

The TSEconomist

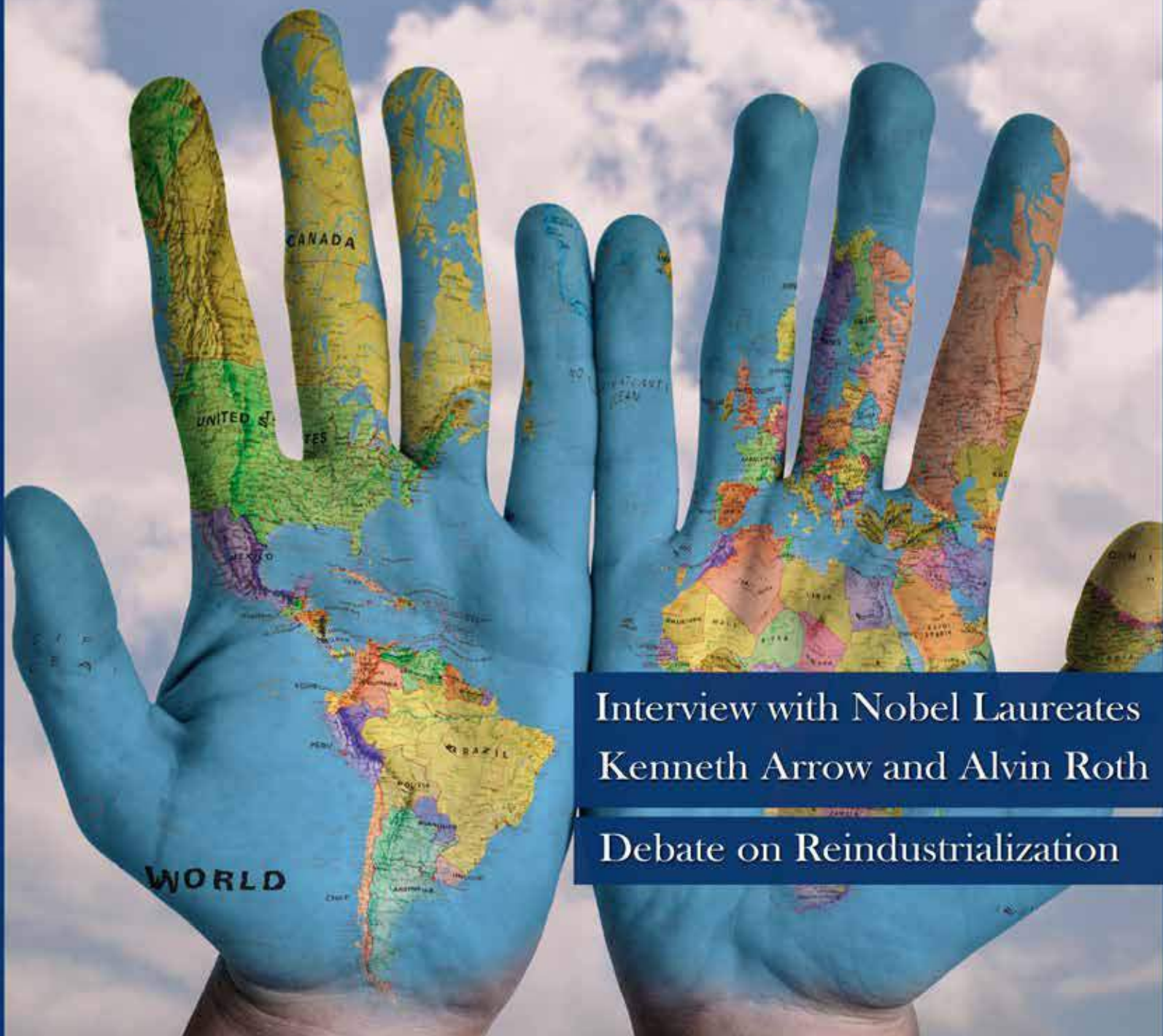
Student Magazine

Issue #9

March, 2015

A-growth with Jeroen van den Bergh

THE FUTURE IN OUR HANDS



Interview with Nobel Laureates
Kenneth Arrow and Alvin Roth

Debate on Reindustrialization



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Passing the Baton

Once again, we're nearing the end of the academic year. This year has been a big success for the magazine in a number of ways. In January, we organized our second ever TSEconomist Talk, this time with an invited speaker from outside the TSE community: Professor Jeroen van den Bergh (Universitat Autònoma de Barcelona, ICREA). Members of the magazine also set up a workshop on academic writing and presentation; both events were very well attended, and I would like to again thank everyone who attended for continuing to make organizing these events worthwhile.

Secondly, this year the magazine has seen a big influx of content – both student contributors and contributors in the professional world. In fact, we've had so many articles and interviews that this year not only has the magazine been bigger than ever, but we've decided to publish an additional summer issue, which will be available at the start of the next academic year in September. (Check the back cover for details about our summer contest!) Truly, this all would never be possible without such a hardworking and dedicated team, who have spent valuable time writing, conducting interviews, proofreading and designing.

I would like to finish up by also offering congratulations to the new team who will take over the magazine after publication of this issue, especially to our new Chief Editor, María Paula, and our new Deputy Editors, Russell and Agne. I am sure the magazine will be left in capable hands, so to them, I say: Good night, and good luck.

*Julia Hoefler Marti
Editor-in-Chief*



Remark

All the writings in this issue remain the strict responsibility of their authors and in no way represent the opinions of TSE and its members.

Contact us:
tseconomist@tse-fr.eu
www.tseconomist.com

Shape Your Magazine!

The TSEconomist is a magazine by the students and for the students. It is thus open to all, and every contribution is highly appreciated!

Send us your thoughts and feedback, attend one of our weekly meetings, volunteer to cover a Business Talk and interview a speaker, write to us or join the team as a board member, proofreader or designer!

All you have to do is write to us at tseconomist@tse-fr.eu.

The Second TSEconomist Public Lecture:

A Transition to a Low-Carbon Economy:

Policies & Implications for Economic Growth

with our Invited Speaker:

Professor Jeroen van den Bergh

by Marica Valente and Amelie Abadie



Climate Change Effects: An iceberg melts near the Arctic Circle in Kulusuk, Greenland. <https://www.flickr.com/photos/klemas/>

In the midst of multiple economic, social and environmental crises, it seems clear that we must construct new ways to understand the functioning of the social and environmental systems in which we live. It is evident that we urgently need effective policies and innovative solutions to address critical environmental issues – foremost **climate change** – and social ones – like structural unemployment. Professor van den Bergh's lecture examined the effectiveness and shortcomings of various proposals in this respect.

Professor van den Bergh visited TSE and gave a lecture in which he argued that a balanced climate policy package is need-

ed to realize a transition to a low-carbon economy. In this context, he argued that we should reconsidering the (GDP or economic) growth paradigm as countries are fearful of stringent climate policies and an international post-Kyoto climate agreement for the simple fact that they feel it will harm economic growth. They may be right or not, but the issue here is that a priority for or focus on unconditional growth acts as a barrier to the implementation of urgently needed climate policies. Van den Bergh does not suggest an anti-growth or degrowth perspective, but a third option, what he calls **"agrowth"**, namely being agnostic, indifferent or neutral about growth. His

motivation for this is that GDP (per capita) is no longer a good proxy of social welfare in the rich part of the world, as it neglects inequity, informal activities, environmental damage, natural resource exhaustion, biodiversity loss, status effects, etc.

It may seem a revolutionary counter-trend in nowadays' economic and political reality, but it is just introducing more rationality in public decision-making. Countries are fully committed to the traditional paradigm that equates societal progress with GDP growth, as the latter is still generally considered a major indication for general welfare, job creation and productivity. However, forcing growth by

Jeroen van den Bergh holds a Master degree in Econometrics and Operations Research from Tilburg University and a PhD in Economics from VU University Amsterdam. He is currently ICREA Research Professor at Universitat Autònoma de Barcelona as well as honorary professor of Environmental and Natural Resource Economics at VU University Amsterdam. He was a member of the Energy Council of the Netherlands and of the advisory council of the Netherlands Environmental Assessment Agency, as well as an elected member of The Board of Directors of the International Society for Ecological Economics (ISEE). He was chairman of various committees in the fields of social sciences, climate change and environmental economics within the national science foundation of the Netherlands. He is a member of the editorial board of six international journals, and Editor-in-Chief of the Elsevier journal *Environmental Innovation and Societal Transitions*. He is a prolific author with more than hundred and sixty journal articles and more than a dozen of books.

His interests vary from environmental, through ecological-economic modelling, evolutionary economics, energy analysis and growth issues to climate policy. The TSEconomist decided to invite Professor van den Bergh because we think that his contribution is crucial for us students in Economics nowadays, and it is very relevant not only in absolute terms, but also and especially given the current socio-economic and environmental challenges.

national governments and international organizations (IMF, OECD) in effect represents an additional constraint to our social and economic development, as well as a serious impediment to achieving social welfare maximization or progress. Questioning the growth imperative in this setting is reflecting increasing rationality in public-decision making.

