

N° 4  
Spring 2014



INSTITUTE for  
ADVANCED  
STUDY in  
TOULOUSE

# IAST connect

## FEATURES

**Ingela Alger**  
When Darwin  
meets Smith

**Chlöe Farrer**  
New pathways  
in neurocognition



# Director's message



Dear readers,

The IAST has now been running for nearly three years. To mark the occasion, we invited those who have been part of the adventure over the first years to send us a very brief quote on the thoughts, feedback, impressions and highlights that spring to mind when they think of their IAST interactions.

We are delighted to read these replies: whether it be as an in-house scholar or via a conference, a seminar, a visiting scholarship, a distinguished lecture... whatever your role, all your contributions have been a great help in getting the IAST on its way to becoming a truly dynamic interdisciplinary center for the social sciences, and we're very grateful. Here's to many more fruitful interactions over the coming years!

The months of May and June in each year are full of activity, of which you will have a foretaste in these pages. None of this would be possible without the dedication of all of the people who work to make our events happen – not just the researchers but the administrative staff and the com team. When the researchers go home from a conference they take a well-earned rest – but for those who handle the clearing up, the promotion of the research output and the travel reimbursements, the work is far from over. Our warmest thanks to them all.

PAUL SEABRIGHT - IAST DIRECTOR

## Contents

<b>IAST A TO Z</b> .....	3
Our alphabet continues from K to O	
<b>HORIZONS</b> .....	4
Ingela Alger: when Darwin meets Smith	

<b>PORTRAIT</b> .....	6
Chloé Farrer: new pathways in neurocognition	
<b>EVENTS</b> .....	8
Five interdisciplinary conferences this season	
<b>ANNIVERSARY</b> .....	10
Our 3 <sup>rd</sup> birthday	

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to be continued in the Autumn 2014 edition...

## K

### IS FOR THE KEYNOTE SPEECH GIVEN BY GARY COX

Professor of Political Science at Stanford University, at the recent IAST conference on elections.

> See pages 8-9

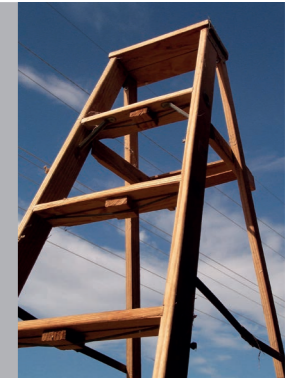


## L

### IS FOR THE SOCIAL LADDER

studied at the upcoming workshop on economic history.

> See pages 8-9



## M

### IS FOR THE MONTH OF MAY

heralding the second edition of the Toulouse Economics & Biology workshop on May 22-23.

> See pages 4-5

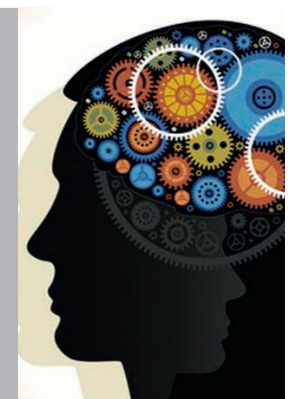


## N

### IS FOR THE NEUROCOGNITIVE APPROACH

which Chloé Farrer brings to the IAST via her interactions with economists and psychologists around human behaviors and decisions.

> See pages 6-7

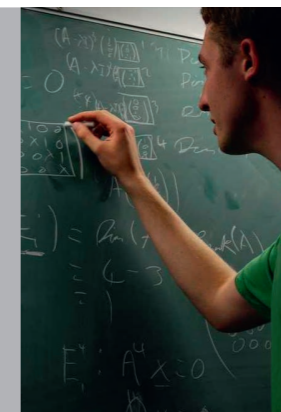


## O

### IS FOR OPENINGS

Check out our website for current opportunities for joining the IAST.

> [www.iast.fr/applications](http://www.iast.fr/applications)



## Ingela Alger

## When Darwin meets Smith

Ingela Alger has been CNRS Research Director at Toulouse School of Economics and the IAST since 2012. She was already very familiar with the University of Toulouse 1 Capitole, having completed her PhD in Economics there in 1997 before undertaking a series of research positions in the UK and North America: Boston University (1997–98), LSE (1998–99), Boston College (1999–2007), and finally Carleton University.

