



Istituto Veneto di Scienze Lettere ed Arti
Palazzo Loredan
Venezia

9-10 September 2014

Explaining Development

A workshop organized by
Alessandro Minelli (University of Padova and Istituto Veneto di Scienze Lettere ed Arti) and
Thomas Pradeu (Paris-Sorbonne University and Institut universitaire de France)

What is development, and how should it be explained? Conceptual issues play an important role in today's developmental biology (e.g., concerning plasticity and robustness, the periodization of development, etc.) An important, related question is to determine whether developmental biology offers theories. In a volume published by OUP in 2014 and edited by Minelli and Pradeu (Towards a theory of development), prominent biologists and philosophers have examined this question. This exploration of the theoretical aspects of developmental biology has now naturally led us to a broader and perhaps even more fundamental question, that of the explanation(s) of development.

Attendance to the workshop will be open and free to all interested people.

Active participation to the discussion will be welcome.

Please inform the organizers of your intention to attend by sending a message to alessandro.minelli@unipd.it not later than **August 31, 2014**.

Programme

9 September 2014

09:00-09:30 ALESSANDRO MINELLI & THOMAS PRADEU – Welcome and introductory remarks

Explaining what? – Putting development in context

09:30-10:20 GIUSEPPE FUSCO – Development in the context of the life cycle

10:20-11:10 JAMES R. GRIESEMER – Periodization of development

11:10-11:30 *Coffee break*

Explaining what? – Unconventional developmental systems

11:30-12:20 ALESSANDRO MINELLI – The development of the fruit, the seed, the moss and other chimaeric systems

14:00-14:50 ALEXANDER V. ERESKOVSKY – Problems and insights from sponge developmental biology

What is the respective role of descriptions, explanations and predictions in developmental biology?

14:50-15:40 THOMAS PRADEU – Description, explanation, and prediction in developmental biology

15:40-16:30 LUCIE LAPLANE – Contrasting notions of theory and their relevance for developmental biology

16:30-17:00 *Coffee break*

17:00-18:00 Plenary discussion I – The problem agenda(s)

10 September 2014

On the causality of development

09:00-09:50 WALLACE ARTHUR – Topology of causal links in development

09:50-10:40 JOHANNES JAEGER – The role of dynamical systems theory in a mechanistic theory of development

10:40-11:10 *Coffee break*

11:10-12:00 GERD B. MÜLLER – Do theories of evolution affect theories of development?

What does it exactly mean to give an explanation of development?

14:00-14:50 ALAN C. LOVE – The concept of potentiality in developmental reasoning

14:50-15:40 MICHEL VERVOORT – The importance to compare convergent developmental processes in trying to establish some principles of development

15:40-16:10 *Coffee break*

16:10-17:00 **Plenary discussion II - Connections and broader issues**

17:00-18:00 **What next? General discussion on research, meetings and editorial plans**