different countries not least by developing comparative perspectives on ecology. || Claire Waterton, Chris Young, Lisa Gannett, Chris Eliot, Gene Cittadino, Peter Taylor, [Patricia Bunner]

Understanding Environment: Biology, Values, Policy I & II

A central problem for environmental studies is to articulate a foundation for the intersection of environmental science, values, and policy. Differently put, what are current, basic conceptual problems at the intersection of environmental science, values, and policy and how can those problems be solved?

Part I of the symposium asks and answers the following three questions:

1. Why should environmental science be used to ground environmental policy? (Heather Douglas)
2. How might the boundaries between environmental science and policy be stabilized? (Esther Turnhout)
3. In what sense might the environment have moral and/or political standing? (Robert Skipper)

Part II of the symposium instantiates some of the more general problems in Part I into foundational work in philosophy of ecology on the nature and preservation of species. Part II asks and answers the

following three questions:

1. Are there ecological laws/kinds? (Gregory Mikkelson)
2. Is the US Endangered Species Act of 1973 self-defeating? (Mark Madison)
3. How might sub-species preservation be morally and/or politically justified? (Roberta Millstein and Jeff Ramsey)

Accommodating Error

This session examines how errors arise in biology and then how biologists find them and recover from them. Cases include the low-dose response curves for carcinogens (and the policy implications of error in science) and the lack of randomization in evolutionary studies. || Kevin Elliott, Nancy Hall, [Douglas Allchin]

Evolution and Development I: Modularity and Adaptation

Evolution has resulted in organisms that develop. For a long time the processes of evolution and development have been theoretically and empirically largely independent. This was epitomized by the gene selectionist view of evolution, which rendered the process of development largely epiphenominal to the evolutionary business of evolving the genome. However, there is now a growing awareness that an understanding of development is essential to a complete understanding of evolution and vice versa. This session addresses what this 'developmental synthesis' may contribute and some difficulties that must be overcome for its success. || Roger Sansom, Kim Sterelny, Gunter Wagner & Chi-hua Chiu

Evolution and Development II - IV

Evolution has resulted in organisms that develop. For a long time the processes of evolution and development have been theoretically and empirically largely independent. This was epitomized by the gene selectionist view of evolution, which rendered the process of development largely epiphenominal to the evolutionary business of evolving the genome. However, there is now a growing awareness that an understanding of development is essential to a complete understanding of evolution and vice versa. This session addresses what this 'developmental synthesis' may contribute and some difficulties that must be overcome for its success. || Andrew Ariew, Sahotra Sarkar, Denis Walsh, Marion Blute, Lee Zwanziger, Jason Robert et al, Julio Tuma, Richard Burian

Evolution & Ethics

Natural selection continues to pose puzzles for interpreting the origin of morality and its meaning and/or justification. Through critiques of David Hume, E.O. Wilson and Michael Ruse, this session examines the status of moral realism, the nature of moral agency, and the relation of human motivation to natural selection. || John Mizzoni, Julio Munoz-Rubio, Phil Roberts

Between Nature and Science: Conceptualizing Experimental Benchmarks

What is the basis for interpreting nature from experimental investigations, and when does nature itself provide "experiments"? This session explores the interpretive tension between drawing conclusions "from" nature or experimental observations, on the one hand, and imposing scientific frameworks or experimental systems "onto" nature, on the other. First, what is the relationship between natural experiments and "experiments"? John Huss considers 20th-century paleontology, a field where scientists cannot formally manipulate nature, yet nonetheless pose investigative questions of records of the past. In what sense are such inquiries "experiments," and how are we to interpret what they reveal about nature? Next, Cheryl Logan considers the role of diversity before there were standardized laboratory animals, by surveying two prominent German physiology journals between 1885 and 1900. Here, increasing emphasis on standardization, the growth of the experimental method, and the industrialization of the life sciences led to a change in assumptions about generality and diversity that had guided earlier studies. Animals were often assumed to be basically similar, and scientific generality became an a priori assumption rather than an empirical conclusion. What is gained, what lost, in the shift to model organisms as standards of research? What counts as complete understanding of nature in the world of experiment?