This is what our invited speaker Prof. van

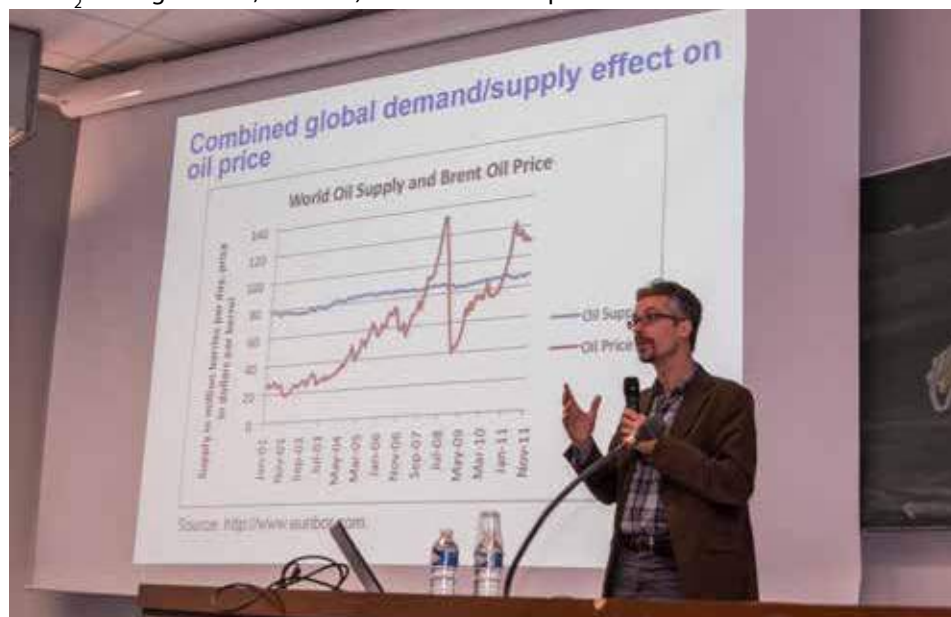
den Bergh discussed in the yearly Public Lecture organized by the TSEconomist. This concern for environmental issues is closely linked to **energy issues**. Van den Bergh noted a set of related energy trends: global energy consumption increases, peak oil, and climate change. The risk of carbon leakage urges us to think about a new, post-Kyoto global climate agreement. Carbon leakage means that individual countries have very little space for unilateral policy. The global average temperature has already increased and **IPCC predictions for 2050** range from +2°C to +4°C above the pre-industrial level. One might think that, peak oil (a ceiling reached to global annual production of conventional oil) sets a limit to CO₂ emissions. However, it actually may reinforce pollution, as it will induce a shift to more polluting fossil fuels like coal and non-conventional oil sources. In fact, we see this already happening.

At a very general level, one can identify three strategies to reduce emissions¹. **Forestation** represents the first one, as it could help to stabilize temperatures thanks to photosynthesis, thus removing CO₂ from the atmosphere. **Carbon capture and storage** is an additional option which, however, remains expensive given that technologies are not mature enough for the moment, while it is also seen as a risky (because of long term effects like chemical changes in, or CO₂ leakages from, the soil) and not

permanent solution. The main solution is therefore the third one, namely using **less fossil fuels**. This requires regulating energy prices and encouraging innovation in particular technologies, like of renewable energy and energy efficiency. To stay within the relatively safe zone of 2°C, the carbon intensity of our production (per €) should fall by 80% to possibly more than 99% (Jackson, 2009).

In this case, should we bet on renewable energies and abandon fossil fuels entirely? On the basis of economic arguments it is easy to question the switch to renewables: even though green power has environmental advantages, it is not as energy-intensive and thus not as profitable as coal or oil. An important measure here is **Energy Return On Investment (EROI)**, which is still rather low for renewable energy options like wind and solar PV: A transition to a **“renewable energy future”** is thus economically not very logical at this moment. More innovation (R&D) in renewables is needed to increase their EROI, before stimulating large-scale diffusion of them.

This may all sound negative. However, van den Bergh expressed a strong belief in the economy having a huge capacity for change and becoming more energy (and carbon) efficient. But this will not happen fast enough without serious environmentally regulatory and technological policies. And for reasons indicated



Prof. van den Bergh lecturing at TSE

¹ Antal, M, and J.C.J.M. van den Bergh (2013). Macroeconomics, financial crisis and the environment: Strategies for a sustainability transition. *Environmental Innovation and Societal Transitions* 6: 47-66.

below, supranational transition strategies are required, in particular an effective **global climate treaty**, that guarantees consistent and therefore maximally effective climate policies in all countries.

Van den Bergh emphasized that the design of an effective climate policy package has to account for the following phenomena. Wrongly specified policy may result in various “**escape routes**”. A first one is **carbon leakage**. This is a problem that is likely to appear if countries have distinct climate policies. A strong climate policy in one country may then stimulate dirty industries to relocate in other places, or it will be competed away and trade patterns will shift. As a result, carbon emissions will shift to other countries, namely those with more lax (weak) climate regulation. A climate agreement would assure that policies are identical among countries, thus avoiding the risk of carbon leakage. Another solution is to implement border taxes on carbon emissions. Although difficult to realize, it might put pressure on climate negotiations.

Another “escape route” was introduced by the German economist Hans-Werner Sinn, namely **the Green Paradox**. This suggests that stimulating green alternatives (e.g., renewable energy) without punishing dirty options (fossil fuels) may lead to oil market responses that can result in an increase rather than the intended reduction of CO₂ emissions.

The solution is to combine technology policy with environmental regulation (e.g., a carbon price). This will avoid that oil market responses will reduce oil price so much that demand for them can rise and undo the effects of technology policies. The specific argument here is that if renewable energy subsidies threaten oil as an energy source, then owners of oil reserves will accelerate extraction of these before the reserves become valueless. This will depress oil prices, increase oil demand, and push up CO₂ emissions – a counterproductive effect of the original energy subsidies. There are many uncertainties involved, but it is important to realize the potential consequences.

A third “escape route” is **energy rebound**. It involves unanticipated increases in energy consumption associated with energy efficiency improvements and other energy conservation measures (e.g., behavioral change). Without a good climate policy, notably carbon pricing, it will be very difficult to control rebound effects. Many well-intended strategies, like voluntary energy conservation, will then turn out to be rather ineffective. There are many rebound mechanisms to explain this: more intense use if one knows a machine (car, light technology) is more energy-efficient; respending monetary savings associated with energy conservation; diffusion of more energy-efficient technologies, etc.

The previous arguments suggest that cli-

"Do growth and environmental policy actually match?"

mate policy should involve various instruments to effectively and rapidly move us towards a low-carbon economy. Carbon pricing provides incentives to all agents (electricity producers, manufactures, consumers, investors, innovators) to change their behavior so as to reduce the CO₂ intensity of all production and consumption. It not only changes current choices, but also redirects technological progress. A logical question here is how much carbon should cost, which has generated a literature on the **social cost of carbon**². Of course, one can just experiment with carbon prices and raise them if the effect is disappointing. A high price would need additional equity policies, such as block-pricing (electricity) and equitable redistribution of carbon tax revenues (more to lower incomes if higher energy prices make basic goods more expensive).

To avoid the above-sketched green paradox as well as to keep technological trajectories of promising but still expensive alternatives (e.g., solar PV) open, innovation or technology policies (especially some form of subsidizing innovation) are needed in addition to carbon pricing. The two are largely complementary and can guarantee a maximally fast transition to a low-carbon economy. We really have no other credible option. On the other hand, since economies have developed and GDP has perpetually expanded, so have greenhouse gas emissions! Do growth and environmental policies really match? Actually, the idea of a **win-win green growth** is close to fantasy. Assuming a 1.5% growth per year, we shall cutback our emissions down to 82% only to avoid the threatening 2°C increase of temperatures. Indeed, green growth relates more to an astonishing challenge than to reality: it implies drastic efficiency progresses and does not take rebound effects into account.

To return to the growth-versus-environment issue, what Prof. van den Bergh sug-



² J. van den Bergh and W. Botzen (2014), A lower bound to the social cost of CO₂ emissions. *Nature Climate Change* 4(4): 253-258.

³ J. van den Bergh (2014). Green agrowth as a third option: Removing the GDP-growth constraint on human progress. *WWWforEurope: Policy Paper No. 19*.

⁴ J. van den Bergh (2009). The GDP Paradox. *Journal of Economic Psychology* 30: 117-135.

J. van den Bergh (2011). Environment versus growth – A criticism of “degrowth” and a plea for “a-growth”? *Ecological Economics* 70(5): 881-890.

gests is **agrowth**³, being agnostic towards GDP growth because GDP (per capita) is a measure that does not reflect social welfare or even individual wellbeing⁴. The idea is to remove the (unconditional pro-) growth constraint from policy in order to widen policy makers' choice set, and thus arrive at better social outcomes. This includes paying attention to environmental problems like climate change. Solving climate change will look much more attractive if one uses a good **social welfare function accounting for equity, employment, leisure, community and environment, instead of using GDP per capita** (effectively average income, nothing more).

Van den Bergh also stressed that GDP information has a negative impact on our society as it reinforces positive feedbacks in the economy, thus contributing to instability, which may end in a crisis. He

We interviewed Prof. van den Bergh after his talk.

1. First, a few questions about your most recent research. When did you start to see growth glorification as problematic?

When I was doing my PhD I was involved in an organization which brought together all environmental NGOs of the Netherlands, and we formed a macroeconomic club that was asked to clarify the various perspectives on the growth debate.



