IAST CONNECT #13

Autumn 2018

INSTITUTE FOR ADVANCED STUDY IN TOULOUSE

TRADING PLACES: HOW TRADE SHAPES OUR WORLD

"IAST is a fantastic meta-cognitive collaboration"

I was very glad to be invited to speak at IAST's Economics and Biology workshop on 'Evolution, Cognition and Rationality' in May. I was soon wishing that I'd been to previous events in the series as well.

IAST is a fantastic collaboration. It's a great thing to have all these disciplines in close proximity to each other. My impression is also that the people chosen for positions here are chosen very well. Not everybody can do interdisciplinary exchange. Not everybody can use those other languages or have enough tolerance of uncertainty to really listen to somebody from another discipline. But I spoke to lots of people here who have that meta-cognitive capacity: they're brilliant in their own discipline but they can also step back and compare different ways of thinking. And that's crucial for effective interdisciplinary work.

This edition of IAST Connect highlights IAST's strength in promoting interaction and diverse perspectives on human behavior. In a global context of rising trade tensions, this issue takes on a subject traditionally seen as the reserve of economists and shows how its effects explode across disciplinary boundaries, throwing up surprises that reshape our societies. Inside, a panel of IAST historians discuss the far-flung effects of mercantilism, slavery and trade war; Fany Declerck and Alexandre de Cornière examine the lightning speed of modern finance and the power of digital platforms; Irene Menendez analyzes the geographical and political fates of globalization's victims; while Eric Crubézy draws on archaeology and genetics to reveal the impact of trade on Siberian gender relations.

My own research, also featured in this issue, focuses on the cultural evolution of thinking. It draws on comparative and developmental psychology, cognitive neuroscience, philosophy, anthropology, behavioral economics and theoretical biology to suggest how our agile minds enabled us to construct the vast edifices of knowledge and skill that distinguish us from other animals. Interdisciplinary institutions like IAST represent an exciting new chapter in that story, bringing together different ways of thinking to better understand what makes us human.

Cecilia Heyes is Senior Research Fellow in Theoretical Life Sciences and Professor of Psychology at All Souls College, University of Oxford.

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- Production manager: Carolyne Lamy
- Editorial contributions: James Nash
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FLASHBACK TO RECENT EVENTS

IAST in action

IDEOLOGIES AND PREFERENCES

JUNE 14-15

POLITICAL SCIENCE

What do millionaires think about redistribution? How do ideas about fairness, healthcare and vegetarianism spread? These intriguing questions were among those discussed at an international conference entitled 'The Origins of Moral and Political Ideologies and Preferences'.

EVOLUTION, COGNITION AND RATIONALITY

MAY 24-25

ECONOMICS, BIOLOGY

Biology is the natural foundation for any science that seeks to understand the behavior of living beings, including humans. This year's Economics and Biology workshop also welcomed experts in computer science, physics, and psychology.

RULES OF PHILOSOPHY, LAW AND ECONOMICS

JUNE 18-19

What can these subjects teach us about property, possession and modern markets? The second IAST Philosophy and Social Sciences conference investigated the philosophical foundations of the economic analysis of law.

IAST PRIZE

JUNE 21-22

BIOLOGY, ANTHROPOLOGY, ECONOMICS

IAST prizewinners Jeanne Bovet, Jonathan Stieglitz and Boris Van Leeuwen presented their research explaining how factors during one's development can influence future economic preferences.

INFORMATION, COMMUNICATION AND KNOWLEDGE

HISTORY

JUNE 25-26

With specialists on subjects including the British in Afghanistan, Revolutionary France and Black Lives Matter, this conference examined how information and communication has shaped our world over centuries.

DEMOCRACY AND DEVELOPMENT

JULY 5-6

POLITICAL SCIENCE, ECONOMICS

The second IAST-Sciences Po Paris conference on political economy and political science was held at IAST. Initiated by the CAPS center, this yearly event aims to promote interdisciplinary, analytical and quantitative research.

IAST appointments

NEW CAPS DIRECTOR

MICHAEL BECHER

Congratulations to Michael Becher who is now in charge of the Center for Analytical Political Science (CAPS).

ERC AWARD

ADVANCED GRANT

INGELA ALGER

Congratulations to Ingela Alger who has been awarded an advanced grant by the European Research Council for her research project "Evolving Economics – Human motivation: Evolutionary foundations and their implications for economics".

UPCOMING IAST EVENTS IN TOULOUSE

See www.iast.fr for more details

SAVE THE DATE

October 21-22,
Scientilivre book festival
In the footsteps of humans and animals

November 8,
Distinguished Lecture #2
Today's identity discourse

December 6,
Distinguished Lecture #3
Gender norms and women's work

How did our minds evolve?

• CECILIA HEYES •
COGNITIVE GADGETS

What makes human minds different from those of other animals? Visiting IAST in May, Professor of Psychology (All Souls College, Oxford) Cecilia Heyes argued that small tweaks to our genetic starter kit allowed a much greater role for cultural evolution than previously thought. Drawing on new evidence from the rapidly developing field of social cognitive neuroscience, she believes that culture-rich human environments play a crucial role in teaching children not only what to think, but how to think it.

Construing the mind as the software running on the brain, Cecilia studies the development of distinctively human cognitive abilities such as language, imitation, and the capacity to conceive of mental states in other minds, to reconstruct the past, imagine the future, and to understand the way the physical world works.

A widely held view, put forward by evolutionary psychologists such as Steven Pinker, is that these mechanisms are cognitive instincts that we are born with. If we are able to read the minds of others, and reason about cheating and causation, it is largely thanks to genetic evolution. Experience, in this view, plays only a triggering or tuning role.

Cecilia argues that evolutionary analysis should be refocused from genetic to cultural evolution. Rather than fully formed cognitive instincts inherited at birth via DNA, she suggests that during childhood we download "cognitive gadgets" from the social environment.

These ways of thinking are culturally inherited, says Cecilia, a bit like simple physical technologies such as spinning wheels or canoes. "A canoe doesn't do its job well thanks to genetic evolution. It's also unlikely that it's been designed. A good canoe is more likely to be a consequence of many bad ones in the past. The good canoes didn't sink and were therefore more likely to be available for copying when new canoes were needed."

> **"The mechanisms that distinguish us from other animals are small additional fittings. They're little extras with big effects"**

At the same time, she insists, a newborn human mind is no blank slate. "The lion's share of human behavior is controlled by psychological mechanisms which, although much changed by experience, are originally genetically inherited. Most of our cognitive machinery is shared with other animals but genetic evolution has made small tweaks to our starter kit that allow us to upload from other people these new pieces of cognitive kit. The mental mechanisms that distinguish us from other animals are small additional fittings, gadgets; they're not heavy machinery. They're little extras with big effects."