Function, Teleology & Explanation

What counts as a biological explanation of function, especially

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with regard to processes that exhibit an element of projection, or so-called teleology? Two major themes have emerged, analytical-mechanical and etiological-selectionist. This session examines these traditions and their application, offering fresh perspectives and alternatives. || Scott Thomson, Andrew Aavatsmark, Peter Schwartz

Hothouses for Science: Hybrid Institutions and the Study of Plants I & II

Agricultural experiment stations, land grant colleges, horticultural societies, and botanical gardens have all shaped the study of plants in the United States. At these hybrid institutions, practical challenges and theoretical concerns have been both fortuitously juxtaposed and creatively fused to advance many sciences—from botany, horticulture, and agronomy to genetics and evolutionary theory. Our subject is this interplay, both scientific and institutional, across several points and places in the history of the plant sciences in the United States. || Barbara Kimmelman, Philip Pauly, Peter Mickulas, Kim Kleinman, Petra Werner & F. L. Holmes, Steven Conn

Wherein Information?

The three papers of this session share a common disagreement: that genetic, or biological, information is substantively encoded by the DNA alone, as John Maynard Smith has recently defended in response to earlier criticisms of the informational construal of genetics and developmental biology. There are two well-worn routes to conceiving of genetic information: that the use of information terminology is mostly metaphorical and heuristic, and that the theoretical use of information meaningfully references biological phenomena. Michelle Little discusses the desirability of taking the first route. Jim Griesemer and Stephen Downes each argue for the second, but in a novel way: they present alternatives to Maynard Smith's conception of where genetic information exists.

Backstage at the Journals

[This is a special session being held over lunch on Friday.] Designed primarily for graduate students and others new to academic publishing, this informal session will provide an opportunity to chat with members of the editorial staffs of the *Journal of the History of Biology*, *Isis*, and *Philosophy of Science* (perhaps also *Biology & Philosophy*). The staff members will speak very briefly, but mainly the session will consist of questions and answers about submitting papers, refereeing, what common pitfalls to avoid, etc. || Jane Maienschen, Gar Allen, Marie Glitz, Karen Oslund, Anne Mylott, Kim Sterelny

Language Change as a Selection Process I & II

The session deals with the evolution of language. Might historical linguists have something to say on this score? Linguists have been treating language scientifically for years. A few are now trying to treat it as a selection process in particular. || William Croft, Thorbjørn Knudsen, Gregory Radick, Salikoko Mufwene, David Hull, Zeynep Tufekci

Levels I: Property Emergence

Property emergence has recently become, once again, a very much discussed issue in the philosophy of biology as well as in other domains of philosophical research, particularly, in the philosophy of mind. In part, this was due to the remarkable influence of the sciences of complexity, such as Artificial Life, Artificial Intelligence, cognitive science, theoretical biology, and so on. Among the issues regarded as relevant to a cogent explanation and/or definition of property emergence in biological, mental, and other complex systems, one finds the nature of causality in these systems, and, specially, the idea of downward causation. || Charbel El-Hani, Mark Bedau, Sami Pihlstrom

Levels II: Bridging Levels

What is the relation between functional integrity and its component processes, between part and whole, where selection acts on multiple levels or scales simultaneously? The problems are particularly acute in cases of the origin of new levels of organization or the creation of ontologically distinct entities + whether slime mold colonies, multicellular organisms or populations of sexually reproducing organisms (populational lineages). This session offers new approaches to the problem of bridging levels by considering: (1) how emergent functionality affects the complexity of its parts; (2) why adaptations accrue primarily at the organismal level; (3) how principles of self-organization, already articulated at the level of organisms, may apply at

the species level; and (4) how conflicts between selection at different levels of organization are resolved in the case of slime mold behavioral polymorphism. || Dan McShea, Eduardo Wilner, Thomas Reydon, Ian Nyberg

What is Life? I & II

The definition of life in modern biology has been ignored in both theory and philosophical analysis. We will use this session as an invitation to reflect upon and discuss questions about the concept of life, its history and philosophy, the ontology of life, life's emergence and autonomy, standard as well as non-standard approaches to living systems in theoretical biology, the generality, specificity and unity (or disunity) of biology, and the role of definitions and base concepts in science. || Ina Roy, Naomi Dar, Claus Emmeche, Marina de Lima-Tavares, David Magnus, Rob Pennock

Establishing Medical Benchmarks

What constitutes health, what disease? What are the appropriate foundations for interpreting the emergence of a dysfunctional medical condition, whether physiological or psychological, genetic or environmental? The papers in this session consider: (1) the general metaphysics of cancer (2) how cultural background shapes researchers' interpretations of the specific etiology of stomach cancer (genetic vs. environmental), and (3) how psychiatrists' attitudes shape the discourse on the effectiveness of antipsychotic drugs. || Gershom Gajicek, Joao Nunes, Andrew Garner