At the IAST, Ingela is Director of the Biology program, promoting the pursuit of interdisciplinary research via a range of activities, including an Economics and Biology seminar series, regular conferences, and Ph.D. courses.

### What does economics have in common with biology?

**IA:** Economists and biologists are both interested in understanding the behaviors of living beings. Although of course human beings differ in many ways from other species, there is a common underlying mechanism based on evolutionary forces that applies equally to humans and to living beings. The key point is that we speak the same language – even if we don't necessarily realize it – both talking of costs and benefits. Economists generally consider costs and benefits in monetary, material, welfare or utility terms, whereas biologists have in mind fitness, that's to say reproductive success. But in some sense we do understand each other when we talk about costs and benefits in that behaviors or institutions when it comes to economics will tend to evolve to the point where there are still additional benefits to be gained. And there are also common elements of competition, in the human world between firms and markets, and in the animal world between individuals within the same species and also between species in the common ecology. We may sometimes have different views, but what I think is interesting is that we can understand each other from the offset and try to connect the dots between our model worlds which have evolved a little differently. Above all, the exciting factor is that by combining our forces I believe we can create a total which is bigger than the sum. Economists and biologists focus on slightly different mathematical tools – but by combining these tools we are creating new synergies and providing new insights.

“Economists and biologists focus on slightly different mathematical tools – but by combining these tools we are creating new synergies and providing new insights.”

### What are your main challenges and ambitions?

**IA:** Bringing together economists and biologists is a challenging but most stimulating task. One main hurdle we have to overcome are the false perceptions; when ecologists and biologists evoke economists they may think of people putting a price tag on nature. While it's true that economists can provide very careful cost-benefit analysis, it's far from the only thing they can bring to biology. Vice versa, economists are often surprised when they discover what they can learn from interacting with biologists. That's the message I would like to get across: our main aim is to use our respective toolboxes together intelligently to generate new scientific insights.

### Are you alone in the field or is it a wide movement?

**IA:** If you look at history I think that the potential has been lurking in the background for some time – Gary Becker<sup>1</sup> for example realized this and was something of a pioneer in the field. Several other researchers, among them IAST visitors Ted Bergstrom, Sam Bowles, Redouan Bshary, Alan Grafen, and Arthur Robson, as well as long-term senior IAST visitor Jörgen Weibull, and IAST Director Paul Seabright, have made important cross-disciplinary contributions over the past decades. One major driving force behind engaging our two fields in dialogue is the growing awareness of our impact on the environment and the search for mitigation solutions. In the US there is a movement toward building research centers around evolutionary logic, and the Santa Fe Institute is of course of great inspiration to us.

“If you look at history I think that the potential has been lurking in the background for some time.”

### Could you give us some examples of current and recent “eco-bio” research projects?

**IA:** I could give you many examples, but there are three areas that spring to mind where interactions are highly fruitful: Firstly, Laurent Lehmann, a biologist from the University of Lausanne who has been visiting the IAST on a regular basis, Jörgen Weibull and I are working on connecting our respective mathematical models in order to study the evolution of social behaviors and the motivations driving these behaviors, such as moral values, or altruistic or spiteful inclinations. Within the general field of evolutionary study of behavior, we are also carrying on our great cooperation with the TULIP<sup>2</sup> project led by Etienne Danchin. Secondly, in the field of medicine, we just had our first seminar where the economist Flavio Toxvaerd from the University of Cambridge talked about antibiotic resistance and infectious diseases – using models from epidemiology to make more suitable, realistic models for economic policy to prevent, control and treat infectious diseases. Another very interesting researcher who has been very active is Michael Hochberg from the University of Montpellier who works on evolutionary models in order to better understand the growth of cancer.

Last but not least, we have many interactions in the field of natural resource management, such as water, energy and ecosystem management. Biologists and ecologists may not be aware that economists, including several TSE researchers such as Jean-Pierre Amigues, Gilles Lafforgue, and Michel Moreaux, have developed sophisticated dynamic models of resource management. In fact, economists would very much like to join forces with ecologists in order to benefit from their specific knowledge about how these systems work. We will soon receive a visit from Charles Perrings, economist from the Global Institute of Sustainability, and together with TSE economist François Salanié we have ongoing discussions about collaborating with Michel Loreau, member of the IAST from the Station for Experimental Ecology in Moulis (French Pyrénées).