Some of the most important modifications to our genetic starter kit relate to changes in our temperament, attention and multi-purpose cognitive mechanisms. At birth, the minds of baby humans are very similar to those of baby chimpanzees. But humans are more motivated for social reward and less mutually aggressive, enabling the young to learn from a much broader range of adult models.

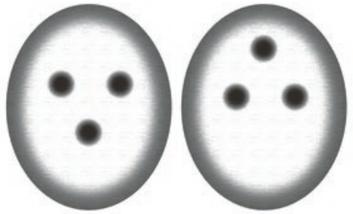
Another important tweak is human infants' genetically inherited bias to look at faces. "That initial bias quickly becomes converted into gaze cueing, a tendency to look where another individual is looking. Then with even greater specificity, if another individual has looked you in the eye, you are more likely to turn to where they are now looking. This sequence enables adults to direct the flow of information to infants by controlling their attention." Humans are also better than newborn chimpanzees at associative learning, memory and resisting temptation."

Sifting the evidence, Cecilia finds that the case for the cognitive instincts view has been steadily eroded over the past 25 years. Print reading is perhaps the clearest example of a culturally inherited cognitive gadget. "Nobody doubts that reading is distinctively human cognitive mechanism. And there is no print or script older than 6,000 years so reading has to be because of cultural evolution; there hasn't been enough time for genetic evolution."

Just as we learn print reading through social interaction, Cecilia points to evidence that parents also provide children with explicit instruction in mind reading (that is, ascribing thoughts and feelings to others). Similarly, research into the spontaneous emergence of a new sign language in Nicaragua in the 1970s suggests that the ability to communicate with others is crucial for learning to read minds.

If Cecilia's theory is true, human cognition is at risk of falling down a ravine. "The cognitive instincts view suggests that human nature is relatively invulnerable. In the cognitive gadgets view, we don't just lose knowhow, facts and techniques after a catastrophic war or epidemic, we would also lose the cognitive mechanisms that enable us to learn from others. We would be in a better position than chimpanzees to culturally evolve them again, but they wouldn't be restored with each birth."

On the bright side, Cecilia suggests that human cognition is more agile than previously thought, constantly adapting to new social and physical environments. "We need not fear that our minds will be stretched too far by living conditions that depart from those of hunter-gatherer societies. Rather than taxing a Stone Age mind, new technologies – social media, robotics, virtual reality – provide the stimulus for further cultural evolution." ■



Starter Kit - Humans appear to have a genetically inherited attentional bias towards faces. Newborns and fetuses look longer at the face-like triangle on the left, than at the triangle on the right (see Johnson, 2005; and Reid, 2017).

FIND OUT MORE

Cecilia's book 'Cognitive Gadgets' (2018) is available from Harvard University Press.

In depth on trade

What explains the human propensity to 'truck, barter and exchange'? In a political climate in which the free-trade consensus is under attack, this special edition of IAST Connect focuses on the ways in which trade has shaped our societies, from the slave ships and mercantilists of the 17th century, via the frozen wastes of Siberia, to the high-speed trading and digital monopolies of today's tech giants. Drawing on a range of disciplines including finance, history, political economy, geography, genetics and archaeology, IAST researchers highlight trade's complex dynamics and often unforeseen, far-reaching consequences.

The good, THE BAD and the unexpected

• IAST PANEL •
MERCANTILISM, SLAVERY AND TRADE WAR

The history of trade is about more than the exchange of physical goods. It has involved the transfer of services, ideas, disease, even humans and other species. It has also opened up communities to other cultures, exposing them to new risks and opportunities. We asked a panel of IAST specialists in economics and history to discuss the role of trade in creating a more interdependent world.

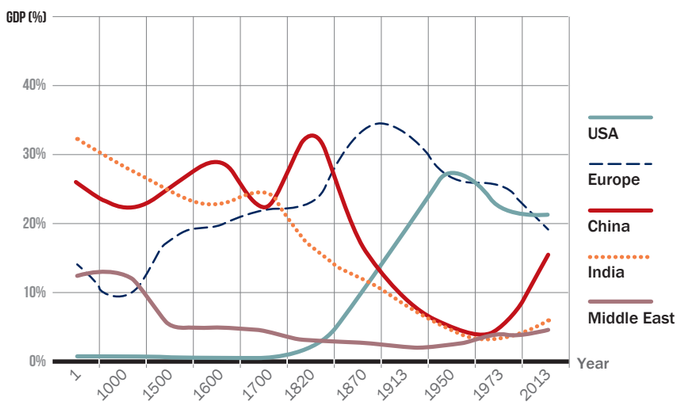
What are the conditions for trade? Why does it flourish in certain locations and periods of time?

Simon Fuchs: Imagine two villages: each can try to provide for all its inhabitants' needs alone or seek to trade with the other. Trade is beneficial if it provides existing goods at lower prices or entirely new goods. As Ricardo pointed out 200 years ago, trade benefits both villages by allowing them to specialize in what they are best at. However, trade between the villages also involves challenges: it requires the establishment of trust, transportation infrastructure and a steady flow of merchants who must grapple with fluctuations in supply and demand, as well as cultural, linguistic, and political barriers. These problems seem at times almost insurmountable, yet the ubiquity of trade speaks to its enormous benefits.

Why did the West overtake the trading empires of China and the Islamic world?

Kathryn Schwartz: My research focuses on the Middle East, a region which was once the crucial axis of trade between Europe, the Far East and South Asia, and which generally functioned on a provisionalist model. It gradually became a fiscally indebted area which sourced raw materials to Europe, and consumed European processed goods. The standard explanation is the European discovery of the New World, which flooded the European market with silver and rendered Asian goods less significant, and the corresponding development of European imperialism, whereby European powers dismantled Middle Eastern monopolies for producing goods, gained tax exemptions and concessions for extracting natural resources, developed actively managed colonies, and also lent money to Middle Eastern rulers whose states became heavily indebted to them.

HISTORICAL TRENDS IN GLOBAL DISTRIBUTION OF GDP



Source: Maddison A (2007), *Contours of the World Economy I-2030 AD, OUP*

> **"Britain needed to export manufactures and import food, so it had a strong incentive to support international trade"**

How did mercantilism come to be challenged by ideas about free trade?

Gabriel Mesevage: Mercantilism is a term used to describe the economic policies of European states in the 17th and 18th centuries. It is conventionally associated with an economic policy focused on the accumulation of monetary resources (at that time gold and silver) and the perception that international economic affairs are zero-sum: one state's gain is another's loss. Mercantilist thinkers viewed political power as a tool for carving out gains in international trade, which in turn could be used to enhance a state's political power.

