

European Science Foundation  
Standing Committee for the Humanities (SCH)  
Standing Committee for the Social Sciences (SCSS)

## **ESF SCH-SCSS EXPLORATORY WORKSHOP**

### **Understanding Actions and Minds:**

Integrating recent advances from Philosophy of Mind, Cognitive Neuroscience, Psychology of Language and Communication, Developmental and Comparative Psychology, and Artificial Intelligence



Central European University  
Budapest, Hungary, 4-8 July 2004

Convened by:  
**György Gergely**

Department of Developmental Research, Hungarian Academy of Sciences





The European Science Foundation (ESF) acts as a catalyst for the development of science by bringing together leading scientists and funding agencies to debate, plan and implement pan-European scientific and science policy initiatives.

ESF is the European association of 76 major national funding agencies devoted to scientific research in 29 countries. It represents all scientific disciplines: physical and engineering sciences, life and environmental sciences, medical sciences, humanities and social sciences. The Foundation assists its Member Organisations in two main ways. It brings scientists together in its EUROCORES (ESF Collaborative Research Programmes), Scientific Forward Looks, Programmes, Networks, Exploratory Workshops and European Research Conferences to work on topics of common concern including Research Infrastructures. It also conducts the joint studies of issues of strategic importance in European science policy.

It maintains close relations with other scientific institutions within and outside Europe. By its activities, the ESF adds value by cooperation and coordination across national frontiers and endeavours, offers expert scientific advice on strategic issues, and provides the European forum for science.

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## Main Objectives of the Workshop:

The Workshop explores recent advances and new methodologies in studying a) *the production, representation, and interpretation of intentional actions in biological and artificial systems*, and b) *the inferential and representational mechanisms specialized for understanding intentional mind states*, aiming to integrate novel approaches from philosophy of mind, cognitive neuroscience, psychology of language and communication, developmental and comparative study of social cognition, brain research on autism and schizophrenia, and artificial intelligence modeling.

The planned Workshop aims to achieve three major goals that are all basically interdisciplinary in nature:

1. *To facilitate information exchange and to foster interdisciplinary and integrative cross-talk among the related fields represented.* To achieve this, participants would be asked to present talks that would realize three (related) goals: a) They would describe their most recent and significant theoretical and research findings, b) they would summarize the newest advances, most significant results, and emerging novel methodologies of their sub-field in a form accessible to the interdisciplinary audience of experts, and c) they would outline the emerging new points of connections, hitherto unforeseen problems, and new research questions that recent contributions of their own sub-discipline raise for the other sub-fields represented in the Workshop.



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2. *To provide an opportunity to engage in in-depth informal discussions to foster interdisciplinary understanding as well as theoretical and methodological cross-fertilization among the different sub-fields represented. To make this possible we plan to structure the Workshop to include substantive professional presentations each being followed by a sufficiently (approx. half an hour) long discussion period, plus an hour-long general discussion after each topical session, and finally an open-ended general discussion at the end of the Workshop.*
  
3. *To plan new and specific interdisciplinary and potentially multi-site collaborative research projects to be carried out in the future with the integrated participation of the various research labs and Institutes of the different European countries represented in the Workshop. These collaborative projects would be targeting specific new research questions that would emerge during the Workshop and would aim at fostering the effective exchange of newly introduced methodologies as well as the realization of novel research paradigms that may emerge from the intensive discussions and in-depth consultations made possible by the Workshop.*



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## PROGRAMME

### Sunday 4 July 2004

Evening *Arrival and Dinner at Retorta*

### Monday 5 July 2004

09:30

**Greetings and Introduction**  
**György Gergely** (Convenor)

**Presentation of the European Science Foundation (ESF)**  
**Sami Gülgöz** (Standing Committee for the Humanities) and  
**Hrafnhildur Ragnarsdóttir** (Standing Committee for the Social Sciences)

9:45 – 10:00

Short coffee break

10:00 – 12:30

**Cognitive neuroscience and artificial intelligence approaches to generating and perceiving intentional actions.**

Chair: **Csaba Pléh** (Center for Cognitive Science, Budapest, Hungary)

*Three 30-min talks each followed by an approx. 15 min discussion period.*

**Andreas Wohlschlager** (Max Planck Institute for Human Cognitive and Brain Sciences, Munich, Germany): **The ideomotor principle in imitation and action perception**

**Harold Bekkering** (Nijmegen Institute for Cognition and Information, Holland): **Intentional action: The interplay between goals and means**