Prof. van den Bergh

Together with Professor Ruud de Mooij (currently at IMF), I summarized the long-standing environment-versus-growth debate in five perspectives¹. These were referred to as the moralist/immaterialist, pessimist, opportunist/sceptic, technocrat (believing that policy and markets will steer consumption, produc-

tion and technology in a more sustainable direction) and optimist (growth is necessary as the environment is a luxury good). They were defined in response to three core questions: (i) is continued economic growth desirable? (ii) is continued growth feasible? and (iii) is growth controllable? I would suggest the correct answers to be as follows: (i) "depends on the country and period," (ii) "depends on technological change and the content of growth, and therefore on environmental and innovation policies" and (iii) hardly but perhaps in the future². I see arguments in favor of most positions causing me to prefer to be rather agnostic and not occupy a very strong position, in line with my idea of "a-growth"².

2. What are the most common reactions you encounter about a-growth?

To my surprise quite positive reactions. Many people at the beginning put this term in the corner of anti-growth, but after I repeatedly explain my concept of agrowth in detail, it seems many start to like it. Recently, I took part in a meeting at the OECD in Paris with some of the de-

sions and less unemployment. This evidently needs further empirical research.

To close, **global warming** is one of the main issues, if not the primary, of the 21st century, and already affects the functioning of our economy. Solving this growing problem may seem utopic, but Prof. van den Bergh has reminded us that a clear solution exists and can in principle be implemented. The main barriers are a lack of understanding of the solutions and an unwillingness to give priority to climate change on behalf of the voters and politicians. These barriers are associated with the fact that GDP growth still prevails in governments' agenda and restricts them to undertake serious action in favor of climate mitigation. The task of economists remains to make sure that the issues and solutions are well understood by the rele-

partments' heads and countries' ambassadors. At this occasion I had the chance to put forward my idea and, honestly, I was prepared for a lot of resistance. For this reason I carefully presented my talk in a very clear and nuanced way. In the end I was surprised because generally people responded with positive comments, one saying "yes, the third option is always better". Moreover, someone noted that in view of inflation and a very unequal income distribution income growth does not reach everyone in our society.

3. In this setting, how can we move the debate from economists to politicians?

I guess the first thing to do is to publish this type of work in recognized international journals. First, I would like to reach out to economists, in general and working on environmental issues, and then if the idea is more matured develop a workshop with politicians.

4. What does progress mean for our society nowadays?

Daniel Kahneman, 2002 Nobel Prize in Economic Sciences and expert of behavioral economics, once expressed that progress does not mean to create happiness, but to eliminate unhappiness.

¹ de Mooij, R.A., van den Bergh, J.C.J.M., 2002. Growth and the environment in Europe: a guide to the debate. *Empirica* 29 (2), 79–91

² van den Bergh, J.C.J.M., 2011. Environment versus growth — A criticism of "degrowth" and a plea for "a-growth". *Ecological Economics* 70 (2011), 881–890

However, to translate this in practice it is extremely difficult since there is not a clear agreement on what our social welfare function is. In fact, you might see that left-wing politicians have a different social welfare function than right-wing ones. The former would give more weight to distributional equity and environmental issues, while the latter to liberties like market competition. This means that there is not a single social welfare function. But perhaps we don't need a social welfare function to decide on policies that guarantee progress. Putting the accent on the main two problems of our era, i.e. structural unemployment and climate change, will almost certainly lead to progress. This is the essential challenge of our time, combining a stable climate with full employment.

5. Our generation is often seen as apathetic, individualistic, unhealthy, unentitled, but the sense of community seems to be crucial in the transition to a more sustainable economy. Should we take this into account when we are designing macroeconomic policies based on collective actions that need to be coordinated in order to achieve their goal?

I grew up in a village where moral values were strong and almost nobody felt to be an anonymous citizen of the world. However, when masses of people started to move to cities, self-interest and individualism became a trend that is difficult to counter. On the other hand, climate change, for example, is a global problem that we cannot solve locally with individual altruism or reciprocity. Of course communities' cooperation is important for identifying problems, solving conflicts and innovation, but effective policies have to focus on selfish individuals and aim to avoid that they free ride.

6. Technology has evolved so much that we are connected to anyone, anywhere, anytime across the world. Our civilization is improving so much thanks to technology. At the same time, we are also more detached and disconnected from our communities. Which role can technology play in the transition?

Technology is evidently a crucial factor in a sustainability transition (to a low-carbon economy). But change in the struc-



ture or composition of consumption and production is equally if not more important, certainly in the short run (coming decades) when critical renewable energy technologies are still developing. I am now starting a project on behavioral economics and modern ICT technology to see how different lifestyles can be diffused, and on what that depends relatively to the characteristics of receivers, messages and public media. My idea is quite ambitious since I would like to quantify these diffusion effects, and compare and combine these information-provision instruments with price based ones (like a carbon tax or emissions trading). For that I need models that allow for diffusional information among peer groups, thus not just a simple representative agent model, but a population model. This means I would like to arrive at what is sometimes called an evolutionary approach, based on a population of heterogeneous agents, social networks in which exchange of information occurs, combined with what economists traditionally focus on, namely market interactions and technological innovation and diffusion.

7. Four years ago you participated to the International Degrowth Conference in Barcelona. What happened in Europe in the last years? Thinking on wellbeing in terms of happiness: is Europe happier than before? Are our politicians more aware about the need of an economic downscale and resource conservation?

The degrowth movement is gaining attention mainly among citizens, but is not huge or taken very seriously in scientific circles (for good or for bad). I think there is a more critical attitude towards growth

and GDP generally, and people are more inclined to talk about it – as I saw in my last meeting at OECD – but at the end of the day, when politicians have to take real decisions, GDP is still their priority. Therefore, people may talk differently but this does not mean they will act differently. I don't know if it is just a matter of time, or whether people are just like this and cannot be altered. Generally, I am not too optimistic about an imminent switch in the debate at the European level.

For this reason I am strongly convinced that it would be essential for politicians to be more influenced by non-economists. Among their political advisors politicians should have a social psychologist and a happiness expert as economists need always a complementary perspective when real decisions regarding all members of a society have to be made. Nowadays, I see that those economists and lawyers who are able to influence political activity share a one-directional way of thinking, focusing on growth as if this is a guarantee for progress under all circumstances.

There is a lot of homogeneity in the scientific group advising politicians, and this is not healthy for any social organization. In Economics as a discipline it is the same: if you want to have an academic career it is more useful if you do clever research within the same assumptions, suggestion major innovations but without stepping far outside the basic framework. Daniel Kahneman obtained a Nobel Prize by merging biological, cognitive, economic and neural sciences, but he was not an economist. Possibly, if he had been one, he never would have made such an impactful career. ■

An Interview With

LERNA Laboratory of Natural Resource Economics

by Marica Valente



LERNA's headquarters: TSE, Manufacture des Tabacs on the Canal de Brienne in Toulouse

Environmental Risk & Uncertainty

These are the main areas of specialization of LERNA, TSE Laboratory of Resource Economics, composed of a group of professors, research directors, assistant professors, doctoral and post-doc students working on Environmental and Resource Economics.

LERNA addresses the research interests of both INRA and Toulouse 1 - Capitole University to develop in-depth analyses of broad environmental fields by pooling their resources, so as to set up a structuring high-quality research cluster with significant impact and influence at both academic and policy level.

LERNA puts also much effort into building strong educational connections, particularly by leading, coordinating and teaching TSE Master 2 degree in "Environmental & Natural Resource Economics" (ERNA). This Master course provides students interested in both theoretical and applied environmental topics with the analytical skills to assess and recommend economic policies and strategies to tackle environmental issues and manage natural resources. In their future, students will target either an academic career or a professional one in private businesses, public and international institutions.

Water Economics

Agricultural Economics

Growth, Environment & Energy

On the occasion of the Second TSEconomist Public Lecture, our student association started a close collaboration with LERNA researchers who enthusiastically supported Prof. van den Bergh's lecture, and proactively contributed both humanly and intellectually to make our event a great day.

The TSEconomist took the opportunity to get acquainted with some LERNA's members, and we are now glad to present them in the following interview.

"Among our history, which eminent thinker economist, scientist or philosopher would you like to have met, and what would you have asked and talked about?"

François Salanié



Director of LERNA, Senior Researcher (IDEI, INRA)

Research interests: Environmental Economics, Risk and Insurance, Contract Theory

"John Stuart Mill is usually much admired as an economist, but his wife **Harriet Taylor Mill** was also exceptional. She was deeply aware of the very unjust restrictions on women's freedom of her time, and put lots of effort into convincing her husband to sustain that cause — and he served it, at the price of some political credibility. Women had to wait many years before being recognized as having equal formal rights. And yes, surprisingly, the relationship with Environmental Economics reveals itself in this setting. As environmental economists, we also face phenomena whose economic importance is really enormous, in the range of trillions of euros: think of climate change, loss of biodiversity, and the giant negative health effects of diverse pollutants. In many cases we have valuable proposals, and even some we consider satisfying. However, it will take a lot of time and effort before they will be applied.

Dear reader, please consider the following statement: working on environmental policies is one of the most urgent and important task an economist may perform today, but the main witnesses of the formidable changes triggered by our research are more likely to be our students. In the meantime, let us be satisfied with our intellectual quests, and the pleasure of working with humble and far-looking researchers. Welcome!" ■



*Harriet Taylor Mill (1807-1858)
Philosopher and women's rights advocate*

Henrik Andersson



Director of M2 ERNA, TSE Researcher

Research interests: Evaluation of non-market goods, Risk perception, Pricing of externalities

"It is of course hard to choose only one person of all the great thinkers there have been during our history. Anyway, I have decided to choose someone who was active in my area of research, and I have decided not to go back in time too far. The person I have chosen is **Sherwin Rosen** who was an American labor economist, who died in 2001. Personally I do not work on labor issues, but his work has also been very influential in my main area of interest, i.e. the valuation of non-market goods.