Memories and Molecules: Long-Term Potentiation and the Mechanisms of Memory

An understanding of the neural mechanisms of memory would be an important first step towards understanding the neural mechanisms of the mind. So it is not surprising that there is considerable controversy over the putative role of Long-Term Potentiation (LTP), a well-known form of synaptic plasticity, in the neural mechanisms of learning and memory. This symposium includes presentations by both philosophers and scientists with a common interest in evaluating the link between LTP and learning and in assessing the conceptual and evidential burdens facing any such theory. Issues to be discussed include experimentation, explanation, mechanisms, reduction, and theory structure in contemporary neuroscience and its history. || John Bickle, Carl Craver, Louis Matzel, Maurice Schouten

Mechanisms in Biology I & II

Talk of mechanisms is ubiquitous in biology, but the topic has received surprisingly little discussion. These sessions show a growing interest in the topic. In Session I, Jeff Ramsey will explore the relations between models and mechanisms in discoveries about protein folding. Lindley Darden will discuss reasoning strategies for constructing, evaluating, and revising hypothesized mechanisms in molecular biology. Larry Holmes will serve as commentator, drawing on his work on Hans Krebs's discussion of mechanisms in biochemistry.

In Session II, Maria Jesus Santesmases will discuss mechanisms of enzyme action. George S. Levit will survey literature in both German and English on "mechanicism" and provide critiques. Stuart Glennan, whose work will be discussed by Levit, will serve as commentator for the session.

Mind and Evolutionary Explanation I, II & III

Philosophers and scientists are increasingly turning to evolutionary biology in order to formulate naturalistic accounts of human mental processes. For example, evolutionary psychologists, such as Cosmides and Tooby, claim that their programme can and will ultimately supply a "precise definition of human nature", which will take the form of a set of domain-specific, functionally individuated cognitive adaptations called 'modules'. Also influential in philosophical circles are teleological theories of representation (e.g. Millikan [1984, 1993], Papineau [1987, 1993]), which attempt to naturalise intentional states by appealing to a biological selectionist account of function. Whilst many philosophers are flocking towards a naturalistic, biological account of mind, others, such as Thomas Nagel, charge such approaches with 'scientism' and with taking for granted a naive, overly restricted conception of 'scientific objectivity'. The papers in these sessions set out to explore the limits of evolutionary approaches to human mentation: Do such approaches constitute an illuminating - or even comprehensive -

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window onto the mind? What are their methodological, epistemological and ontological limitations? What room do they leave open for alternative perspectives? In what ways, if any, are they misguided? || Sally Ferguson, Matthew Ratcliffe, Zeynep Tufekci, Otniel Dror, Brian Garvey, Jonathan Kaplan, Terence Sullivan, Elizabeth Lloyd, John Lemos, Mark Russell, [Thomas Polger]

Modularity in Complex Natural Systems (remembering Herb Simon)

Herbert Simon's landmark work on nearly-decomposable systems is the premier source for ideas about thinking in terms of modules. This session will honor Simon, who died recently, by addressing modularity of biological systems (in development, in evolution, in mind). || Werner Callebaut, Diego Rasskin-Gutman, William Wimsatt

Variety of Theory in Natural History

Over the years, research in natural history and comparative biology has used alternative ways of theorizing. This session considers several questions about these usages, for example:

- How does theorizing in natural history differ from theorizing in the mechanical-experimental tradition?
- How do the different theories of change (e.g. natural selection, inheritance of acquired characters, and internal drives) relate to one another?
- What is the relation between notions of teleology and theories of change?

Lamarck and Darwin, for example, were both natural historians who theorized, in different ways, about the dynamic properties of parts and wholes. Barker focuses on Lamarckism in order to describe the analytical requirements of an adequate teleological theory. Gerson describes the development of a new class of theories in natural history. Winther & Oyama explore three models of change that have been employed in various fields: selectional, instructional, and maturational. || Elihu Gerson, Gillian Barker, Rasmus Winther & Susan Oyama

Philosophy of Evolution: Chance and Species

This session address two main themes in philosophy of evolution. The first is the role of chance. Lewens argues that selection is purely statistical, and that discussion of dynamics or forces is misplaced. Hong addresses the interplay of chance and reductive explanation in proposing "a gray scale of biological determinism." Finally, Wilkins delves deeper into the notion of species as lineages by considering "the intrinsic mechanisms that keep taxa distinct in their clades." || Felix Hong, Tim Lewens, John Wilkins

Regulatory Science I: Intellectual Property

Regulatory Science II: GMOs, Uncertainty & Law

This session will explore policy issues concerning biological research. Examples of such issues are the precautionary principle, bioprospecting and biodiversity resource exploration, macro-agro-ecological zoning and development, and transgenic product regulation. Most themes reveal aspects of risk assessment negotiation, regulation debate, political debate on development, international trade, international relations and globalization issues. || Jack Wilson, Marilia Coutinho, Warren Neill, Lino Paula, Les Levidow, Keith Culver