Nowadays there is a tendency to deride 'mercantilist' thought, particularly as it is easy to find examples of fallacious economic reasoning by mercantilists that fail to recognize the potential gains from trade.

Simon **Fuchs**

Kathryn **Schwartz**

Gabriel **Mesevage**

Mohamed **Saleh**

Nicholas **Crawford**

The Khan El Khalili bazaar in Cairo, Egypt.

But this is somewhat ahistorical, as in the 17th and 18th centuries European countries were constructing monopoly markets, extracting raw materials from colonies and selling their own exports to colonial markets at monopoly prices.

The economic historians Findlay and O'Rourke suggest that "given this 'zero-sum' focus on the international division of monopoly rents, classical arguments regarding the gains from trade to all parties under peaceful conditions of perfect competition did not apply". If all other states pursue a policy of mercantilism, attempting to be a unilateral free-trader could end disastrously: rival states might shut you out of export markets and use their earned foreign exchange to build large armies that they might turn against you.

Mercantilism, however, was quite costly as it involved nearly constant warfare, funded through debt and taxes on imports and exports. In addition to these tariffs, monopoly systems kept goods more expensive for citizens at home. By the end of the 18th century, 'fiscal military crisis' in Europe was an important catalyst for American rebellion, French revolution and wide-ranging reform in the UK.

Britain was at the forefront of the movement toward free trade in the 19th century. This may have been due in part to ideas popularized in the 1840s by radical political economists, and new journals like The Economist, but there are simpler economic reasons: Britain needed to export manufactures and import food, so it had a strong incentive to support a well-functioning international trade system. British landowners who wanted high tariffs on imported foodstuffs were eventually co-opted or replaced by a manufacturing elite, who had a vested interest in cheap labor (made possible with cheaper food) and a reduction in European tariffs. • • •

Slaves harvest sugar cane in 1823 in Antigua, in the British Caribbean

Slavery featured in almost all societies until about 200 years ago. What does your research reveal about the dynamics and interest groups involved?

Mohamed Saleh: Ending slavery was the primary objective of the American Civil War (1861-1865) and the subsequent blockade on cotton exports from the US confederacy, but the rise in world cotton prices led to a massive expansion in cotton cultivation in the world's major cotton producers at the time: India, Brazil, and Egypt. In my research, which is based on Egypt's population censuses of 1848 and 1868, I found that agricultural slavery increased dramatically in Egypt following the cotton boom. Slaves were imported from current-day Sudan via caravans across the Sahara desert. Interestingly, the demand for slaves in Egypt came from village headmen and other medium landholders. Large Egyptian estates, whose owners were mostly state officials, did not purchase slaves and relied instead on Egyptian labor. This puzzling finding was arguably due to the fact that large landowners were able to coerce local labor, whereas medium landholders had to purchase imported slaves.

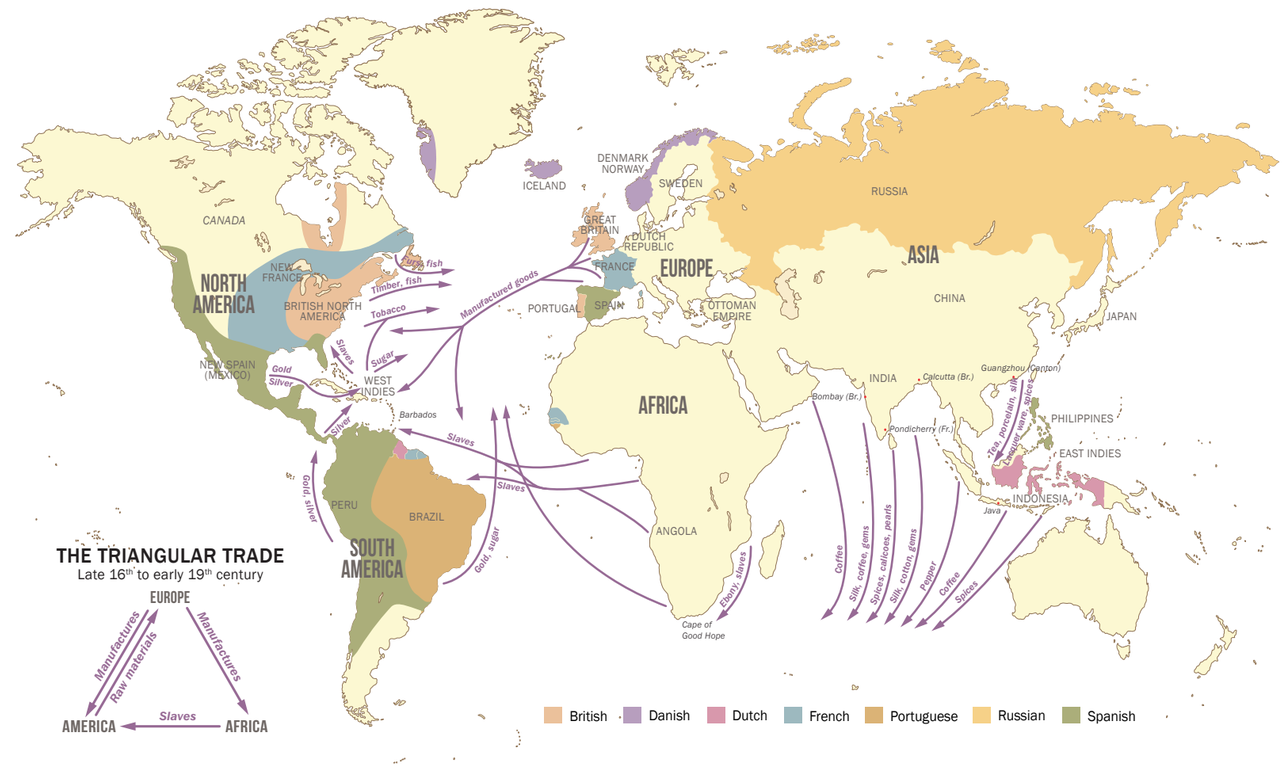
Nicholas Crawford: Trade and other forms of economic exchange have fostered cooperation across cultures from the earliest societies, though historians of the early modern Atlantic world (c. 1450-1800), which I'm broadly trained in, tend to focus as much on the losers as on the winners in examining the "globalizing" effects of commerce. The transatlantic slave trade was one of the most impressively integrated cross-cultural systems of exchange in the early modern period, and we've learned much about the volume and scope of the traffic as well as the complex, varied forms of credit utilized in transactions that rendered people into commodities.