In the area of the valuation of non-market goods Sherwin's paper "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition" (JPE, 1974) is one of the most influential papers published, maybe the most influential one.

Sherwin in his hedonic model proposed two steps: (1) estimate the marginal willingness to pay (WTP) for the different attributes of differentiated products, and (2) recover the marginal WTP function. Whereas the first step has become the workhorse for valuing characteristics of differentiated products for which there exist no easily available market prices, such as clean air and safety (by using for instance house and car prices), his proposed second step turned out to be harder to implement, due to issues about identification and endogeneity.

Recently a lot of work has been conducted in econometrics addressing these issues related to Sherwin's second step, and huge steps forward have been taken on how to deal with them. Indeed, it would have been interesting to have his view on all these techniques now proposed to solve an econometric problem in a clear and intuitive economic model he developed 40 years ago." ■

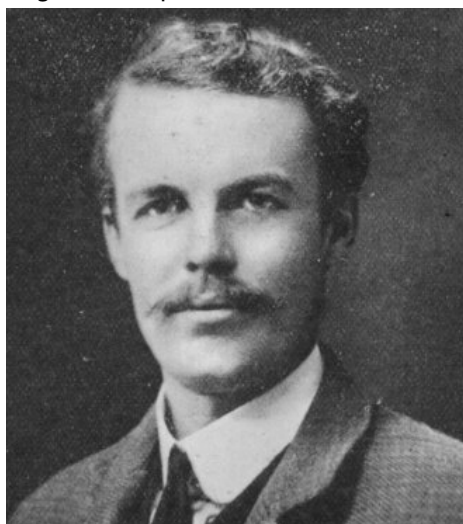
Nicolas Treich

INRA Research Director, IDEI Researcher

Research interests: CBA, Risk theory, Environmental Economics

“Your question is an invitation to meet classic writers in economics who are a long time dead like Adam Smith, Mill, Keynes or Pigou (to cite an early environmental economist). However, do you know what would be much fun in such a meeting? It is not what I would learn from them, but what they would learn from me! Not because I am exceptionally smart, but just because of all my fellow economists who have worked very hard during all these decades and have improved a lot our knowledge.

Nowadays in economics, we have almost forgotten the pioneers.



Arthur Cecil Pigou (1877-1959). British Economist

To me, this is good news. I tend to believe that the speed at which we forget about old writers is a measure of a progress of a field (which is bad news for philosophy or psychoanalysis!). In any case, I am sure that the above-mentioned exceptionally smart classic writers would have a lot of fun to meet me, and listen to me. So my question would be: Mr Pigou, what would you like to know about environmental externalities?” ■

Sylvain Chabé-Ferret

TSE Assistant Professor, INRA Research Fellow

Research interests: Econometrics of Treatment Effects, applied to Environmental and Labor Economics.

“If I were to have dinner with an economist of the past, it would probably be **Trygve Haavelmo**. His 1944 Econometric paper “The Probability Approach in Econometrics” is for me a milestone for econometrics and applied economics, and, let’s be bold, economics in general. I read it several times and continue reading it regularly. Each time, I discover a novel gem. This paper laid out the ground for applied work in economics with a sound statistical basis but also taking into account the specificities of our field, as for example the existence of interdependence and equilibrium

relationships. This paper inspired the subsequent work of the Cowles Commission that forms the basis of the econometrics curriculum that we teach. But this paper is also so much more than theoretical econometrics. It is a paper about epistemology, how and why we can do research in economics.

I think the views Haavelmo expressed here are so deep that they implicitly structured how applied research in economics has been conducted until the late 80s. And in some of his views, you also see the nascent credibility revolution coming: Haavelmo coined the term natural experiments (actually, Josh Angrist, the modern proponent of this approach, directly attributes the term to him) and he also insisted heavily on setting up a design of experiments with each economic theory, because, in his own words: “Our guard against futile speculations is the requirement that the results of our theoretical considerations are, ultimately, to be compared with some real phenomena.” He also said that “What makes a piece of mathematical economics not only mathematics but also economics is, I believe, this: We have in mind some actual experiment, or some design of an experiment, which we could at least imagine arranging, in order to measure those quantities in real economic life that we think might obey the laws imposed on their theoretical namesakes”.

What I would love to talk to him about is why he did not promote much more the experimental method in economics. My understanding of his paper is that, at some point, he abandons all hope of ever conducting experiments in economics and settles for something else, namely modelling what we do not know, the confounding factors. He uses an analogy with physics, saying that we have to model the forces of friction because we cannot run experiments in a vacuum. I think this approach was wrongheaded and contributed to mixing science with engineering for a long time in economics.

I would also ask him why, despite the repeated failures of the approach that he proposed, he repeatedly acknowledged, in his 1958 speech as a president of the Econometric Society, and in his 1989 Nobel prize speech, he blamed the theory instead of blaming the method



Trygve Haavelmo (1911-1999). Econometrician

and putting experiments back into the picture. I would also love to discuss with him the exciting direction that economics is taking now, with more use of experiments for testing theories and policies, and the novel and welcome approach of testing the predictions of structural models against policy changes.

Finally, because Trygve did not seem like a funny guy, I might also invite David Hume to take part. Apart from being my favorite philosopher, he was nice and charming fellow and would for sure cheer us up. Oh, and he also basically invented the notion of counterfactual that is crucial for causal analysis. That would be some dinner!" ■

Vera Zaporozhets



TSE Researcher

Research interests: Environmental Economics, Political Economy and Public Economics

"I have decided to choose **John Rawls** (1921-2002), who is one of the most influential political philosophers of our time. He was very creative and his work grew not only from contemporary political philosophy but also from other fields such as economics and psychology. His work has been read by lawyers, economists, political scientists, not to mention political philosophers. His ideas have also found realization in game theory and natural and resource economics, the two areas I am currently working in.

In his seminal work "Theory of Justice" (1971), Rawls changes the way political philosophers think about justice by linking justice to the idea of fairness. He proposed a thought experiment: the rules that govern society are chosen under the veil of ignorance, i.e., when the individual initial positions with respect to race, education, health, intelligence, etc. are not known. Based on this idea, he came up with two principles. The first concerns basic freedoms, like the freedom of speech. The second is the "difference principle". In contrast to the classical utilitarian approach (the greatest good for the greatest number of people), it suggests to improve the well-being of the least advantaged members of the society.

Interestingly, the difference principle, known also as the maximin principle, appears in cooperative game theory as well. The concept, called the nucleolus (Smeidler, 1969), formalizes the idea to make the worst individual/group to better off. It is an exciting example of interconnections between different disciplines.

The nucleolus has been widely used to study the problems of common surplus/cost allocation and alliances formation. There are also many applications of the nucleolus related to natural and resource economics: equitable allocation of resources as water, allocation of joint costs in agriculture or waste water treatment among others." ■



John Rawls (1921-2002). American Philosopher

James Hammitt



TSE Associated Researcher, INRA Chair at TSE-LERNA - secondment from Harvard

Research interests: Environmental and Health Economics, Risk Theory

"I would like to have met **Frank Plumpton Ramsey**. He was a Cambridge mathematician and philosopher who made three seminal contributions to economics: the Ramsey discount rule, Ramsey (or Ramsey-Boiteux) pricing, and subjective expected utility theory.



Frank Plumpton Ramsey (1903-1930)
British Mathematician and Economist

Incredibly, he made these contributions (not to mention those in his primary fields of mathematics and philosophy) before his death at age 26 and allegedly worked only four hours per day! (He spent a lot of time hill walking and listening to classical music.)

His contribution to decision theory was in response to his colleague John Maynard Keynes' argument that there is some objectively correct probability for each possible state of the world, which is a logical consequence of disembodied knowledge. Ramsey developed the subjective, Bayesian concept that probability is personal: it expresses an individual's degree of belief and can be quantified via the betting odds he will accept.

I would love to know what Ramsey would have said about how we can develop (or whether there exist) sensible subjective probabilities for problems about which even experts have very little knowledge: What is the probability that global warming will increase annual

mean surface temperature by 10 degrees C by 2100? What is the probability that some product of genetic engineering or nanotechnology will cause catastrophic environmental harm? What is the probability that ice-nine could freeze the Earth's oceans?" ■

Christoph Rheinberger

Lecturer and Post-doctoral Fellow, also IAST Member.

Research interests: Economics of Environmental and Health Risks



Amos Tversky (1937-1996)
Israeli Psychologist



Several of his psychological works (on elimination by aspect, context-dependent preference, judgment by similarity, and comparative ignorance) are highly relevant to environmental economics, too.

How comes that many people change their environmental behavior, suddenly consuming product A rather than B, when their choice set is extended to comprise products C and D albeit nothing else changes?

Why is it that our judgments of uncertain events (e.g. climate catastrophes) are prone to effects of ambiguity aversion if compared to risky events (e.g. industrial accidents) rather than evaluated in isolation?

Questions like these were at the core of Tversky's research and his writings on choice making provide the most inspiring insights." ■

"If I could, I would have met the late **Amos Tversky** (1937-1996). In my eyes, Tversky was one of the most brilliant minds of the 20th century and his thoughts have impacted the social sciences in a fundamental way. Economists are well aware of Prospect Theory and the notion of loss aversion, but Tversky's contribution to our understanding of how people actually make choices is much larger.