### What are your plans for future work?

**IA:** We have very exciting news for next year: we have several IAST research fellows in biology arriving in September (Maxime Cauchoix, Aïda Nitsch and Arnaud Tognetti) as well as Heidi Collaran, fellow in anthropology interacting with Hillard Kaplan, a long-term senior IAST visitor. So we are strengthening our group – our IAST family is growing, and incidentally “family” will be a central theme for research for next year within the general area of behavioral evolution. We are planning many activities around that theme, involving both the new fellows and several TSE economists, namely Paul Seabright, Astrid Hopfensitz and Pepita Miquel-Florensa, as well as Hillard Kaplan and IAST recurrent visitor Donald Cox.

“We are strengthening our group – our IAST family is growing.”

## UPCOMING EVENT

Don't miss the second edition of the **Toulouse Economics & Biology workshop on May 22–23, 2014**, presenting several of the key contributors in this interdisciplinary field.





**Chlöé Farrer**

## New pathways in neurocognition

Chlöé Farrer is CNRS Researcher within the “Construction of mental states and representations” group of the Toulouse Brain and Cognition research centre (CerCo). As a member of the IAST, Chlöé is pursuing a number of exciting cross-disciplinary interactions with economists and psychologists.

### What is your field of research?

**Chlöé Farrer:** I work in cognitive neuroscience, studying the different neurocognitive mechanisms involved in mental functions, such as perception, action, language... I'm particularly interested in how we understand the different types of intentions of others, whether these intentions are directed towards an object or towards an agent (social intention). For example, the action of picking up a glass with the intention of washing it or giving it to somebody else. I use behavioural experiments and brain scanning technology such as functional magnetic resonance imaging (fMRI) to allow us to see the activity of the brain as we infer intentions. The combination of these two approaches allows me to understand how one can correctly infer intention when observing an agent's behaviour.

### How can this work be linked to the IAST?

**CF:** This work can be of interest to economists and social scientists, as the “decoding” of intentions can influence decision-making. Essentially, economics, psychologists and neurocognitivists use complementary approaches to address and understand the same phenomenon – how humans react in a certain context. The neurocognitive approach brings complementary insights about the brain mechanisms involved in human behaviours and decisions.

Via the IAST I have been able to exchange with a number of scientists around these questions of intentions, in particular TSE economists Paul Seabright and Astrid Hopfensitz, and also visiting IAST scholars such as Sam Bowles, research professor at the Santa Fe Institute where he heads the Behavioural Sciences Program, and Peter Gärdenfors, professor of cognitive science at the University of Lund, Sweden.

“Essentially, economics, psychologists and neurocognitivists use complementary approaches to address and understand the same phenomenon – how humans react in a certain context.”

### You have initiated a new collaborative project at the IAST, can you tell us more?

**CF:** Yes, alongside my research on intentions, I'm currently developing a cross-disciplinary project on the development of self-control among preschool children. This project is about assessing the relationship between self-control and social interactions, notably looking at the impact of a child's self-control levels on their altruistic capacities. Is a good level of self-control necessary in order to engage in an unselfish social relationship with another? Does one have better self-control when in contact with others than when isolated from others? For the latter question, we plan to control different social contexts (the mere presence of an individual or interaction with that individual) to observe the effect on a child's self control capacity. The impact of social context on decision-making has been widely addressed in experimental

“Assessing the relationship between self-control and social interactions, notably looking at the impact of a child's self-control levels on their altruistic capacities.”

economics; here we extend this assessment to the development of self control in children. This project involves psychology, neuroscience and behavioural economics.

These questions are very relevant for the design of educational strategies and we also plan to include an educational component in the project. Self-control is an essential cognitive function in the educational achievements of children from the earliest schooling stages; if one does not have good self-control it is difficult to benefit fully from the education one receives. We have observed that there are significant differences between children at this level, and this can have an impact on their academic success. So another aim of this research is to put into place educational strategies that favour and facilitate self-control. This project involves both fundamental neurocognitive research, studying the cognitive and brain mechanisms that are triggered when such strategies are implemented, and techniques in economics, notably randomisation methods to ensure that our studies are as rigorous as possible.

### How are you planning to develop this project?

**CF:** We have a joint CerCo – IAST research fellow, Gladys Barragan-Jason, arriving in September to work full-time on the project. Gladys will be studying the relationship between self-control and social interactions with a particular focus on altruism, collaborating closely with Astrid Hopfensitz, experimental economist and director of the IAST psychology programme.