**Julie Grezes** (Wellcome Department of Imaging Neuroscience Institute of Neurology, London, UK): **From the intriguing contagion of movements to social attribution**

12:00 – 12:30

General Discussion of the Morning Session

12:30

*Lunch*

14:00 – 15:30

**Brain and behavioural research on pathologies of intentionality and mind: Autism, Schizophrenia, and Williams syndrome.**

Chair: **Agnes Kovacs** (Romania; International School for Advanced Studies – Cognitive Neuroscience, Trieste, Italy)

*Two 30-min talks each followed by an approx. 15 min discussion period.*

**Uta Frith and Chris Frith** (University College London, UK): **Theory of mind in autism and schizophrenia**



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**Csaba Pléh** (Center for Cognitive Science, Budapest, Hungary):  
**Social cognition in Williams syndrome**

15:30 – 16:00 *Coffee-break*

16:00 – 18:00

**Brain and behavioural research on infants' understanding of action and mind**

Chair: **Luca Surian** (University of Trieste, Italy)

*Two 30-min talks each followed by an approx. 15 min discussion period.*

**Teresa Farroni** (Italy, Centre for Brain and Cognitive Development, Birkbeck College, London, UK): **When does communication start?**

**Luca Bonatti** (International School for Advanced Studies – Cognitive Neuroscience, Trieste, Italy): **Humans and other things**

18:00 – 18:30

General Discussion of the Afternoon Session.

19:00

*Dinner at Café Kör*

## Tuesday 6 July 2004

09:00 – 10:30

**Actions, Minds, Artifacts, and Intentionality: Theoretical integration of advances in philosophy, cognitive neuroscience, developmental and comparative studies, and artificial intelligence.**

Chair: **Hannes Rakoczy** (Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany)

*Two 30-min talks each followed by an approx. 15 min discussion period*

**Johannes Roessler** (University of Warwick, UK): **Young children's conception of intentional action**

**Renée Baillargeon** (Univ. of Illinois at Champaign-Urbana, US): **Infants' Reasoning about Others' Goals, Perceptions, and Beliefs**

10:30 – 11:00

*Short Coffee-break*

11:00 – 12:45

**Comparative approaches to understanding actions, minds, and artifacts.**

Chair: **József Topál** (ELTE University, Dept. of Ethology, Budapest, Hungary)

*Two 30-min talks each followed by an approx. 15 min discussion period.*

**Josep Call** (Spain; Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany) : **Taking a comparative psychological stance: How apes and dogs interpret the perceptions and actions of others**



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	<b>Juan Carlos Gomez</b> (Spain; University of St. Andrews, Scotland): <b>Solving Momo's problem: evolving an intentional view of the world</b>
12:30 – 12:45	<i>Commentary:</i> <b>Ádám Miklósi</b> (ELTE University, Dept. of Ethology, Budapest, Hungary)
12:45	<i>Lunch</i>
14:00 – 15:00	General Discussion of the Morning Session.
15:00 – 17:00	<b>Poster Presentations by the Young Scientists</b>  <b>Tanya Behne</b> (Department for Comparative and Developmental Psychology, Max-Planck-Institute for Evolutionary Anthropology): <b>Inferring Communicative Intent: Infants' Use of Communicative Cues in a Hiding Game</b>  <b>Ágnes M. Kovács</b> (International School for Advanced Studies (S.I.S.S.A.) Trieste, Italy): <b>Bilinguals' advantage in understanding other minds. What does this benefit mean?</b>  <b>Henrike Moll</b> (Department for Comparative and Developmental Psychology, Max-Planck-Institute for Evolutionary Anthropology): <b>When can young children imagine what someone else sees when that differs from what they see?</b>  <b>Hannes Rakoczy, Felix Warneken &amp; Michael Tomasello</b> (Department for Comparative and Developmental Psychology, Max-Planck-Institute for Evolutionary Anthropology): <b>Three-year-olds' understanding of different people's incompatible desires</b>  <b>Luca Surian &amp; Stefana Caldi</b> (Department of Psychology, University of Trieste): <b>Motion perception and object individuation at 10 months of age</b>  <b>József Topál, Zsófia Virányi &amp; Ádám Miklósi</b> (Department of Ethology, ELTE University Budapest, *Comparative Ethology Research Group, Hungarian Academy of Sciences): <b>Deductive inferring in dogs: Only when cues are socially mediated.</b>
17:00 – 17:15	<i>Short Coffee Break</i>
17:15 – 18:15	General Discussion of the Poster Session Chair: <b>Henrike Moll</b> (Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany)
19:00	<i>Dinner at CEU Japanese Garden</i>

