

Sydney-Tilburg Conference:
The Progress of Science



Tilburg, 25.04.2012 - 27.04.2012

Synopsis

This year is the 50th anniversary of Thomas S. Kuhns seminal book *The Structure of Scientific Revolutions*, which forcefully questioned the idea that science makes steady, rational progress towards truth. After half a century his challenge is everything but outdated. Look at the failure of economic science in the financial crisis, or the fierce debate about whether string theory is just a mathematical gimmick, unable to connect to empirical data. At the same time, however, the scientific enterprise appears to be more dynamic than ever, with an explosion of publications and new subdisciplines emerging by almost the hour. Philosophy of science has changed too. The abstract account of method which Kuhn criticized have been replaced by efforts to model how science proceeds, exploring, for example the epistemic benefits and drawbacks of division of scientific labor. What is more, scientometric data and a wealth of case studies are readily available to empirically test theses about what progress in science means today.

In this conference, will revisit this classical question in the philosophy of science in the light of current developments and invite contributions on both historical and systematic aspects of the progress of science. We particularly encourage work on progress in the special sciences, the emergence of new disciplines, and empirically informed reassessments of classical positions

Organizers: Mark Colyvan (University of Sydney), Paul Griffiths (University of Sydney), Stephan Hartmann (TiLPS), Jan Sprenger (TiLPS)

Keynote Speakers

Heather Douglas (University of Tennessee), Paul Hoyningen-Huene (University of Hannover), Theo Kuipers (University of Groningen), Michael Weisberg (University of Pennsylvania)

Publication

We plan to publish selected papers presented at the conference in a special issue of the *journal Studies in History and Philosophy of Science* (subject to the usual refereeing process). The submission deadline is 15 September 2012. The maximal paper length is 7500 words.

Program

Wednesday 25.04

	Room AZ 017	Room AZ 211
10:00 - 10:30	Registration	
10:30 - 10:45	Opening	
Plenary session	Chair: Stephan Hartmann	
10:45 - 12:00	Michael Weisberg: <i>The Social Structure of Normal Science</i>	
12:00 - 01:15	Lunch	
Parallel sessions	Chair: Soroush Rafiee Rad	Chair: Dominik Klein
01:15 - 02:00	Juha Saatsi: <i>Epistemic Conception of Progress and the Semantic View of Theories</i>	Alex Davies: <i>Kuhn On Incommensurability and Theory Comparison: A Hitherto Undocumented Development</i>
02:00 - 02:45	Kirsten Walsh: <i>Falsificationism: Fatal?</i>	Justin Price: <i>Incommensurability A Divide Between Worlds</i>
02:45 - 03:15	Coffee break	
Parallel sessions	Chair: Lasha Abzianidze	Chair: Christopher French
03:15 - 04:00	Juan Dur/’an: <i>On the Epistemic Virtues of Computer Simulations In the Form of Explanation of Results</i>	Wolfgang Pietsch and Christof Gaiser: <i>A Revolution without Tooth and Claw Redefining the Physical Base Units</i>
04:00 - 04:45	Mark Colyvan: <i>Progress in Mathematics</i>	Dunja Seselja and Christian Strasser: <i>Kuhn and the Context of Pursuit</i>
Plenary session	Chair: Paul Griffiths	
05:00 - 06:15	Heather Douglas: <i>Pure Science and the Problem of Progress</i>	
06:15	Reception	