Moreover, I hope this study of self-control within the educational system will lead to new areas of collaboration with economists specialised in education. It would be interesting to work together to evaluate the impact of new educational strategies aimed at increasing self-control. Via the IAST workshops I have already had the chance to meet Margaret Leighton, PhD at TSE, who is interested in the economic benefits of educational strategies targeted at children in disadvantaged areas, and I would be delighted to enter into further discussions with other economists in the field of education.

### To conclude, in a few words could you say what the IAST brings to you?

**CF:** I particularly appreciate the positive intellectual energy that the IAST fosters. Interacting with the institute's members and visitors has allowed me to envisage different scientific approaches in an extremely interesting way. Without the IAST, I would never have imagined such exciting new avenues of cross-disciplinary research.

“I particularly appreciate the positive intellectual energy that the IAST fosters.”

**FIND OUT MORE**





As always, the Spring-Summer semester at the IAST heralds is a season of interdisciplinary conferences on a broad range of topics. Mark the dates in your diary and check out the IAST website for more information: [www.iast.fr](http://www.iast.fr)



## THIS SEASON'S CONFERENCES

### **Elections and Electoral Institutions**

› April 10-11, 2014

### **The 2<sup>nd</sup> Toulouse Economics and Biology Workshop**

› May 22-23, 2014

### **TIGER Forum 2014: The Military in Politics in the 21<sup>st</sup> century**

› June 5-6, 2014

### **Shifting Attitudes: Radical Upheaval and its Legacies**

› June 19-20, 2014

### **1<sup>st</sup> IAST Economic History Workshop**

› June 26-27, 2014

Consult the calendar of IAST events



## FOCUS ON...

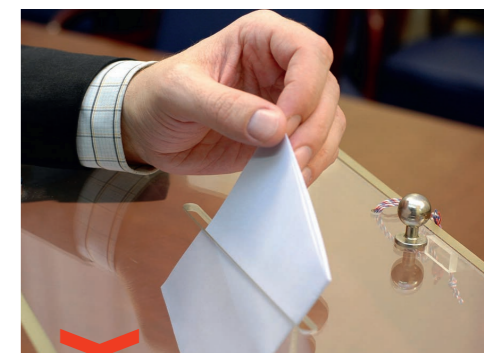
### ELECTIONS AND ELECTORAL INSTITUTIONS CONFERENCE

› April 10-11, 2014

Organized by the IAST's political science team and the TSE's public economics and political economy group, the aim of this two-day workshop was to bring together economists and political scientists to present and discuss the latest advances in this interdisciplinary field. The twelve presentations from international researchers were purposefully chosen to combine a mix of methodological approaches – both formal analysis, empirical studies and experiments. A special thanks goes out to Gary Cox, Professor of Political Science at Stanford University, for his fascinating keynote speech on "Electoral Rules, Mobilization and Turnout". According to Karine Van Der Straeten, IAST political science program director, "Professor Cox is leader in his field and an inspiration to the IAST, a model for the kind of combined approach we are trying to develop here at the IAST".

This conference is the first of a new annual series. Forthcoming events are set to be co-organized with other major European political science research centers.

› Check out the next edition of the IAST Connect for a full focus on the political science program with Karine Van Der Straeten.



FIND OUT MORE



### MILITARY IN POLITICS IN THE 21<sup>ST</sup> CENTURY

› June 5-6, 2014

This two-day workshop is to be held within the framework of the 2014 TIGER Forum, annual one-week summit bringing together economic leaders from institutions, academia and business around a series of lectures, conferences, round tables, prize awards and gala events, providing a unique platform for scientific exchanges and policy debates. The Military in politics workshop, generally concentrating on the ways in which the military influences political life, will present sixteen papers on the around themes including the impact of militarism on society, war and political decision-making, the army and Islam in Turkey, the demilitarization of Spain and Portugal, Egypt and the Arab spring, army and government in South Asia, the future of warfare, and civil war.