Research Groups Revisited: Looking Beyond the Research School

Geison's concept of the research school has proved a valuable tool for integrating institutional, human, and intellectual analyses of research groups. However, there are many research groups that do not fit the criteria for a "research school" as defined by Geison. These working groups are also more cohesive than a "network." These groups are often highly productive and are built on close relationships between researchers. They often transcend not only institutional but national boundaries. What are the characteristics of these "research groups" and what generalizations can we make about their roles in science? What are their strengths and weaknesses? How do they foster or hamper the work of group members? What is the role of gender in research groups? What are the relative roles of institutional structure, personal goals, and intellectual commitments in research groups? The presenters will look at three very different fields and provide preliminary analyses of these groups and how they function. || Pam Henson, Ron Rainger, Nancy Slack

Rhetoric and Biology: the Strategy of Communication in Modern Biological Thought I & II

Rhetoric as the art of persuading has been contrasted with

argument and logic since the time of the Greek philosophers. Rhetorical skill consists in getting others to embrace certain beliefs, opinions or judgements which the speaker or writer wishes them to adopt. Both sound argument and rhetorical techniques have usually been used in scientific discourse, and different trends in historiographical analysis tend to emphasize either one or the other aspect of scientific writing. Rhetorical analysis of any type of discourse (including scientific works) may disclose several relevant features that contribute to effective communication of beliefs, such as:

- Attempts (by the author) to convey the impression that he/she is a credible person (good character, honest intentions, competence, devoted to the truth, . . .) and that his/her opponent are the converse.
- Attempts to influence the readers by appealing to their emotions (admiration, disdain, hatred, fear, . . .), interests, imagination, prejudices (including naive beliefs), etc.
- Persuasive but false or incomplete arguments (use of peculiar examples, analogy, metaphors, authority, etc.).
- A convincing structure of the discourse accompanied by an adequate style, designed to suppress critical thought and leading the readers to the intended beliefs.

This session will be devoted to the debate of specific instances of rhetoric in modern biological thought, dealing with questions such as:

1. Which kinds of rhetorical devices were used by the main biologists in their writings, in defending their own views or criticizing opposite opinions?
2. Does the very presentation of biological data (the result of observation and experiment) make use of rhetorical devices?
3. To what extent did prominent scientists of the past use rhetoric as an essential part of their scientific works?
4. Was the use of rhetoric a strategy for convincing readers when sound arguments were scarce?
5. If one attempts to "clean" biological works of rhetorical devices, will they lose their cogency?
6. Was rhetoric replaced by cold arguments as biological theories got stronger arguments and a better empirical foundation?
7. Is rhetoric an essential part of the current controversies in biology?
8. Do present textbooks use rhetoric in presenting accepted theories?

Anna Carolina, K. P. Regner, Palmira Fontes da Costa, Lilian Al-Chueyr Pereira Martins, Roberto de Andrade Martins, [Joan Steigerwald]

Unifying Concepts in Ecology

Ecology is a broadly heterogeneous discipline, with many theories and methods, encompassing a wide spectrum of fields, from population biology and community ecology, to ethology, biogeography and evolution. What, if anything, brings these diverse practices and ideas together? Odenbaugh examines the historical efforts of several population biologists — Richard Levins, Richard Lewontin, Robert MacArthur, and E. O. Wilson, otherwise known as the "Marboro Circle" — to craft a synthesis between "evolutionary play" and the "ecological theater" based on mathematical models and certain metaphysical commitments. Mittwollen offers a contemporary perspective, suggesting that evolutionary perspectives can help resolve the traditional dichotomy between reductionistic population ecology and the more holistic systems ecology. || Greg Cooper, Jay Odenbaugh, Arend Mittwollen

New Frameworks for Unification

Is unification truly dead? For many, explanatory division of labor in the special sciences has triumphed, and pluralist perspectives have eclipsed efforts to understand the unity of science. Historians and philosophers of biology seem to agree that evolutionary biology, in particular, is not a unified science, and that the evolutionary synthesis was not a conceptual synthesis, so much as an institutional synthesis. Reduction of genes to molecular properties likewise remains controversial. However, it is not clear that there is consensus about what it means for a theory to be unified. M. Morrison's (2000) recent work on unification and explanation serves as a starting point for discussion. This then opens to wider reinterpretation of interfield relationships and non-reductionist approaches to unification. || Daniel Sirtes, Todd Grantham, Anya Plutynski

continued on next page

Visual Images in Biology I & II

This pair of sessions will present papers on the use of visual images in biological inquiry and in representing attitudes toward the living world. A range of approaches is used from an analysis of the interplay of image and experimental data to the relationship between the empirical and the aesthetic in representing the natural world. The rhetorical and explanatory uses of images are also explored as is the ability of images to create awe and wonder. The session provides a broad range of investigations into the use of images in areas of biological inquiry from the molecular to the physiological, from zoology to evolutionary biology.