There are long-running debates on the degree to which "Europe underdeveloped Africa" through the slave trade, but recent historical research has also unearthed the surprisingly significant roles played by indigenous African and "mixed race" Afro-European merchants. If you were well-positioned as a middleman trader between local African leaders and coastal European merchants and slave ships, you could profit handsomely from the exploitation of your countrymen. This research doesn't so much undercut the important work of development economics, but rather highlights the fact that questions of who profits and who suffers from globalization have always had complex and unexpected relationships. My sociologist colleague Kofi Asante has traced the continuing political and economic importance of these figures in West African colonies and independent nations.

What other surprising causes and consequences of trade emerge from your research?

Kathryn Schwartz: Trade generates cross-cultural mixing at the level of institutions, but also at the level of individual lives. For example, Omar Cheta has shown that in 19th-century Cairo, an entirely new form of courts was developed to oversee financial disputes between Egyptians and foreign merchants. This year I have been researching Amin al-Madani, who took the bold step in 1883 of traveling from Cairo to Amsterdam with several hundred Islamic manuscripts, hoping to sell them to orientalist antiquarians. The Dutch publisher Brill eventually purchased and sold these books to universities such as Princeton and Yale. There, they have shaped research by generations of scholars.

Simon Fuchs: My research shows that trade caused by the First World War had unexpected effects: it fostered development in countries that did not participate in the war themselves. Specifically, while France and other trading partners entered the war, Spain remained neutral and increased exports to the belligerent countries. Using historical statistics, I show that the war redirected trade demand towards Spain and that this resulted in a fresh bout of industrialization, particularly in the north east of Spain.



'Trade wars are good, and easy to win,' insists Donald Trump. Is protectionism viable in the 21st century?

Gabriel Mesevage: Trade wars are not good and it's unclear how one might 'win' one. Protectionism is always 'viable' but will be costly. The case that tariffs were responsible for the Great Depression in the US is certainly overstated. But the Smoot-Hawley tariffs in the 1930s, and resulting retaliation, show how protectionism opens up a Pandora's box of lobbying by vested interests. Similarly, the US is currently seeking to compensate agribusiness suffering from the trade spat. Trade policy was wielded to benefit some other US industry, but with knock-on consequences.

Tariffs allow governments to pick domestic winners and losers. Although the Smoot-Hawley increase in tariffs was not enormous, it morphed into a bill that provided protection for numerous industries; as tariffs were raised on manufactured goods, industries that relied on those goods required subsidy. This stimulated legislative horse-trading between US politicians, each seeking to defend his constituencies' interests. Protectionism is a boon to politicians, providing an opportunity to wave sticks and dispense carrots, and invites lobbying by industry.

FIND OUT MORE

Research papers by Simon Fuchs, Gabriel Mesevage, Kathryn Schwartz, Mohamed Saleh and Nicholas Crawford are available to view at www.iast.fr

Trading at THE SPEED OF LIGHT

• FANY DECLERCK AND ALEXANDRE DE CORNIÈRE •

CAN REGULATORS CATCH UP?

The steam engine and other industrial innovations allowed faster transport of goods over much larger distances, radically altering the way we live. The impact of digital technology may prove to be even greater, not least in its acceleration of the transmission of ideas and information. Here, TSE economist Fany Declerck analyzes the impact of high-frequency trading on financial markets while her colleague Alexandre de Cornière highlights some of the economic challenges in the age of digital platforms.

FANY DECLERCK
FAST FINANCE

How has information technology influenced financial markets?

FD: In the early 1840s, information took two weeks to travel from Wall Street to Chicago. Today, companies like Anova are installing laser networks between stock exchanges to gain a few nanoseconds in speed over microwave and fibre-optic links. High-frequency trading (HFT) algorithms aim to minimise the time it takes to receive and react to messages from trading platforms. The first HFT was plugged into the Nasdaq in 1987. Nowadays, HFT represents between one and two thirds of volumes exchanged on financial markets.

Meanwhile, several firms are developing high-tech surveillance techniques to supply traders with non-public information, using a patented private network of in-the-field monitors, maritime freight tracking, infrared diagnostics, electromagnetic frequency monitors, high-resolution aerial photography and near-earth satellite imagery.

> "High-frequency trading can lead to an arms race between traders, venues and investors. However, it has also improved liquidity and price discovery"

What problems arise for traders when every nanosecond counts?

FD: The algorithms are obviously confidential, so the market is vulnerable to coding or configuration errors. Knight Capital used a wrongly configured algorithm in 2012 and lost over $400 million in a few moments. HFT can lead to an arms race, as traders, venues or investors compete to be the fastest, with liquidity as the unintended victim. The evidence is mixed regarding negative externalities such as adverse selection. However, most evidence suggests that HFT has led to improvements in price discovery.

The big question for economists is about the effect of HFT on liquidity. Working with Bruno Biais and Sophie Moinas, using a huge 60-terabyte database from the French financial markets authority (AMF), we have found that HFTs have a generally positive effect on the market, to the extent that they contribute liquidity and do not withdraw when price volatility is higher. Their speed enables them to stabilize the market, selling as soon a stock rises and buying as soon as it falls.

What can policymakers do to keep up?

FD: The secrecy of HFT firms and their algorithms has led regulators to propose various reforms. Bruno Biais (2015) has looked at the possibility of using a ban on fast trading, the coexistence of slow and fast markets, and a Pigovian tax on HFT technology. Only the latter enables a socially optimal level of investment in HFT technology.

Regulators are also seeking to reconstruct the sequence of events across linked markets via a master clock, to detect predatory or illegal trading behaviour. However, as the arms race has almost reached the physical limits set by the speed of light, it is impossible to precisely sequence such trades. Instead of trying to implement a speed bump, regulators could speed up access to protect large orders and avoid disclosing information to HFTs. ■

ALEXANDRE DE CORNIÈRE
PLATFORM POWER

How have digital platforms changed the way we trade?

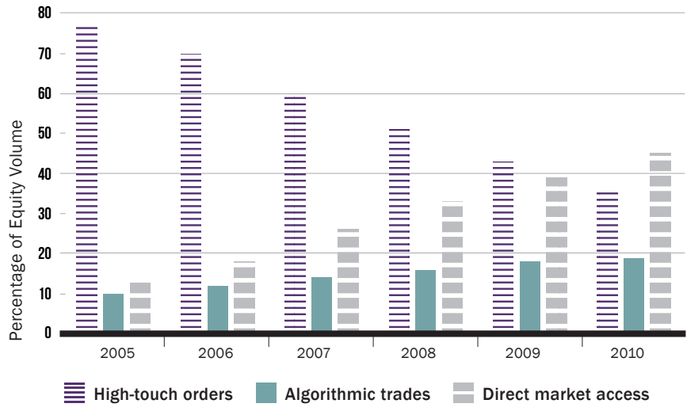
AdC: The five biggest firms today in terms of market capitalization (GAFAM – Google, Amazon, Facebook, Apple, Microsoft) are all platforms. These actors allow different groups to interact, selling access to other users. There's great diversity: trading platforms (Amazon, AirBnb or Ebay); social networks (Facebook, LinkedIn, Twitter); payment systems (Visa, PayPal); operating systems (IoS, Android); communication systems (email, Skype). Inside these ecosystems, we don't always know who or what we are dealing with, and actions often have consequences for unrelated third parties.