FIND OUT MORE



### 1<sup>ST</sup> IAST ECONOMIC HISTORY WORKSHOP

› June 26-27, 2014

Entitled "Climbing the social ladder: social and geographical mobility over time", the first edition of a new series of workshops in economic history will concentrate on the complementary insights that economic history brings to the general economic wisdom regarding social and geographic mobility across the globe. The program features a number of top economic historians in the United States, including Joseph Ferrie (Northwestern), Dora Costa (UCLA), and Greg Clark (UC-Davis). Joseph Ferrie will open the event by addressing the issue of socioeconomic mobility in the U.S. across four generations. Other topics discussed include intergenerational mobility and institutional change in 20th century China, inheritance and the transmission of inequalities in France (1820-1940), long-term social mobility in Sweden, stability and change in social mobility regimes in Britain (1840-2000), and intergenerational mobility across three generations in the 19th Century with evidence from the US Census.



FIND OUT MORE





## THE IAST. ACCORDING TO YOU. COLLECTED QUOTES FROM IAST VISITORS TO CELEBRATE OUR 3<sup>RD</sup> BIRTHDAY.

“ Combining the charm and also the intensity of Old World scholarship with instruments and approaches drawn from a range of intellectual and academic traditions, the IAST feels like the ideal cauldron in which to create and foment important scholarly work. As I walk by the 1912 inscription “Crèche Et Garderie De La Manufacture Des Tabacs” en route to the Institute, I am inspired as well by the struggles that have produced progress, and the signposts that honor that work. IAST is a wonderful place to foster those objectives.

Robert Barsky, Vanderbilt University

“ IAST is the perfect place to bring together top researchers in a stimulating and inspiring environment.

Michael Kosfeld, Goethe University

“ I spent some months in Toulouse last year, and had a great time with a series of inspiring conferences that brought together the best people from many fields, economics, sociology, biology to name but a few. Please do continue this path!

Guido Friebel, Goethe University Frankfurt

“ My sojourn in Toulouse as an IAST fellow was marvelous in all respects, with colleagues whose congeniality is on a par with their remarkable talents, all embedded in a city of special charm.

Henry Hansmann, Yale Law School

“ Collaborating with IAST has been a pleasure – a dynamic, interactive, and interdisciplinary relationship with world-class faculty who are engaging and insightful.

Charles K. Whitehead, Cornell Law School

“ The IAST is an inspiration for social scientists to be bold, be creative... to be academic entrepreneurs.

Alexandre Debs, Yale University

“ The IAST is leading the way in interdisciplinary social science research, not just within France, but across all of Europe.

Christopher Olivola, Carnegie Mellon University

“ Interesting and useful interdisciplinary interactions.

Karel Janda, Institute of Economic Studies, Charles University, Prague

“ It was a fantastic experience. Thank you to offer those kinds of opportunities in Toulouse.

Pierre-Luc L’Hermite, Lawyer in the field of health

“ Really nice opportunity to link economy with biology and more.

Etienne Danchin, EDB

“ The IAST shines a beacon of serious interdisciplinary scientific research. In less than one week I during my visit, I connected and interacted with a legal expert on biotech, an evolutionary biologist, several political scientists and numerous economists all of whom are making a significant impact with their frontier research. How lucky was I to be involved in all of this!

Chris Meissner, University of California, Davis

“ We found the atmosphere at IAST created the perfect foundation for meetings of two of CIFAR’s programs, bringing together social scientists in effective interdisciplinary engagement.

Pekka K. Sinervo, CIFAR

“ The IAST is leading the way in interdisciplinary social science research, not just within France, but across all of Europe.

Christopher Olivola, Carnegie Mellon University



“ The IAST has been for the students a source of inspiration expanding the borders of potential research topics and questions. I found its activities very stimulating and rewarding. Happy birthday!!

Georgios Petropoulos, PhD candidate at TSE and founder of the TSEconomist magazine

“ An exciting and valuable endeavor in a wonderful French city.

Mark Dincecco, University of Michigan

“ On its third birthday, like every three-year-old, IAST seems to be interested in almost everything, learning a lot, and has not lost the capacity for wonder at what it will learn. Being part of the IAST community is, well, rejuvenating.

Sam Bowles, Santa Fe Institute

“ Toulouse was already known as one of the premier institutions in Europe in economics. Now it is branching out to the other social sciences. In its short existence, IAST has already become one of the most interesting truly interdisciplinary centers. I learned a great deal during my short visit.

Erik Voeten, Georgetown University

“ The time I spent with the IAST as a visiting scholar was fabulous in that I had tremendous collaborative opportunities with leading scholars from many related disciplines, such as evolutionary biology, economics, and political science. Toulouse will always hold a special place in my mind and my heart.

Jacob Groshek, Boston University






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