- Images of the Cerebral Cortex, C.U.M. Smith
 - Explanation in Two Dimensions: Diagrams and Functional Analysis, Laura Perini
 - A Brief History of Imaging Proteins, Maura C. Flannery
 - The role of Photographs and Film in Kettlewell's Popularizations of the Phenomenon of Industrial Melanism, David Rudge
 - Poetry, Learning and Skill; biological illustration from 18th and 18th C New Zealand, John R.H. Andrews
 - From Theology to Ecology: The Use of the Grotesque in Biological Imagery, 1450-2000, Robert Hendrick
- [Bracketed names] remain uncertain.

Pre-Conference Workshop

Teaching History, Philosophy, and Social Studies of Biology

Quinnipiac College, Wednesday July 18, 2001

A pre-conference workshop organized by the Education Committee of the International Society for History, Philosophy, and Social Studies of Biology

Through their teaching, writing, and public presentations, many ISHPSSBers promote the constructively critical analysis of science among students, practicing scientists, science studies scholars, and the wider public. The idea of a pre-conference workshop is for ISHPSSBers to share how we address this challenge. To get the ball rolling the Education Committee has arranged three presenters for the 2001 meetings. We hope this will incite others to offer to share their wares before and at future ISHPSSB meetings. A lunch meeting will be held during the conference to plan future pre-conference education workshops.

This workshop consists of three experiential sessions. That is, instead of the session leaders telling us how they teach, participants experience the kinds of teaching the session leaders are exploring and reflect on the pedagogical issues raised. Participants are encouraged to attend the full day to compare and contrast the different approaches.

Logistics: Indicate on the ISHPSSB Conference registration form that you will attend the workshop and need Wednesday lunch. Indicate also if you need Tuesday night dormitory accommodation and breakfast, available at the same (low) cost. There will be no cost for the workshop, but please email peter.taylor@umb.edu if you will be attending so sufficient copies of the handouts can be made.

Program

with provisional descriptions of the workshop sessions (11 March 2001; updates will be posted when available)

9:30-11:00, Douglas Allchin, Minnesota
(allchin@pclink.com, "Learning from Minamata"

Minamata, Japan, suffered from severe mercury poisoning in the 1950s — perhaps the earliest and most

emotionally engaging case of point-source pollution in history. Unfolding the episode in reverse chronology frames questions and lessons in science, society and uncertainty.

11:30-1:00, Steve Fifield, University of Delaware (fifield@udel.edu), "Whose Embryo Is It, Anyway?: A Problem-Based Learning Activity"

In this session participants will experience a problem-based learning activity that foregrounds ethical and cultural dimensions of science in society that are often marginalized in science education. The case involves a mistake at an in vitro fertilization clinic that raises issues in reproductive biology and parenthood, biotechnology, genetics, race, and bioethics. In the problem-based approach, complex, real world problems or cases are used to motivate students to identify and research concepts and principles they need to know in order to progress through the problems. Students work in learning teams, bringing together collective skill at acquiring, communicating, and integrating information in a process of inquiry. This necessarily accelerated experience will give participants a taste of the problem-based learning cycle.

2:00-5:00, Peter Taylor, University of Massachusetts, Boston (peter.taylor@umb.edu), "Inquiry-based approaches to science education can be enhanced by placing developments in science and technology in their social context"

Participants in this session will be encouraged to take its title seriously. After a warm-up activity, you will experience a case or two from my own teaching in biology/environment and society, then critique the case(s), and work on lessons and activities in your own areas of interest to teach or present to the wider public.

For further information, contact Peter Taylor, Program in Critical and Creative Thinking, Graduate College of Education, University of Massachusetts, Boston, MA 02125. Phone: (617) 287 7636. Email: peter.taylor@umb.edu

Nominees for ISHPSSB Council

President Elect (vote for one):

Angela Creager is associate professor in the Department of History and Program in History of Science at Princeton University. She works on the development of biomedical research in the twentieth century, and is also interested in interactions between the physical and life sciences and in gender and science. She has previously served as co-chair of the Women's Caucus of the History of Science Society, and recently served on that society's Committee on Meetings and Programs. She has always enjoyed the interdisciplinary, informal nature of the ISHPSSB meetings.