When a platform's value increases with its number of users, these network effects create economies of scale – the more users, the lower the average cost. Network effects present a problem of coordination in which people will only use a platform if they anticipate that others will also participate. In these multiple equilibria, everyone joins in or everyone doesn't. Dynamic pricing is one way firms deal with this problem, offering very low or negative prices during the launch phase. Other strategies include asymmetric pricing and vertical integration, attracting users with additional, often complementary services.

Should tech giants like GAFAM be regulated?

AdC: Everything hinges on contestability. It's important for regulators to create the conditions that allow other firms to enter and overtake the established firm. While network effects can be an obstacle for new firms, they can be a formidable shield for established firms. Microsoft's insistence that Internet Explorer be installed with Windows is an example of bundling, and Europe has recently fined Google for similarly anti-competitive behaviour. Other problematic strategies are the buyout or imitation of competitors. • • •

US EQUITY MARKETS: RISE OF THE ALGORITHMS



Source: Marco Avellaneda, *NYU & Finance Concepts, 2011*

Recommendations play a powerful and sometimes negative role. Platforms like Google and Netflix are likely to recommend their own services and advertising space rather than those of rivals. Price control is another burning issue, as are most favoured nation clauses, in which platforms insist that sellers never offer a lower price elsewhere. Platforms need to protect their investment, but these practices provide an incentive for excessively high commissions.

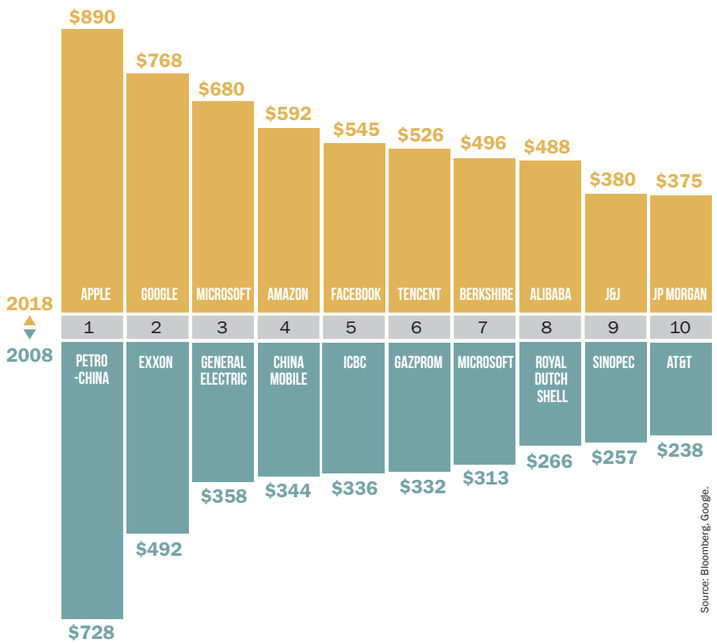
"It's important for regulators to create the conditions that allow other firms to enter and overtake the established firm. While network effects can be an obstacle for new firms, they can be a formidable shield for established firms."

Regulators need to be aware of the importance of network effects for market structures and strategies. The ambiguity of the relationship between the platform and the user is a very new research area. Economists have plenty of work to do!

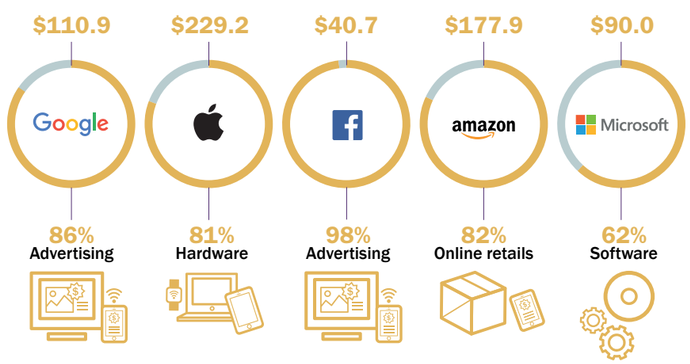
FIND OUT MORE

Discover more cutting-edge research on the digital economy by Fany, Alexandre and other Toulouse researchers at www.tse-fr.eu/digital

WORLD'S LARGEST COMPANIES
By market capitalization in billions of US dollars



HOW TECH GIANTS MAKE THEIR BILLIONS
Revenues in billions of US dollars in 2017



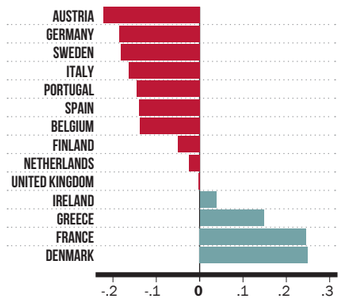
Open borders, open wounds

• IRENE MENENDEZ •
FREE TRADE AND ITS DISCONTENTS

In many countries, rising support for anti-free trade policies has focused attention on those who suffer the costs of globalization. Policymakers can attempt to soften the blow of job losses and depressed wages by increasing welfare spending such as unemployment benefits, but such efforts vary greatly from country to country. A new paper by IAST political scientist Irene Menendez finds that the interplay of economic geography and electoral systems can help to explain why some voters get more compensation than others.

Why does globalization have more impact on welfare spending in certain countries? For Irene, part of the answer lies in the variable impact of trade liberalization within countries. "Research in economic geography provides reasons to expect variation among those that lose from trade. For instance, during the 1980s, Spanish workers in declining manufacturing industries faced severe competition in the wake of EU membership, which required lowering the trade barriers of the Franco dictatorship. However, their risk profile differed across regions. Workers in the northwestern region of Asturias, heavily specialized in mining and steel production, faced very limited chances of reemployment. In contrast, workers in the Basque Country, also heavily industrialized but industrially diversified, faced lower levels of risk."

WITHIN-COUNTRY CORRELATION OF CHANGES IN BENEFIT GENEROSITY AND IMPORTS
in Western Europe, 1980-2010



Irene argues that welfare policy is shaped by the way such patterns of economic geography interact with different electoral systems. "Long-standing research in comparative politics suggests that under particular institutional conditions, low-income voters constitute attractive political targets. Yet how, precisely, the distributional effects of globalization map on to policy outcomes remains unclear. Understanding who benefits from trade and which voters are targeted by governments is thus key to better understanding the relationship between globalization and domestic outcomes."