Laboratoire d'Economie
des Ressources **N**aturelles

Nobel Corner

An Interview With Kenneth Arrow

by Georgios Petropoulos

“Economics is about helping people”



Professor Kenneth Arrow

Kenneth Joseph Arrow is an American economist, writer, and political theorist. He is the joint winner of the Nobel Memorial Prize in Economics with John Hicks in 1972. To date, he is the youngest person to have received this award, at 51. His most significant works are his contributions to social choice theory, notably “Arrow’s impossibility theorem”, and his work on general equilibrium analysis. He has also provided foundational work in many other areas of economics, including endogenous growth theory and the economics of information. Arrow remains active on the international scene through a variety of initiatives including his role as a founding trustee for the United Nations-registered NGO Economists for Peace and Security and a member of the Advisory Board of Incentives for Global Health, the nonprofit organization behind the Health Impact Fund.

Having arrived late for the SITE workshop at Landau building of Stanford University due to a flat tire on my bike I noticed that only two name tags were left. The other one was that of Kenneth Arrow. Seeing his name I immediately thought to invite him to an interview for our student magazine. To my surprise his reply was immediate and positive. The initial enthusiasm was gradually replaced by scepticism about how to construct the interview. He is one of the most influential economists of the 20th century. He has founded many different fields in economics and written numerous breakthrough contributions. I decided to focus on the man behind the academic giant. Thousands of pages have been written about his theories, but less is known about the course of his life. I have to apologize to him because our interview exceeded our scheduled time. Despite this fact he was so generous and kind to answer some additional questions. Kenneth Arrow has by far shaped our discipline and inspired and influenced the most gifted from the generations to follow. Before beginning the interview allow me to quote Eric Maskin who wrote of his PhD advisor:

Another thing that struck us students was the breadth of Ken’s knowledge, which extended far beyond economics. He would be lecturing on some technical point when an apt quotation from Maimonides or an analogy from thermodynamics would occur to him. Ken evidently knew more on virtually any subject than any of the rest of us. There was a story at Harvard that a group of junior faculty once concocted a plan by which they could finally appear to outshine their erudite senior colleague. They read up on the most arcane topic they could think of: the breeding habits of gray whales. On the appointed day they gathered in the coffee room and waited for Ken to come in. Then they started talking about the elaborate theory of a marine biologist named Turner on how gray whales find their way back to the same breeding spot year after year. Ken was silent . . . they had him at last! With a delicious sense of triumph, they continued to discuss Turner, while Ken looked increasingly perplexed. Finally, he couldn’t hold back: “But I thought Turner’s theory was discredited by Spenser, who showed that the supposed homing mechanism couldn’t possibly work.”(Social Choice and Individual Values, 3rd edition, 2012).

1. Prof. Arrow, thank you so much for accepting my invitation for this interview. It is a great pleasure and honor for our student magazine to have an interview with you.

The pleasure is mine. I was a great friend of Jean-Jacques Laffont whom I first met at Harvard University during his graduate studies. I closely followed his efforts in founding and establishing an economic center in Toulouse and I am always glad to express my support for your school.

2. You hold a bachelor in social sciences with a major in mathematics. What was your motivation to enter the PhD program of economics at Columbia University?

When I was in college, I was very concerned about how I could make a living. My father was out of work and things were bad. So, I was very much concerned about my financial security. And somehow, the idea of being an academic was from another world, one that I did not seem to belong to. I was wondering what to do and one thing I thought of was to be a secondary school maths teacher. In order to be a teacher you have to take a lot of courses in education. So, I spent a fair amount of time taking courses in education. Totally a waste of time [laughs], I could have taken more maths instead ...



Columbia University

3. Later you became a great academic teacher and student advisor yourself. So, it may have not been totally a waste of time?

Maybe. But, actually, I did have one of the best teaching experiences in my life. Part of the program was that you practice teaching. You are sent to a high school to teach for a day a week or something like that. And you take overall class for an hour and then you receive comments about your teaching. But, there was one peculiar thing. New York State had a statewide examination for secondary school students. Of course the high school wanted to have a good record, it did not like failures. There was a yearly course on plane geometry. And sometimes the students took the first part of it and they failed and took it over again. But when they failed really badly, they agreed to enter the next term but without aiming to take the statewide examination. However, and this is American, I do not think that any other country in the world would have done this, schools have found over the years that among this group, there were some that somehow did very badly but they really had the ability. So, they would pick some of them and let them take a voluntary, one hour per week course, and if the person in charge of this course felt they were able, they could be allowed to take the statewide examination. I had to teach this course. Of course these students were very motivated. It was not a problem to motivate them. I allowed two thirds of that class to take the statewide exam and they all passed. It is probably the best teaching I have ever done in my life.

4. Why did you move from education to economics?

The reason I did not become a high school teacher was very simple. I could not take the examination. There was such a backlog of applicants who had passed the exam for math teachers in 1933 that New York hadn't held an examination

since.

Then, I decided to study statistics. I actually enrolled to take an M.A. in mathematics at Columbia and took Harold Hotelling's statistics courses. Hotelling at that time was the head of the economics department, and he was also giving a course on economic theory. I took that course just out of curiosity, and I really got interested in the subject. But, I still did not think of going into economics until I asked Hotelling whether he could write a letter supporting me to get a scholarship to continue my studies with a PhD degree. He told me that he did not have any influence in the mathematics department and that I should consider applying at the economics department instead. He thought he could be helpful in getting financial assistance there. As it indeed happened.

5. Was the Great Depression a source of motivation and inspiration for you?

Certainly, it stimulated my interest in economics. When I was in college with a mathematics major, I took some classes in economics, more than the required ones, but I did not feel that I learned too much as the courses were very anti-theoretical. That was very common in the United States, by the way. The Columbia department was largely anti-theoretical too.

6. You were forced to interrupt your PhD studies to serve as a weather officer in the U.S. Army Air Corps during World War II. How did this experience affect your mindset? Did you have time for research during the war years?

First, let me make clear that I never left the USA during the war years, so, I never had a direct experience. I was assigned to a research unit and worked exclusively in the research field. I started working on the use of winds for flight planning, which came about when a group associated with some aircraft company had an idea for navigation using the wind. The idea was that when you're flying, of course, you're drifting, you point your plane in one direction but the wind modifies it. And the object was to get from one place to another as fast as possible. An applied mathematician directed me to European literature on that subject. Some of it was in German, and my German was mediocre, but I could struggle through it. All the literature assumed that the world was flat, that everything was on a plane, which may be germane if you're flying a hundred miles. But, we were already flying planes across the Atlantic. It turned out to be an interesting mathematical problem to change these results to be applicable to the sphere - and that was my contribution. The results were used routinely by firms that supplied the airline companies with the optimal routes

As for your first part of your question, let me say that before the war I was very much a pacifist. I felt that I would probably ask for a conscientious objector status. I did not think that we were actually going to war. But, as soon as I heard about the attack at Pearl Harbor, I realized that in some cases war is unavoidable. And World War II was such a case.

7. When you came back to your regular life after the end of the war, were you determined about what you wanted to do with your life?

Now, the problem was this. I was a very good student. I did the

oral examinations in record time and I passed all my courses without any problem. But, I did not have any original ideas. I knew the literature better than my professors did. As I said, they tended to be anti-theoretical. I had a desk in the library, in the stacks where the books are, and I was picking up books that I had never heard of before and reading them. For example, John Hicks' "Value and Capital" was a very exciting book. So, through this process of reading the work of others I could see everything. Errors, incomplete works. And I tried to correct them. But, it did not end up to as a stimulating and interesting project. So, that was my problem. I was really worried whether I could come up with a good idea. As such a good student, I should have had a very good idea. Otherwise, I would not have been satisfied with. So, I spent this next year taking some courses. I tried to read things for this big project of mine. I read about the mathematical aspects of stability and such kind of things but I was not making any real progress. I found out that there was an organization in Chicago called the Cowles Commission for Research in Economics. They organized a conference on new statistical methods. I really thought about it. I was studying statistics and thinking about economics, I said to myself, I am not sure if ordinary regression analysis really does the right thing for this. I felt that something was wrong. But, I could not derive something interesting.

8. When you were struggling to find your dissertation topic, did you consider other options outside academia for your future?

Yes. In fact, I considered becoming an actuary. I got some interviews and offers from insurance companies. I recall that Hotelling was very disapproving. I went to a conference organized by the Cowles Commission and I knew that Tjalling Koopmans, who was there, had worked in the past for a while in an insurance company. So, I asked him "you know, I am thinking of becoming an actuary, what is it like working in an insurance company?" He responded "Oh no! There is no music in it". I think I would not have gone anyway, I think I would have made the same decision, but, the minute he said that I realized that there was no question whatever.

9. How did you finally decide to work on the aggregation of individual preferences and social choice theory?

I became a research associate at Cowles Commission in 1947. There I was constantly encouraged to criticize people and their ideas, especially by Jacob Marschak. If you criticized him, he loved it. Koopmans was a little bit more sensitive, he was not so happy with criticism.

At Cowles I met Selma Schweitzer (my future wife), who was studying there, and it was she who introduced me to statistician M.A. Girschik, who was going to work for the RAND Corporation. He invited me to spend the summer of 1948 there. There I met a fellow named Olaf Helmer, a German philosopher. It was not the first time I was meeting him. I had met him when I was in my last year at college. I had attended a course, by the great Polish logician, Alfred Tarski about the calculus of relations, which I found very interesting. Tarski did ask me to proofread the translation of his book from German to English. The translator was Helmer. So, I got to meet him then for the first time.