Michael Dietrich: I am currently an Associate Professor in the Department of Biological Sciences at Dartmouth College. Although trained as a philosopher, my research is primarily concerned with the history of modern biology. I am currently completing a biography of Richard Goldschmidt and continuing my research on the history of molecular evolution. I was a founding member of the Executive Committee for ISHPSSB and was the Program Chair for the ISHPSSB meeting on Oaxaca. As President I would like to continue the ISHPSSB tradition of providing an open and welcoming environment for interdisciplinary discussion.

Paul Lawrence Farber is Oregon State University Distinguished Professor of the History of Science. He received his graduate education in the Department of History and Philosophy of Science at Indiana University. Currently, he is chair of the Department of History at OSU and holds a joint appointment in the Department of Zoology. Professor Farber's books and articles have focused primarily on the history of natural history and on evolution. He is also a co-author of a general biology textbook. He has served twice on the Council of the History of Science Society, was Executive Councillor of the West Coast history of Science Society, President of the Columbia History of Science Group, Co-Program Chairman for the 1993 annual meeting of the History of Science Society, and currently serves as Secretary of Section "L" (History and Philosophy of Science) of the AAAS. He is an associate editor of *School Science and Mathematics*, and *Journal of the History of Biology*.

Directors (vote for three):

Rachel A. Ankeny is currently Director and Lecturer in the Unit for History and Philosophy of Science at the University of Sydney, where she oversees all departmental administration and the undergraduate/honors programs. Her research interests include history of 20th century genetics and neurobiology; philosophy of biomedical sciences; and bioethics. She was elected as Secretary of the Australasian Association for History, Philosophy and Social Studies of Science (AAHPSSS) in 2000, and also serves as Regional Treasurer for the Network for Feminist Approaches to Bioethics (FAB). She was chair of the Student Interest Group of the Society for Health and

Human Values (SHHV) from 1993-95, and was the graduate advisor for the medical ethics program in HPS at the University of Pittsburgh in 1997-98.

Ana Barahona is a professor of history and philosophy of science at the National University of Mexico (UNAM), where she teaches history of biology and evolution for undergraduate students, history of genetics, and history of science in Mexico in the Graduate Program of Biological Sciences. Her main concern is on the problem of historiography and explanation in science, particularly biology. She is the author of the national textbooks on natural sciences for primary education. She has been head of the Graduate Program of Biological Studies (98-2000), and head of the Biology Department at the School of Sciences, UNAM (96-98).

Nathaniel Comfort: I began my serious intellectual life as a biologist. In 1991, I left neurobiology and animal behavior research to become the science writer at Cold Spring Harbor Laboratory. In 1994 I returned to graduate school, taking my Ph.D. in history from the State University of New York at Stony Brook. Since the fall of 1997 I have been an assistant professor in the history department and the deputy director of the Center for History of Recent Science, both at The George Washington University, in Washington, DC. I am also the editor of *Recent Science Newsletter*, which I began two years ago as an organ of the Center. I am on the Operations Committee for ISHPSSB. I am on the editorial board of *History and Philosophy of the Life Sciences* and am the organizer of the 2001 Joint Atlantic Seminar on the History of Biology. I am the author of *The Tangled Field: Barbara McClintock's Search for the Patterns of Genetic Control*, forthcoming in June from Harvard University Press. I have written articles for the *Journal of the History of Biology*, *Natural History*, *Trends in Biochemical Sciences*, *Genetics*, *Helix*, and other magazines, as well as the usual barrage of encyclopedia entries and so forth. I have about 20 published book reviews.

Jean Gayon is Professor of Philosophy and History of Science at the University Paris 7-Denis Diderot (France). His areas of interest include history of biology, 19th-20th century (biometry, evolutionary biology, genetics), and philosophy of biology. His principal publication in English is *Darwinism's Struggle for Survival* (Cambridge UP, 1998). Administrative posts include: director of the "Doctoral School" of "Epistemology, History of Science and Didactics of Scientific disciplines;" member of the French National Committee of History and Philosophy of Science (Paris Academy of Sciences); member of the Evaluating Committee of CNRS (Centre National de la Recherche Scientifique); member of the "philosophy" section of the National Committee of Universities (France) Foreign and International Committees; member of the joint Committee of the International Union of History and Philosophy of Science (nominated by the International Division of History of Science); member of the Scientific Committee of the Max Planck Institut of History of Science (Berlin); member of the Evaluating committee of

the Program of Research Chairs (Canada); adjunct editor of *Revue d'histoire des sciences*; member of the scientific board of various journals (*Biology and Philosophy*, *Ludus Vitalis* [Mexico], and *Philosophia Scientiae*, *Bulletin d'histoire et épistémologie des sciences de la vie*).