## Wednesday 7 July 2004

09:00 – 11:30	<b>Developmental approaches to understanding actions, minds, and artifacts.</b> Chair: <b>Tanya Behne</b> (Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany)  <i>Three 30-min talks each followed by an approx. 15 min discussion period.</i>
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	<b>Wolfgang Prinz</b> (Max Planck Institute for Human Cognitive and Brain Sciences, Munich, Germany): <b>Prospective Coding in Event Representation</b>
	<b>Josef Perner</b> (University of Salzburg, Austria): <b>Young children's objective notion of desire and emotions</b>
10:30 – 10:45	<i>Short Coffee-break</i>
10:45 – 11:30	<b>Malinda Carpenter</b> (Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany): <b>Understanding and Sharing Intentions in Infancy</b>
11:30 – 12:15	General Discussion of the Morning Session.
12:45	<i>Lunch</i>
14:00 – 15:30	<b>Teleological and mentalistic understanding of communication and reference: Efficiency, Rationality and Relevance. Evolutionary, Developmental, and Linguistic Perspectives.</b> Chair: <b>Martin Kanovsky</b> (Slovakia, Faculty of Social Sciences, Bratislava) <i>Two 30-min talks each followed by an approx. 15 min discussion period</i>
	<b>Gergely Csibra</b> (Hungary, Centre for Brain and Cognitive Development, Birkbeck College London, UK): <b>Learning and social cognition: The case of pedagogy</b>
	<b>Dan Sperber</b> (Institut Jean Nicod , EHESS and ENS, France) <b>Verbal comprehension as a form of mindreading</b>
15:30 – 16:00	<i>Coffee-break</i>
16:00 – 18:00	<b>General Discussion and Planning Collaborative Research Possibilities</b> Chair: <b>György Gergely</b> (Institute for Psychological Research, Budapest, Hungary)
19:00	<i>Dinner and boat trip on the Danube</i>

**Thursday 8 July 2004**

Departure





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## Objectives of the ESF Standing Committees

### Humanities (SCH)

The main tasks of the **ESF Standing Committee for the Humanities (SCH)** are:

- to encourage interdisciplinary work through the independent evaluation of collaborative research proposals emanating from the scholarly community;
- to identify priority research areas and to play an integrative and co-ordinating role by creating links between research communities which in the Humanities are often small and fragmented.
- to contribute to the development of the ESF science policy agenda and to provide expert advice on science policy actions at the European level in the field of its responsibilities.

The Committee is well aware that the ESF is the only European Agency where the Humanities have a place next to the other sciences and where European projects are reviewed, developed and subsequently operated.

The Committee considers it all the more important to be heard as the voice of the Human Sciences in Europe and to continue pleading for a more prominent place for the Humanities in the European landscape.

### Social Sciences (SCSS)

The mission of the **ESF Standing Committee for Social Sciences (SCSS)** is as follows:

- to promote high quality social science research at the European level;
- to bring 'added value' to nationally funded research through European collaboration between ESF Member Organisations;
- to help support innovative research ideas and approaches emanating from the scientific community, and
- to play an institutional role in strengthening European social science research infrastructure.



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## European Science Foundation

### ESF Exploratory Workshops - Possible Outcomes:

**ESF Standing Committees** support a limited number of **Exploratory Workshops** each year. These workshops allow leading European scientists to explore novel ideas at the European level with the challenging aim to "*spearhead*" new and preferably interdisciplinary areas of research. Further details are available on the internet at <http://www.esf.org/workshops>.

One desirable outcome of an ESF Exploratory Workshop may be that participants submit **high quality proposals for further ESF activities** (such as "à la carte Programmes" or a EUROCORES initiative), or **research funding applications** for submission to the EU 6th Framework Programme or to other European or international funding organisations.

In the case of **ESF Programmes** ("*à la carte*" or **EUROCORES**), which are financed by, and coordinated through, the European Science Foundation, a draft proposal should be submitted to the relevant Secretariat (LESC or SCH) for advice, to then subsequently undergo further external refereeing. If successful in obtaining the Standing Committee's scientific recommendation, the proposal will be submitted to ESF Member Organisations for funding on a voluntary basis. More details are available at <http://www.esf.org/lesc> and <http://www.esf.org/sch>.