When we met again at RAND Corporation, he said to me how puzzled he was about the (at that time) well discussed games between the Soviet Union and the United States. The payoff functions of such games were defined in terms of utility functions following the von Neumann and Morgenstern formulation and they were derived on the basis of individuals. He found puzzling that the Soviet Union and the United States were not individuals but aggregates of individuals. I replied to him that economists have thought about that, and it is really explained in a paper by Abram Bergson. He asked me to write an expository paper on Bergson's work. When I started working on this paper, I realized the questions that had been asked were not right. That is one of my biggest academic strengths, finding out whether people ask good quality research questions and if not to modify them to the right direction. I had finally found my dissertation topic!

It took me a week to set up the framework and demonstrate the inconsistency of a set of reasonable conditions for aggregation of preferences, and it took me 6 months to write it up. I was working with a thesis advisor that could not see what I was working on. But he had the feeling that it was something good and important. Hotelling had left Columbia by that time.

10. In choosing your topic you defined a whole new field in economics, that of social choice theory. Was it difficult to develop it given that people around you were not able to help you very much?

No, it took me a week. I saw immediately what the problem was. It was very, very simple. It could have been done some years earlier. It does not depend on modern and complex mathematics. I used the relations theory I learnt from Tarski, but I only made very elementary use of it.

11. After being awarded your PhD you got a position at Stanford and started looking into general equilibrium theory. What was your initial motivation to work on this particular topic?

I had identified that in some games, at the equilibrium, players play the competitive equilibrium. My wife was playing bridge, and once I was waiting in my car to pick her up. While waiting, I started thinking that this is a game whose equilibrium is the competitive equilibrium. There were some technical points that required some investigation. It took me around a month to write it. Then, it turned out that Debreu was doing exactly the same thing from the very same perspective, and we joined our forces.

12. The 50s were for you period of multiple and seminal publications on social choice theory, general equilibrium theory, security markets and so on. Then, you joined the staff of the Council of Economic Advisors in the Kennedy Administration. Was this a useful experience for someone that was so active in academia as you?

Yes. It did not have so much influence in my later life, but it was useful as a matter of fact, but in a very peculiar way. Everybody was talking about macroeconomics. The Keynesian revolution, multipliers and all that. In the staff of the council, I was the only one who was working on microeconomics [laughs]. I

could say that at large it was waste of time. I would say that I did something very useful during the first two weeks. And at the end I did something very useful as well. I contributed to the implementation of policies that were right. In between I dealt with projects that did not flourish, for administrative reasons, not intellectual. Kennedy created a lot of teams, the so called task forces. One such team was working on the airline industry. There was a group of airline owners and manufacturers who came up with some recommendations. One of them was that the USA should undertake building a supersonic transport. The British and French had committed to that, and the Russians were also working on one. I am in favor of government projects when the benefits exceed the costs. In this proposal, I did not see many practical benefits but on the other had through my contacts in the RAND Corporation that were involved in the development of new military airplanes, I realized that the cost implementing that recommendation would

have been relatively high. So, my view was that we should not have implemented such a policy just to be the first to do it and leave the Soviets behind, but we should have been happy that Soviets chose to implement a policy that has high costs but only limited benefits. The council adopted my arguments and the project was initially delayed. Later, taking into account the environmental concerns related to supersonic flights above populated cities, the project was finally killed and I was happy that I played a role on that.

13. Prof. Arrow, thank you so much for this interview and for your valuable time. Before the end, do you have any message for our students?

Remember what economics is for. **It's about helping people.**



An Interview With Alvin Roth

"We Like to Make Markets Work Better"

by Georgios Petropoulos

Before the interview, allow me to present some highlights of the life of Alvin Roth. He never graduated from high school as he decided to drop out because he felt "underestimated" (The Stanford Daily, 19 Oct. 2012). This did not prevent him from entering the undergraduate program of Columbia University and study Operations Research. His graduate studies in the same discipline at Stanford could have been very short as he failed a PhD qualifying exam which was necessary for the continuation of his studies. Fortunately for us, Bob Wilson agreed to act as his PhD adviser giving him in this way the opportunity to finish his PhD studies. After the completion of his doctoral studies, Alvin was about to accept an offer from a maths department but at the last minute he changed his mind after receiving a phone call from Bill Zangwill, who was putting together an operations research group in the business school at the University of Illinois at Urbana-Champaign. There he had the freedom to focus on the research topics of his interest, like game theory and market design. Alvin is also known for the very close relationships that he develops with his students. Many of his students consider Alvin as member of their family and they talk about his ability to act as an advisor with the best possible words. In fact, he recently decided to move from Harvard to Stanford because he wanted to be closer to his former students who in the meantime had taken positions in the faculty there.

1. What was your initial motivation to do research in the fields of matching theory and market design?

I studied lots of different parts of game theory when I was young and some of them turned out to be dead ends. But matching always kept raising new questions, so I kept looking into it and



Professor Alvin Roth

tried to answer them. And of course you have the advantage of having a connection to things in the real world. It was nice to find some games that are played according to matching rules. This is not only

Alvin Eliot Roth is the Craig and Susan McCaw professor of economics at Stanford University and the Gund professor of economics and business administration emeritus at Harvard University. He has made significant contributions to the fields of game theory, market design, matching theory and experimental economics and is known for his emphasis on applying economic theory to solutions for "real-world" problems. He has designed the National Resident Matching Program, through which approximately twenty thousand doctors a year find their first employment as residents at American hospitals. He also helped design the high school matching system used in New York City to match approximately ninety thousand students to high schools each year (in use from Fall 2004) and he redesigned the matching system used in Boston Public Schools (in use from September 2006). He is one of the founders and designers of the New England Program for Kidney Exchange for incompatible patient-donor pairs.¹⁰ In 2012, he won the Nobel Memorial Prize in Economic Sciences, jointly with Lloyd Shapley "for the theory of stable allocations and the practice of market design".

firms and the way they compete with each other. I think that learning about that has opened up a new window on labor markets and how people enter them. It was not obvious on the basis of theory that everyone will be paid at his marginal productivity. It turns out that it is hard to assess everyone's marginal productivity.

3. Did the initial unsuccessful attempt to introduce matching theory into the economic literature strengthen your motivation to convince your colleagues about the economic relevance of matching theory?

Yes, I guess. I have come to think that the models we like to use in economics have focused more of our attention on markets that are like commodity markets. But there exist other markets that are equally important. Public schools for example are special as we do not allow money to influence the allocation. The salary does not exclusively determine which job you like to take. People are not commodities. You cannot make a job offer to the whole market and just hire whoever accepts the lowest wage. We therefore need other market clearing institutions. We need ways to examine individuals. A simple dimensional price vector does not clear the market the way it does for commodities.

4. You were trained as a theorist and made some seminal contributions to the field of matching theory. Why did you decide to move your attention to real markets and deal with practical problems such as school choice, as for instance in New York or Boston, the placement of doctors after medical school or even kidney exchange?

There are of course many different answers to this question because there are many different reasons to do those things. One answer is that you want to do good in the world. When we learn about markets, we like to make markets work better. Another answer is that we like to test what we learned and see whether it is really true. If we know how to make markets work better, how come they do not already work that way? Maybe there are aspects of the problem that we have missed. And then if we go out and try to make them work better, maybe people will explain these aspects to us and we will find out some of these missing things that will help us to better understand markets. And a third answer is to demonstrate the value of things that we have learned. That is to say that if we have learned valuable things we should be able to make markets work better. At the same time this is one way of testing what we have learned.

5. Would you recommend doing research on real markets?

Well, it takes time to convince people to design and implement a market. In many cases it is not suitable for a PhD dissertation just because of time constraints. On the other hand I heartily recommend looking at real markets, partly because the markets are very interesting and the reason we

mathematically satisfying, but also gives us some insight on how economic institutions work.

2. Matching theory and the markets on which you are working on do not involve prices or wages, tools that are traditionally used in economic environments to clear markets. Did you have difficulty in introducing such matching markets in the economic literature and policy discussions?

It was difficult at first. One of my first papers on matching was published in a journal called Mathematics of Operations Research. The title was "The Economics of Matching: Stability and Incentives". But I first sent it to the Journal of Political Economy. The editor was George Stigler. He replied to me with a very polite letter in which he said that he had read the paper, that it was very interesting and clearly it had involved a lot of work but there was no economics in it at all except for the title. What he meant was that there was no price adjustment in the model. First of all, of course, the markets that use clearing houses have wages. They do not adjust them in the course of the algorithm but they adjust them from time to time to make the jobs more attractive. And I think that even in very decentralized markets it turns out that entry level wages for professionals are less personalized than economists tend to think. If you look at the wages for lawyers in big US law firms you observe that there are lots of new lawyers that earn exactly the same amount, and I think that makes it easier to manage

¹⁰ A kidney exchange is an innovative twist on efforts aimed at increasing the donor pool by giving people who are unable to receive a kidney from a loved one or friend the opportunity to still receive a kidney through an exchange between incompatible donor-recipient pairs. Now, with this exciting new program, you can exchange donors with another pair(s) in a similar situation as you, making transplantation possible. See <http://transplants.ucla.edu/site.cfm?id=112> for more information.

study economics, but partly because it is a different avenue to understand what problems are interesting rather than reading the literature. A traditional theorist reads the journals and discovers what other people find interesting and puzzling. But figuring out why some real markets are not functioning so well is just another way of thinking about problems.