Christiane Groeben began, in 1969, to assemble and catalogue source material related to the history of the Stazione Zoologica di Napoli and to shape the Historical Archives into a research facility. Since 1985, she has been responsible for the Book Review section of *History and Philosophy of the Life Sciences*. In 2001, she became head of the newly created "Unit for the History of Biology and Historical Archives" at the Stazione Zoologica. She is a member of several international societies for the history of science holding various offices. Her research focuses on the history of marine stations in general and of the Stazione Zoologica in particular. Through her various publications she has made relevant sources available to an interested readership, e.g. the correspondence between Anton Dohrn and Charles Darwin (Naples, 1982), Dohrn and Emil du Bois-Reymond (Heidelberg, 1985), Dohrn and Carl Ernst von Baer (Philadelphia, 1993). Her own research interests concentrate on the personality of Anton Dohrn, the foundation of the Naples Station and their impact on the development of biology. Recent studies deal with naturalists at the seaside in the early 19th century (1996); Carl Vogt (1998); broadsheets and sea-monsters (1998); "A Bioeconomic Perspective on the Organization of the Naples Marine Station" (2000, together with Michael Ghiselin); the impact of the Stazione Zoologica on Italian biology (2001); and early physiology at the Naples Station.

Roberta L. Millstein is an Assistant Professor in the Philosophy Department at California State University, Hayward. Her areas of interest include the history and philosophy of evolutionary theory (with particular interests in issues of chance, causality, indeterminism, and explanation), biomedical ethics, and environmental ethics. She is currently serving on numerous university and departmental committees, as well as Hayward's faculty governing body, the Academic Senate.

Hans-Jörg Rheinberger worked as molecular biologist until 1990 and is now Director at the Max Planck Institute for the History of Science in Berlin. His recent books include *Toward a History of Epistemic Things* (Stanford, 1997), *The Concept of the Gene in Development and Evolution* (co-editor with Peter Beurton and Raphael Falk, Cambridge 2000). His areas of research are history and epistemology of experimentation and history of genetics. He served as President of the German Society for History and Philosophy of Biology, 1992-1996.

Denis Thieffry holds degrees in Molecular Biology, Philosophy, and History of Science. He is currently Professor at the Ecole d'Ingénieurs de Luminy, Université de Provence, Marseille France. His main research interests include the development of qualitative tools for the dynamical analysis of biological regulatory networks, in particular gene networks involved in development and cancer, as well as sequence analysis and definition of

regulatory patterns in DNA sequences with emphasis on the functional effects of combinations of regulatory patterns. His research work on history and philosophy of molecular biology includes an emphasis on contributions dealing with the notion of gene regulation and its bearing to developmental biology. He is a founding member of the European Society for Mathematical and Theoretical Biology, and has been a member of ISHPSSB since 1994. He organized sessions at the 1995 and 1999 ISSHPB meetings. He has significant teaching experience in Bioinformatics, Theoretical Biology, and History of Biology.

President's Corner from page 2

or was at the time of the paper's presentation, a graduate student. The award consists of a certificate and up to \$200 towards expenses incurred in attending the following meeting of the Society. In addition, if the manuscript is not already under review by a journal, the prize committee will promote the winning entry to one of the leading journals. This year's Prize Committee consisted of Philip Pauly, chair, Ron Amundson and David Rudge. And the winner is . . . Rasmus Winther (Indiana University), for his essay "August Weismann on Germ-Plasm Variation," presented at the 1999 meeting in Oaxaca.

I encourage all graduate students presenting papers at Quinnipiac to consider submitting a manuscript based on their presentation for the next Grene Prize competition.

To close, I want to thank the two stalwart officers whose service has kept the Society functioning. Without the continuing hard work and dedication of our Secretary, Chris Young, and our Treasurer, Keith Benson, we would be in enormous difficulty. Thanks to them, our operations are working very smoothly. Behind the scenes, their contribution to the continuing success of the Society is enormous and enormously important. In addition, many thanks go to Lindley Darden, our next president, for her very capable assistance in planning toward the 2003 meeting and reviewing society operations. The Society will be in very capable hands when she takes charge!