"Understanding who benefits from trade and which voters are targeted by governments is key to understanding globalization and domestic outcomes"

Using data compiled on 14 Western European democracies, Irene has now produced empirical evidence for her theory that trade leads to greater compensation when trade losers are concentrated geographically and politicians have incentives to target specific constituencies. "These incentives tend to exist in electoral systems with lower district magnitude, where electoral districts are small and geographically based. In contrast, trade dampens compensation in political economies where trade losers are dispersed, and decreases it where electoral districts are larger and losers are concentrated."

Irene's findings matter for our understanding of how economic geography shapes democratic politics. "My results resonate with prominent studies emphasizing the joint role of geography and electoral institutions on trade protection, fiscal structure, and redistribution. They also advance our understanding of the role of electoral institutions in shaping policy outcomes."

Free trade has often been touted as a panacea that will provide for all, ignoring those who are vulnerable to economic competition and market volatility, or assuming they will be compensated by the state. Irene's research helps to explain why this compensation often never materializes. Some victims of globalization will find it easier to sway politicians. Less fortunate voters, poorly placed on the economic and electoral map, have nothing left to trade.

FIND OUT MORE

Read 'Globalization and Welfare Spending' and other research by Irene on international and comparative political economy at www.iast.fr

Trade secrets in frozen graves

• ERIC CRUBÉZY • RAISING THE DEAD

What can archaeology and genetics reveal about the impact of international trade on remote indigenous societies? Since 2002, Eric Crubézy has been digging up frozen bodies in the Siberian tundra to study population development over several centuries. His work demonstrates the advantages of a multidisciplinary approach that connects historical events to the evolution of a community's DNA and social customs, offering a glimpse through the eyes of a forgotten people.

Professor of Anthropobiology (UPS and CNRS) in Toulouse, Eric has excavated more than 150 native burial sites in Yakutia, dating from 1632 to 1922. The region is inhabited by a Turkic-speaking population of cattle and horse farmers, with winter temperatures that can drop to -50°C. The Siberian permafrost has provided exceptional preservation of biological samples.

FROZEN ASSETS

Archaeological evidence suggests the Yakuts' traditional lifestyle was increasingly influenced by international trade. Tombs from the 17th century and earlier are scarce, holding only men or, occasionally, boys, generally dressed in horse or reindeer skin leather, and bearing the weapons of hunters or warriors. Imported objects, such as beads, are rare.

New trade routes enriched the elite and appear to have impacted gender relations. "From the beginning of the 18th century," says Eric, "the tombs hold women and men, but few children. These later tombs are astonishingly lavish, with many objects imported from the West or China. The clothing is adorned with hundreds of thousands of beads. Women have whips and decorated undergarments. Both sexes bear signs of power such as signet rings."

Signs of wealth decrease dramatically in graves from the late 18th century, when the Yakuts became more assimilated with the rest of the world. Finely worked leather clothing is replaced by fabric imported from Europe. Evidence of Christianity is increasingly apparent, first with the reduced number of objects alongside bodies, then with the appearance of crosses and candles.

> "Archaelogical evidence suggests new trade routes enriched the Yakut elite and impacted gender relations"

BEYOND THE GRAVES

Eric's painstaking analysis suggests that this economic and social evolution took place without the population undergoing major genetic changes. "The cultural changes seem to have resulted from an influx of cultural elements rather than foreigners. Genetic data also suggest that mass evangelization was preceded by tuberculosis and smallpox epidemics, which could explain how the age of prosperity came to an end."

Hand bracelet and purse

Historical data reveals a lot more about Russian colonization of the area, driven by international demand for sable and other furs. From 1632 onwards, the Russians and their Cossack mercenaries advanced quickly and levied a pelt tax, the yasak, enforcing control through a system of forts (ostrogs). In 1689, Russia made peace with the Chinese and set up a trading post in Nertchinsk. This boosted the fur trade, helping to create a new Yakut elite. To calm hostilities, the Russians also allowed Yakut chiefs to collect the yasak themselves.

In 1728 the Nertchinsk trading post was relocated far to the west, in Khiakhta, excluding the Yakuts from trade circuits. It may have been the decline in commerce and of their control over Yakutia that led the Russians to evangelize the population, with parishes replacing the ostrogs in the late 18th century.

Eric's research offers a rare insight into the native perspective. "The Yakuts had no idea of the link between the fur trapping the Russians pressured them into and the democratization of clothing styles in European and Asian capitals.

> "The economy underwent total change because cattle farming had to be expanded to feed the Russians"

The funeral sites reveal what contemporaries wanted to be carried into the grave. Bringing together archaeological and historical data shows that the rich had several wives, each of whom lived in her own house and occupied a commanding position of power, that the economy underwent total change because cattle farming had to be expanded to feed the Russians, and that the society evolved."

FEAR OF THE DEAD

Ethnographic studies and 19th-century photographs reveal that the Yakuts normally placed their dead on raised outdoor platforms. "This helps us understand why so few tombs have been found for a population estimated at 40,000 for the beginning of the 17th century," says Eric. "Finding out why only certain people were buried remains one of our major research goals."

One answer may be that the Yakuts were afraid of the dead returning, particularly blacksmiths and young shamans. "The way the tombs were locked, their depth, the fact that the bodies were bound and their fingers sewn into sleeves led us to wonder whether these were the people whose tombs we had found."

Ethnographic descriptions also helped Eric's team decode the "neutralized" objects and decoration inside the tombs. Knife blades had been bent in two, and arrows were subtly made unusable. Stylized cows symbolized fertility, while drawings of bees and ants were 'working animals' the Yakuts held in esteem.

Accessories and jewelry found alongside a female Yakutsk tomb.

Tomb excavation in Yakutia where temperatures can reach -50 °C in January

EXPLORING THE PAST

Eric believes his team's multidisciplinary approach can shed new light on native societies elsewhere. "In Yakutia, we found that archaeological and paleo-genetic data do not coincide with history that has been written to date. Ethnographers helped us understand the meaning of objects, adornments, and social status. On the other hand, we often found signs of practices rarely mentioned elsewhere, if at all. This leaves a vast field to be explored, not just for Yakutia, but for all areas visited by ethnologists in the 19th and 20th centuries." ■

FIND OUT MORE

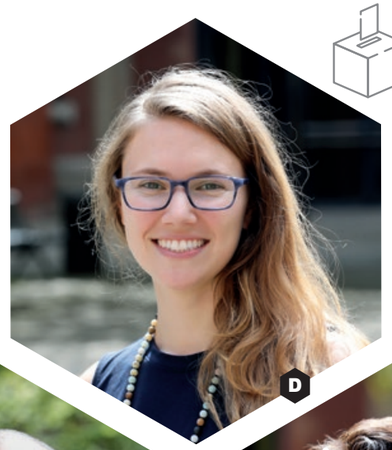
Read about Eric's work on Yakutia in English in *Clashes of Time* (PUL, 2017); or in French in *Vainqueurs ou vaincus?* (Odile Jacob, 2017).