6. I guess that a secret of the success of your applications of theory to real markets is the good collaboration you have with practitioners. Was that the case from the beginning? Did the different backgrounds of academics and practitioners pose difficulties on your collaboration?

Yes. Many people are puzzled that economists should be interested in their problems. For instance, kidney surgeons do not automatically think of economists as the kind of people who will help them think about kidney surgeries. That is why I have spent a lot of time explaining to people that economists are good guys who can help them think about their problems. I am currently writing a book about market design addressed to the general audience. What I would like is to help expand people's notion of what economists do in order to make it easier for economists to talk to non-economists.

I had a dinner with Neil Dorosin last night who was the director of high school operations in New York City when I first met him. Together we helped redesigning New York City's school map. He has since formed a non-profit organization called Institute for Innovation in Public School Choice and he is helping to set up models of school choice around the country with the help of Parak Pathag, Atila Abdulkadiroglu and me. As he was working for the NYC department of education dealing with these problems of getting kids into school, it really helped us to have him on board in redesigning the model of matching students with schools in NYC. I think that the most successful market design occurs when you find someone on the inside who understands and can talk to you and can

“What I would like is to help expand people's notion of what economists do in order to make it easier for economists to talk to non-economists.”

talk to his colleagues and makes things happen. We often speak of economists designing markets. But a better thing is helping people to design the markets that they are involved with.

7. My next question is related to kidney exchange and to the controversial issue of whether the buying and selling of kidneys should be allowed or not...

Of course this is not what we do with kidney exchange. In fact, kidney exchange is a way of bringing some of the benefits of a market place exchange to kidney patients without using monetary transactions. But it is definitely an interesting question how come we don't just buy and sell them. The first kidney transplant was made in 1954 between identical twins, but the first kidney exchange in the US was made in 2000. There is a 1984 law that says you cannot buy and sell kidneys, so that the debate had come before kidney exchange. For kidney exchange we needed a new law which says that kidney exchange does not violate the 1984 law.

8. What is your personal view on this topic?

I do not feel obliged to have a personal view. I am very impressed that it is against the law to buy and sell kidneys not only in the United States but in every country in the world, with one exception, which is Iran. Simple arguments that explain slowly and clearly how monetary transactions between consenting adults improve welfare are not likely to change the situation. It is something that is against the law everywhere. That's a big fact. I do not understand why that is true, but I think that as social scientists it would be good for us to better understand how people think

about economic transactions because there are a lot of what I have come to call repugnant transactions. These are transactions that some people want to do and some other people don't and sometimes this changes. And in the past we have observed big changes. You know that charging interest on loans was a repugnant action in Europe during the middle age. By law this has changed. In the United States we used to sell slaves but that has changed. So, things are moving in both directions. Things that were not so repugnant become repugnant and vice versa.

9. My last question is about your future agenda. What are the challenges and the things that you want to spend your time on? What is your research plan and the real market applications that you have in mind?

The particular markets I have been involved in keep raising interesting questions. I think there are ways to make transplantation more accessible to more people and I am pursuing some of them. With regard to school choice we have this growing mixture of all kinds of schools. In the United States we have public schools and private schools, and we have more and more of what we call charter schools. These are privately managed schools that benefit from public funding. New Orleans is one of the cities that has many of such charter schools. This causes congestion in school choices in a way that some families receive many offers while other families receive none. We try (and have succeeded to some extent) to unify the school choice process across more of these schools. We try to make it easier for families to deal with school authorities and that seems to improve the efficiency in the school choice. ■

An Interview With

Josh Lerner

by Julia Hoefler Marti and Emil Palikot



Professor Josh Lerner

Josh Lerner is the Jacob H. Schiff Professor of Investment Banking at Harvard Business School. His research covers a wealth of topics, including numerous papers on private equity and venture capital, entrepreneurship, and intellectual property and innovation. In January, he came to Toulouse to speak at the eighth bi-annual conference on The Economics of Intellectual Property, Software and the Internet, and volunteered some of his time to answer the TSEconomist's questions.

1. You have done important research in so many subjects it was difficult for us to decide where to begin with. We'd like to start out by posing a silly question: what makes writing a book and inventing a machine so different that we need different tools to protect property rights?

That's a great question. Certainly, both the knowledge that's protected under copyright and that which is protected under patent law do have a lot in common; one of the big things is the public good nature of it – that the idea, once it gets diffused widely, whether it's a

contraption to remove something from a machine tool or whether it's a framework for doing valuation of a company – it's very desirable for it to be diffused widely, but at the same time, it's very hard without some sort of intellectual property protection to ensure that the inventor of it will get some returns. They spread like wildfire: you come up with a new management technique, and you're not going to get any kind of reward for it unless there's some sort of protection. That being said, when you think about the nature of the writing process, it's

often much harder to delineate where the creative element is. So the nature of patent protection is: not only are you protecting the individual device, you're protecting the idea behind it. So if you think about, for example, the oversized tennis racket – when they invented that, [the patent] wasn't simply for a tennis racket that was 70 square inches; they got a patent for saying that it was from 55 square inches to 100 square inches, something like that; so you could do a minute variation and it would still be covered by the patent. In creative

“I think that’s really the rationale, that in some sense for creative things, the tendency has been to have much narrower protection than for the more mechanical inventions.”

endeavors, it would be much harder to have that notion of breadth. So if you were to say “I want a protection for writing a book about falling in love” and they had a patent-like system, you could presumably go after other people who write a book about falling in love, and that would not be very desirable – it would lead to what most people would probably describe as an undesirable stifling of creativity. So I think that’s really the rationale, that in some sense for creative things, the tendency has been to have much narrower protection than for the more mechanical inventions.

2. You came to Toulouse for the Conference on the Economics of Intellectual Property, Software and the Internet, and you will give a lecture on “Copyright in the Cloud”. Could you briefly discuss what the challenges to intellectual property protection stemming from the development of cloud computing?

Well, certainly one of the main issues, which is where I focus, is the issue around how people who store intellectual content in the cloud get treated. So in other words, you essentially go and download a movie, and even if you downloaded it absolutely legally, it can still pose issues if you go and store it in the cloud: not only may you be liable, but more critically, the firm which provides the cloud service may also be liable. So one of the big concerns until this issue was solved a few years ago in the US was that if you were a venture capitalist backing a cloud company and someone ended up storing something in the cloud that you would essentially end up being found to have infringed on the IP of the movie studio, record company, etc. who

“Patent pools have been used in the last few decades as a way to help standards get established (...) it makes people a lot more confident in adopting standards because most of the uncertainty around licensing has been resolved.”

developed it. So that was one of the big things, and what we do in this paper, is look at how those fears around IP protection inhibited investors from putting capital into this area – and once those fears were resolved, how did that end up changing the investment environment?

3. To many TSE students you are probably best known for your work on patent pools. How can an agreement among patent owners to license their patents together improve social welfare?

I think that to answer that, one really needs to think about how new technologies are developed. Often, people see that there’s a problem and say, for example, “we want to get our computers to communicate with the internet”, and everyone sees there’s a problem needing a solution, but often it’s the case that different companies have different ideas on how to address it, and each company is promoting their own answer. To address this problem, which is a classic coordination problem, there spring up these standard-setting organizations and what the standard-setting body typically does is to gather everyone in a room and says, “let’s figure out a solution,” and everyone fights it out and tries to figure out what’s best, and they eventually come to a solution that everyone – or at least a supermajority – sign off on, and then they say “we’ve got this Wi-Fi standard, and that’s what we’re going to promulgate.” But even when you get a standard where you have a number of companies participating and it gets endorsed by a standard-setting body, you still often have a question as to whether people are going to adopt it. And it can be that there’s different versions of it, like various flavors of communicating

between networks and computers; often there’s different standard-setting bodies who do their own standards – think of, for example, videos where there’s Blu-Ray and various competitors. So you can have standard wars where

you have competing standards taking place. One of the big things that holds people back from adopting standards is the fact that even if you say you’re going to implement a standard, it’s not enough: you have to actually go and license all the patents associated with the Wi-Fi standard so I can actually put this into place. And it is true that people who take part in a standard-setting body make promises like, for example, that they will license their patents on FRAND – i.e. fair, reasonable and nondiscriminatory – terms, which means they won’t charge an outrageous price if their patent gets adopted into the standard; but often these commitments are fuzzy and somewhat ambiguous. So there’s a lot of doubt as to whether you can get licenses, whether the standard will really take off, and you can see that even if you get something codified as a standard, you’re still nervous about whether it’s really going to work.

So patent pools have been used in the last few decades as a way to help standards get established; they’re a way of getting all the firms that have IP that’s relevant to the standard to promise not simply to license on fair and reasonable terms, but to license a basket of patents for, say, two dollars per every DVD player. So if you’re making DVDs you can go and say “I’m going to build 10,000 DVDs, here’s a check for \$20,000.” And then you have all the patents there. So it makes people a lot more confident in adopting standards because most of the uncertainty around licensing has been resolved. And when you consider that one of the things that holds back technological progress is not so much the ideas – because people have lots of great ideas – but the coordination to actually get them out there, you can see that patent pools, when they work, serve as coordination mechanisms that help ensure the diffusion of new technologies. Unfortunately they can also be used in anti-competitive ways, but that’s another question.