Thursday 26.04

	Room AZ 017	Room AZ 211
<i>Parallel sessions</i>	Chair: Filip Buekens	Chair: Juan Durán
10:00 - 10:45	Stephan Hartmann and Jan Sprenger: <i>The No Alternatives Argument</i>	Amy Mclaughlin: <i>Pragmatic Significance, Demarcation, and Scientific Progress</i>
10:45 - 11:30	Ilkka Niiniluoto: <i>Scientific Progress as Increasing Versimilitude</i>	Friedel Weinert: <i>Continuity or Discontinuity?</i>
<i>Plenary session</i>	Chair: Mark Colyvan	
11:45 - 01:00	Theo A.F. Kuipers: <i>Explicating 'Cognitive Progress' in an Empirically and Conceptually Adequate Way</i>	
01:00 - 02:15	<i>Lunch</i>	
<i>Parallel sessions</i>	Chair: Michael Weisberg	Chair: Paul Hoyningen-Huene
02:15 - 03:00	Rogier De Langhe: <i>The Sandpile Model of Scientific Progress</i>	Geerd Magiels: <i>Paradigm Lost. How Scientists Change Their Minds and Survive Scientific Revolutions</i>
03:00 - 03:45	Dean Peters: <i>What Is the Problem of Theory Choice?: Rationality and the Chemical Revolution</i>	Sorana Vieru: <i>Problem-solving as a Constructive Empiricist Model of Scientific Progress</i>
03:45 - 04:15	<i>Coffee break</i>	
<i>Parallel sessions</i>	Chair: Chiara Lisciandra	Chair: Theo Kuipers
04:15 - 05:00	Carlo Martini: <i>The Progress of Economic Sciences: The Case Study of the Monetary Policy Committee</i>	Ladislav Kvasz: <i>Thomas S. Kuhns Structure of Scientific Revolutions between History and Epistemology</i>
05:00 - 05:45	Anna Leuschner: <i>Normal Science and Political Interests: On the Progress of Politically Relevant Sciences</i>	Dirk-Martin Grube: <i>The Notion of Progress in Kuhns "The Structure of Scientific Revolutions" (SSR) and Beyond</i>
08:00	<i>Conference Dinner</i>	

Friday 27.04

	Room WZ 201	Room WZ 202
<i>Parallel sessions</i>	Chair: Giulia Andrighetto	Chair: Rogier de Langhe
10:15 - 11:00	Vincenzo Politi: <i>Discoveries, Non-disruptive Specializations and the Progress of Science</i>	Frank Zenker: <i>Theory Change as Dimensional Change</i>
11:00 - 11:45	Paul Griffiths and Karola Stotz: <i>What Kind of Progress Occurred When Genes Went Molecular?</i>	Thomas Boyer: <i>Should Scientists Try To Go At It Alone? A Formal Model For the Risk of Scientific Community Splitting</i>
11:45 - 12:30	Anna Welpinghus: <i>Emotion Concepts in Emotion Science and in Everyday Usage</i>	Christian Damboeck: <i>Structure, Ontology, and Progress. A Formal Framework for the Dynamic of Scientific Theories</i>
12:30 - 01:45	<i>Lunch</i>	
	Room WZ 104	Room WZ 105
<i>Parallel sessions</i>	Chair: Heather Douglas	Chair: Janine Reinert
01:45 - 02:30	Sebastian Zacharias: <i>Progress Underneath the Models! An Analysis Of Continuity and Discontinuity On Three Layers of Biological Knowledge During the Darwinian Revolution</i>	Rens Bod: <i>Is There Progress In the Humanistic Sciences?</i>
02:30 - 03:15	Leen de Vreese: <i>Progress in Medicine</i>	Eric Postma: <i>Scientific progress in Artificial Intelligence: The curious case of computer vision</i>
03:15 - 03:45	<i>Coffee break</i>	
	Room DZ 01	Chair: Jan Sprenger
	<i>Plenary session</i>	
03:45 - 05:00	Paul Hoyningen-Huene: <i>Scientific Progress from Popper to Today</i>	
05:00	<i>Closing Reception (DZ8)</i>	

Acknowledgement

This conference is jointly sponsored by the Tilburg Center for Logic and Philosophy of Science at Tilburg University and the Sydney Centre for the Foundations of Science at the University of Sydney.

Financial support of the Royal Netherlands Academy of Art and Sciences (KNAW) is gratefully acknowledged.