Changing track

IAST is about thinking differently. These six new members have already begun careers that are full of promise. But as they arrived in Toulouse for the start of the academic year, we asked them what might have happened if they had chosen a different path.

1 If you could redo your PhD in another discipline, what would it be?

2 If you could trade careers with someone, who would it be?



A SREEMATI MITTER
*HISTORIAN FROM BROWN**

1 – "I have learned a lot from **CULTURAL ANTHROPOLOGY,** which deeply informs my own research and approach to sources as a historian."

2 – "EDWARD SAÏD is, for me, the definition of the 'scholar "scholar engagé" which is what I'd like to be, and his book Orientalism not only changed several fields, it remains the most important work in post-colonial studies".

* (research fellow at IAST-TSE 2014-2016)

B VIVEK VENKATARAMAN
BIOLOGIST FROM HARVARD

1 – "I would get a PhD in **HISTORY** or **PHILOSOPHY OF SCIENCE**. I love to think about the big history of ideas, and I'm fascinated by how the scientific process is influenced by personalities in addition to the social and political climate."

2 – "I'd switch with science writer **DAVID QUAMMEN.** Scientists communicate in a rather peculiar way that doesn't easily resonate with non-scientists. It would be interesting to focus on distilling complex ideas into a digestible and compelling narrative."

C BENCE BAGO
PSYCHOLOGIST FROM PARIS DESCARTES

1 – "I find both scuba diving and **MARINE BIOLOGY** breathtakingly fascinating."

2 – "JACQUES-YVES COUSTEAU will always be an inspiration. Not only did he carry out groundbreaking scientific work in developing scuba diving apparatus and marine biology, but he did it while helping the Allies during WW2."

D LEAH ROSENZWEIG
POLITICAL SCIENTIST FROM MIT

1 – "I'd probably do a joint JD/PhD. Understanding the **LAW** and helping to form policy would be an excellent way to have a large impact on the world."

2 – "Economist **JEFF SACHS** has broadened the scope of what it means to be an academic. While he still writes academic articles, he also spends a lot of time writing press pieces and travelling the globe to meet citizens and governments."

E FRANCESCA DE PETRILLO
PSYCHOLOGIST FROM MICHIGAN

1 – "I have always been interested in **SOCIAL SCIENCES**, in the ultra-social nature of humans, and their ability to create different cultural groups and cooperate with strangers via institutions".

2 – "I'd trade careers with **GINO STRADA**, founder of the NGO Emergency. Research has a huge impact on society in the long term, but providing help to people in need has a huge impact in both the short and the long term."

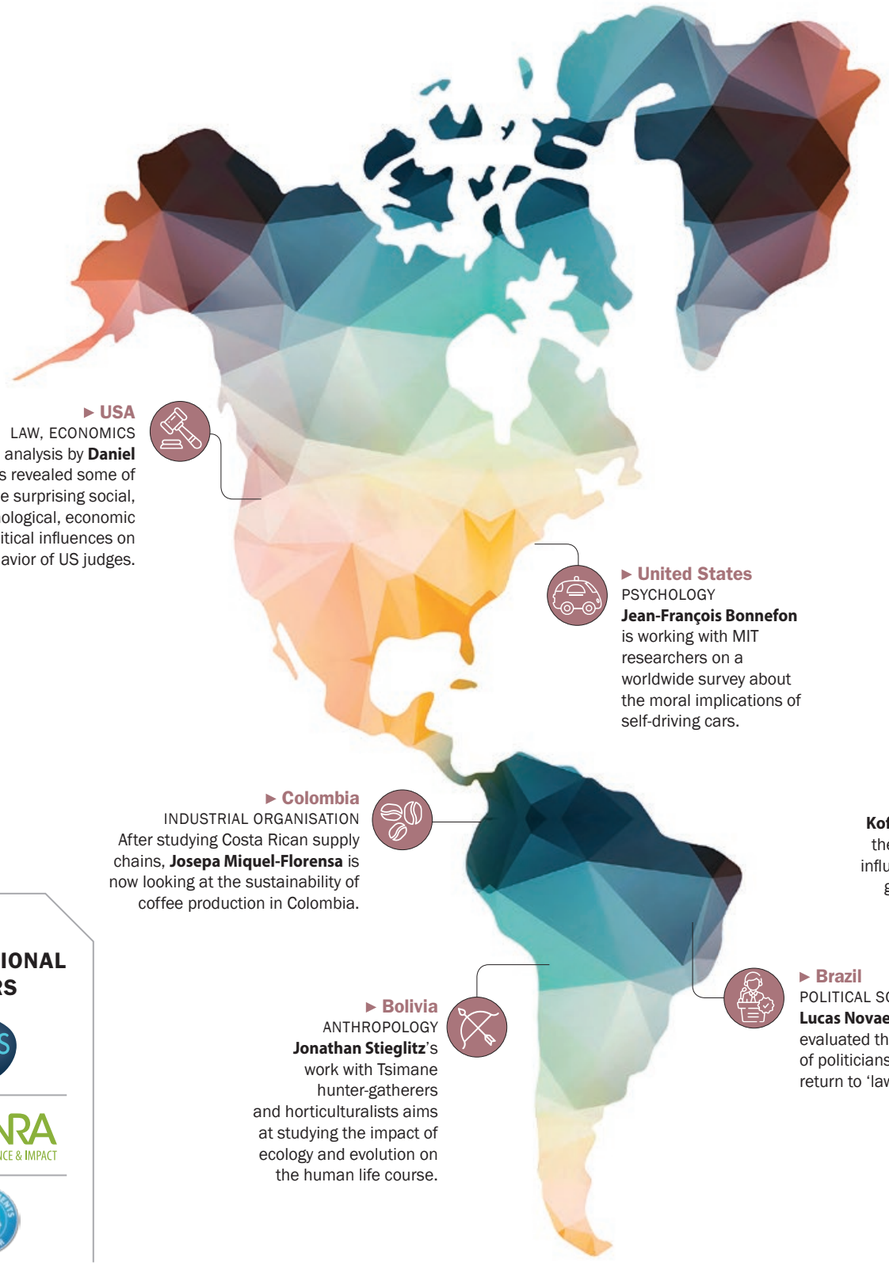
F SAURABH PANT
POLITICAL SCIENTIST FROM PRINCETON

1 – "Probably **ASTROPHYSICS**. I have always found space fascinating, and the more I read about stars and planets, the more I wonder 'what if?'"