Richard Burian, Society President

**Special thanks to
Valerie Hardcastle
who designed and maintains
the Society website!**

BALLOT

See Biographical notes on pages 11-12 of this Newsletter

For President-Elect (2001-2003)/President (2003-2005)

Choose 1

- Angela Creager**
 - Michael Dietrich**
 - Paul Farber**
-

For Director (2001-2003)

Choose 3

- Rachel Ankeny**
- Ana Barahona**
- Nathaniel Comfort**
- Jean Gayon**
- Christiane Groeben**
- Roberta Millstein**
- Hans-Jörg Rheinberger**
- Denis Thieffry**

Mail ballot to:

by June 1, 2001!

fold here

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**Send news of recent
publications and websites of
interest to ISHPSSB members
to Society Secretary
Chris Young
cyoung@aero.net**

Publications of Interest

Wim J. van der Steen, Evolution as Natural History: A Philosophical Analysis (Praeger, 2000).

Evolution has always played an important role in the philosophy of biology, and during the last few decades the theme of evolution has spread over many other disciplines. Considering evolution in biology itself, and in evolutionary biology, I argue that sweeping theoretical claims are out of the question. Analysis of concepts (for example, fitness, selection, and altruism) indicates that evolutionary biology should be content with theorizing at low levels of generality. Evolutionary theorizing in other disciplines (for example, ethics, epistemology, psychology, and medicine) is at times fruitful, but most theoretical efforts of researchers to assimilate evolutionary biology are problematic since they are out of touch with genuine biology.

Wim J. van der Steen and Vincent K. Y. Ho, Methods and Morals in the Life Sciences: A Guide for Analyzing and Writing Texts (Praeger, 2001).

We introduce methodological criteria and general guidelines for the analysis of texts, and thereby for good writing. These are followed by case studies from many areas of biology and biomedicine (for example mental illness, egoism and altruism, genetic engineering), in which criteria and guidelines are the analytical tools. A system of cross references enables the teacher or student to select from the book samples of interconnected case studies that fit preferred levels (elementary, advanced) and themes. Hence, the text is books within a book as it were. The set up also aims at the integration of science and ethics, through particular choices of criteria, guidelines and themes. Lastly, the book contains a modest style manual.

Call for Journal Submissions

Call for Papers: Perspectives in Biology and Medicine

Perspectives in Biology and Medicine invites essays on any aspect of the history, philosophy, or social studies of biology or medicine. *Perspectives* is an interdisciplinary journal published by the Johns Hopkins University Press. Our readers include biologists, physicians, students, and scholars in other disciplines who are interested in biology and medicine. The journal publishes essays that place biological or medical subjects in broader historical, ethical, or cultural contexts. The journal is widely indexed and is available through Project Muse of the Johns Hopkins University Press. More information is available on our web site, <<http://muse.jhu.edu/journals/pbm/>>.

While we have no word limit, most of our essays are in the range of 4,000 to 9,000 words. Manuscripts should be prepared according to *Chicago Manual of Style*. Because of their conviction that scientific writing should not be stilted, ponderous, or dull, the editors encourage an informal, humanistic style that preserves the warmth, excitement, and color of the life and medical sciences. We seek essays with sound and responsible scholarship that will hold our readers' attention and interest. All essays are subject to peer review before publication.

Please direct inquiries to Robert Perlman, Editorial Office, *Perspectives in Biology and Medicine*, Culver Hall 404, 1025 East 57th Street, Chicago, IL 60637; Fax: 773-702-9234; Email: r-perlman@uchicago.edu

Special Offers for ISHPSSB Members

Metascience

We offer ISHPSSB members a discount on *Metascience* and have in fact included it on our flyer for the journal and on the journal's website: <http://www.blackwellpublishers.co.uk/journals/mesc/>

The full personal rate is US\$54 Americas; £35 Europe and the rest of the world. The ISHPSSB member rate is US\$45 Americas; £29 Europe and the rest of the world. The journal's Institutional rate is US\$164 Americas; £106 Europe and the rest of the world, except A\$138 Australia/NZ.

To get the member rate, either email jninfo@blackwellpublishers.co.uk indicating that you are an ISHPSSB member, or tick the box on the *Metascience* website order form. For more information on *Metascience*, including access to online articles, go to <http://www.blackwellpublishers.co.uk/journals/mesc/>

Journal of the History of Biology

Subscribe to the *Journal of the History of Biology* by contacting Society Treasurer and membership/subscription guru Keith Benson. Members receive a substantially discounted rate! (US\$50, or US\$90 for both *JHB* and *B&P*, see below.) Check out the journal online at <http://www.wkap.nl/journalhome.htm/0022-5010>

Biology and Philosophy

Subscribe to *Biology and Philosophy* by contacting Society Treasurer and membership/subscription guru Keith Benson. Members receive a substantially discounted rate! (US\$50, or US\$90 for both *JHB* and *B&P*, see above.) Check out the journal online at <http://www.wkap.nl/journalhome.htm/0169-3867>

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