2 – "Economist **STEVEN LEVITT** not only asks interesting questions but I like that he always points out how incentives matter."

IAST across the world

A FEW OF OUR RESEARCH PARTNERSHIPS AND FIELDWORK IN 2018



▸ USA
LAW, ECONOMICS
Data analysis by **Daniel Chen** has revealed some of the surprising social, psychological, economic and political influences on the behavior of US judges.

▸ United States
PSYCHOLOGY
Jean-François Bonnefon is working with MIT researchers on a worldwide survey about the moral implications of self-driving cars.

▸ Colombia
INDUSTRIAL ORGANISATION
After studying Costa Rican supply chains, **Josepa Miquel-Florensa** is now looking at the sustainability of coffee production in Colombia.

▸ Ghana
SOCIOLOGY AND HISTORY
Kofi Asante is investigating the struggle for power and influence of diverse interest groups in colonial Africa.

▸ Bolivia
ANTHROPOLOGY
Jonathan Stieglitz's work with Tsimane hunter-gatherers and horticulturalists aims at studying the impact of ecology and evolution on the human life course.

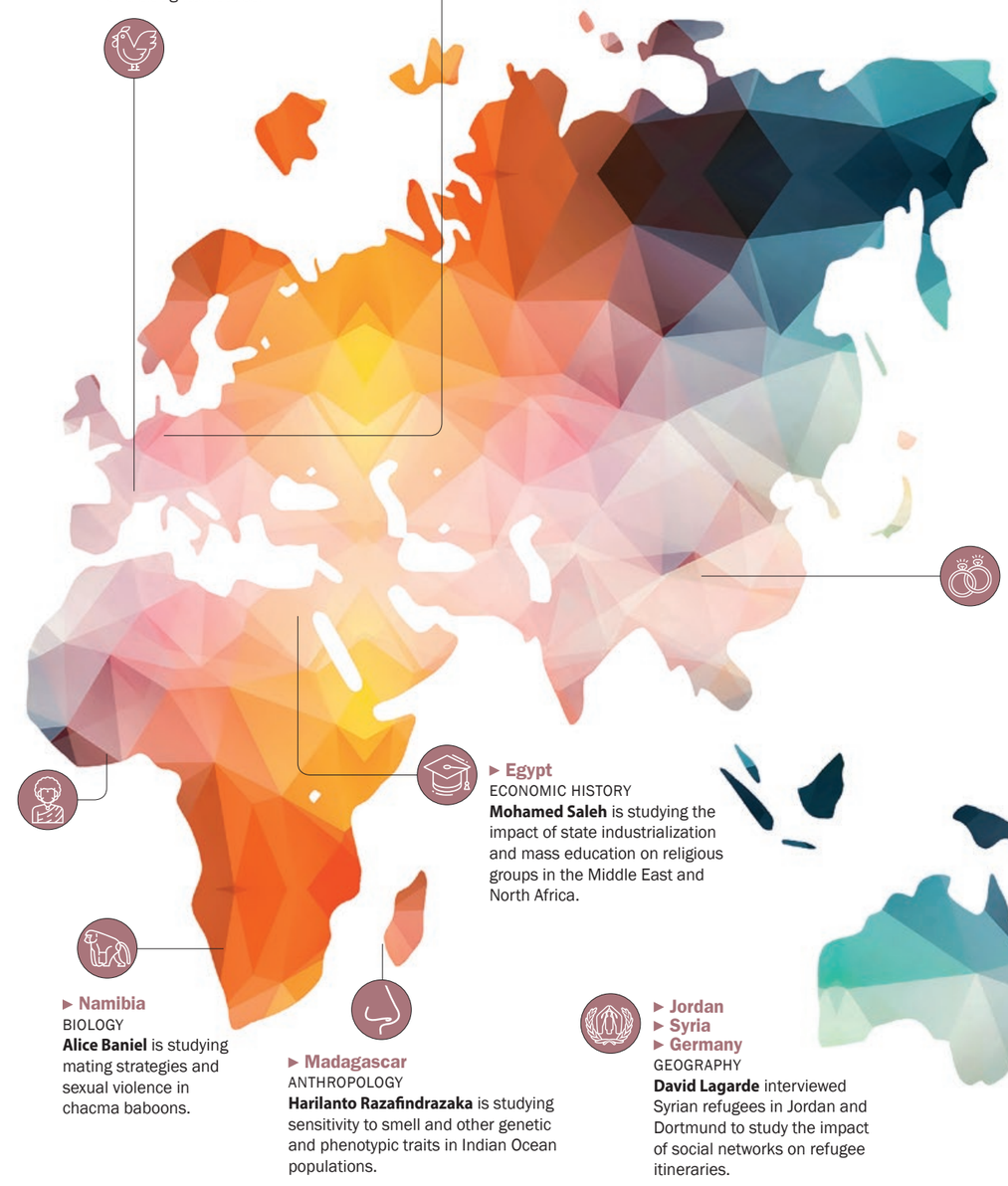
▸ Brazil
POLITICAL SCIENCE
Lucas Novaes has recently evaluated the performance of politicians who promise a return to 'law and order'.

IAST'S INSTITUTIONAL PARTNERS

▸ France
RISK THEORY AND ENVIRONMENTAL ECONOMICS
Nicolas Treich has recently begun research on the economics of animal welfare, visiting farms and slaughterhouses.

▸ Germany
POLITICAL ECONOMY
The Center for Analytical Political Science (CAPS) promotes interdisciplinary, analytical and quantitative research in political economy and political science.

▸ Worldwide
ANTHROPOLOGY
Luke Glowacki is testing the ability of different cultures to identify universal forms and functions in vocal music.



▸ China
BIOLOGY
Jeanne Bovet's study in Kunming found that parents tend to prefer a high-income but less attractive man for their daughters.

▸ Egypt
ECONOMIC HISTORY
Mohamed Saleh is studying the impact of state industrialization and mass education on religious groups in the Middle East and North Africa.

▸ Namibia
BIOLOGY
Alice Baniel is studying mating strategies and sexual violence in chacma baboons.

▸ Madagascar
ANTHROPOLOGY
Harilanto Razafindrazaka is studying sensitivity to smell and other genetic and phenotypic traits in Indian Ocean populations.

▸ Jordan
▸ Syria
▸ Germany
GEOGRAPHY
David Lagarde interviewed Syrian refugees in Jordan and Dortmund to study the impact of social networks on refugee itineraries.

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