4. A short follow-up on this. Lots of economic papers see patents as a probabilistic matter. Why is that?

There have certainly been many studies that look at how much patents are ultimately worth to the companies that take them out. What you typically get is a distribution that doesn’t look that different from the distribution you see for



venture capitalists, or returns from IPOs, or many other kinds of things – in other words, there are a large number with no value whatsoever, and then there’s a peak at a relatively low value, and then what we call the famous “long tail”: a relatively small number of patents that have a huge fraction of the value. And the challenge is that in many cases not only is it very uncertain – it’s a very uneven distribution – but often even the people who take out the patents don’t know if they have something valuable or not. There was an amusing article written by Nathan Rosenberg, who was a professor at Stanford, who looked at a whole variety of great inventions and saw how the people who made those inventions really didn’t understand what the potential of those investments was. For instance, one of the famous quotes he uses is from Tom Watson, who was President of IBM at the time they introduced the first computers in the 1940s or early 1950s, and he said, “The total demand for computers in the world is going to be five.” So clearly even though IBM was crucially involved in inventing the computer, they just didn’t understand what the nature of that thing was going to be. So in a way, when you think about lots of inventions that’s often a characteristic of it: you know that people thought this might have potential – in some cases it ends up being worthless, in others it ends up being fabulously valuable – but no-one really knows going in which way it’ll end up being.

5. Another important issue related to IP protection is open source software. What are the motivations of people who create open source software? Do you think it can be extended to other disciplines?

It’s a very interesting question. We see this whole open source world of people writing programs, working nights and weekends for it, and it’s very interesting to think of why they do it. Clearly part of it is for the same reason we write

academic papers once you have tenure as a professor: you don’t really need to do it, all professors get paid pretty much the same, so it’s not like you’re going to get richer from writing more papers. A lot of it is the desire to impress friends and peers and so forth – not only do you enjoy it but it impresses other people and you enjoy getting pats on the back. And certainly in open source there’s some of this dynamic as well: there’s a peer group and if you write some really neat code you get recognized and people incorporate it in their code base and so forth. But what we’ve argued in some of our work is that there are also other motivations, and in particular that participating in an open source project can be a form of signaling of your ability and actually lead to direct benefits to you. So it may be that a venture capitalist looks at what you do and says, wouldn’t it be fun to try to commercialize this open source software (as often happens).

Sometimes corporations hire people to be open source evangelists, i.e. people who take open source software and try to incorporate it into their projects. In other cases it ends up leading to unrelated programming opportunities. One of the things that we’ve argued is that for a lot of people who are not necessarily in the highest profile places – maybe they’re working for a small university as a systems admin – they may be a very good programmer, but no-one’s really ever going to see their talent running the networks at the university. So this gives them a way to signal their ability, which may have direct, material benefits to it.

The second part of your question is will this model expand to other places – we certainly see user-generated innovation in other places, where certain users suggest a machine to a company, but you typically don’t see the features of open source where the users get credit for having done this thing and it can be a channel of advancement for them. I think part of it may be that software is easier to do: it’s easier to put everything on the internet and see how it works; it could be that software more modular, in the sense that you can work on one little part of it, and if you were to try to do this for, e.g., designing a car, there’s so many elements that have to interact with each other that it would be hard to really make it work. Still, it’s an interesting

question as to whether we’re going to see this more broadly across a variety of sectors.

6. Preparing for this interview we came across an interesting fact about you: you are not only a patent theorist but also a practitioner. What can you tell us about that?

I do own a patent, exactly. (laughs)

So one of the areas of research I’ve done a lot of work on has been venture capital, and certainly one of the areas that’s been very interesting there has been valuation. We did some of the early work in terms of how to value venture capital portfolios, and the fact that you’d want to look at, e.g. comparable companies in the public market, the dynamics of IPOs and pricing and so forth. So at the time I was launching a research agenda on financial patents, so I said to my co-authors, “Why don’t we go ahead and file for a patent here? There’s nothing like doing the real thing to understand how it works.” One interesting aspect is that it took the patent – there’s a lot of criticism in the U.S. of the Patent Office for being too slow – and indeed it did take them about seven years from the time we filed it to the time they issued it.

7. Last question. Volumes have been written about different ways to protect intellectual property. Do you still see avenues for future research?

I think there’s a lot of interesting aspects still to be really explored; part of it is clearly that the landscape is changing, so we’ve seen, for instance, the U.S. Supreme Court has tried to undercut a lot of the broadening that had been done in the 1980s to 2000s and has tried to rein in the patent system, so you have an interesting dynamic taking place there. But I think it’s also fair to say that, while there have been many studies looking at issues like whether broader or stronger patents affect innovation, what is the optimal patent life, and so forth, there’s still a lot we don’t know about these issues, especially on the empirical side. While there’s great theory, when it comes to the mapping between the theory and the real world there’s still a lot of interesting questions to answer. ■

The Global Financial Cycle Blowing in the Wind

Hélène Rey

by Hussein Bidawi, Sabine Gerdon and
Christopher Sandmann



Professors Hélène Rey and Jean Tirole

In 2013, French macroeconomist Hélène Rey blew Jackson Hole. A year later, the IMF included her on the list of the 25 brightest young economists: domestic financing conditions are determined by global cycles.

At about the latitude of the United States global weather conditions are marked by a prevailing wind from the west towards the east, reaching until Europe and beyond. This wind belt is embedded in a more complex system of six belts that circle the globe in opposing directions. Weather scientists have called the North American blow: the anti-trade. Its title is curious and could well serve as a metaphor for the alleged turmoil the Federal Reserve System and ECB policies alike may stir in developing country investments. According to a 2015 BIS

working paper "the monetary policy of the Federal Reserve or the ECB is transmitted directly to other economies."⁽ⁱ⁾ At the same time shocks in the periphery can have an impact on the US economy. Likewise Fratzscher et al. (2012)⁽ⁱⁱ⁾ conclude that there is indeed an important global dimension to and externalities from monetary policy. At the same time concerns loom large about diverging monetary policies in the US, Europe and Japan as a cause of global turbulence. Without doubt the literature on spillover effects from unconventional and conventional monetary policy is on. Yet little is known about them.

Until recently economists were led to believe that countries face a "trilemma": they cannot have free capital flows, a fixed exchange rate and an autonomous monetary policy at the same time ('impossible trinity'). Only a maximum of two goals can be achieved. For example, a country cannot maintain a

currency peg with a bigger economy and allow free movement of capital between these two countries. Monetary policy could affect capital returns to the point that exchange rate adjusted nominal interest rates differ. Arbitrage opportunities arise. If the smaller economy wants to do both, keep the exchange rates fixed and guarantee free capital movements, it needs to adopt the monetary policy of the bigger economy. Larger economies therefore export their monetary policy into the periphery.



Professor H el ene Rey made the argument that the policy “trilemma” overstates the efficacy of monetary policy⁽ⁱⁱⁱ⁾. She finds that widespread co-movements in capital flows, asset prices, and credit growth across countries – a global financial cycle – question the “trilemma” idea. Governments instead face a dilemma, or an “irreconcilable duo”: free capital flows may inevitably mean a loss of monetary-policy independence. She thus argued that “cycles may govern excessive credit growth in boom and excessive retrenchment in bad times” regardless of the exchange rate regime or domestic monetary policy.



H el ene Rey's research focuses on international macroeconomics and finance with special emphasis on international capital flows, exchange rates and the international monetary system. She received her undergraduate degree from ENSAE, a Master in Engineering Economic Systems from Stanford University and her PhDs from the London School of Economics and the Ecole des Hautes Etudes en Sciences Sociales. In the interview she explained that she stayed in academic research because she really enjoys what she is doing. For her, research involves a lot of creativity and it means that you can engage independently and deeply into interesting topics. Since 2007 Rey is a professor at the London Business School. Before that she spent time at Princeton University where she was a professor in the Economics Department and the Woodrow Wilson School. Furthermore, she was a Sloan Research Fellow and received several prizes for her work including the 2006 Bern acer Prize for the best European economist working in macroeconomics and finance under the age of 40 for “her important research on the determinants and consequences of external trade and financial imbalances, as well as the Birgit Grodal Award and the Yrj o Jahnsson Prize. In 2014, the IMF included H el ene Rey on the list of the 25 brightest young economists on which she and Thomas Piketty represent the only non-US institutions.



World Trade Center Construction Sunset from Jersey City.

(i) See more: <http://blogs.wsj.com/moneybeat/2015/01/20/warnings-grow-over-emerging-market-debt/>

(ii) Forbes, K., Fratzscher, M., Kostka, T., Straub, R. (2012). Bubble thy neighbor: direct and spillover effects of capital controls. NBER Working Paper No. 18052.

(iii) Rey, H. (2013). Dilemma not trilemma: the global financial cycle and monetary policy independence. In Jackson Hole Economic Symposium

The TSEconomist Team had the chance to talk with H el ene Rey about her findings during the Tiger Forum 2014.



Professor H el ene Rey

1. In a globalized financial system, do you think that the Federal Reserve (Fed) should pay attention to the consequences of its monetary policy on the rest of the world? On the one hand its monetary policy does matter for the world economy, on the other hand the Fed has a clear US based mandate.

In my Jackson Hole paper I write about the global financial cycle. Changes in the Federal Reserve's benchmark interest rate can fuel the cycle. But also emerging markets have the power to impact the US economy. To understand the entire spillovers one would need to have very good models and it would still be very difficult. Therefore, we cannot expect the Fed to extend its mandate across US borders. However, there are policies that can help to regulate the effects of the financial cycle. These are macro prudential policies, capital controls and imposing stricter limits on leverage for all financial intermediaries.

2. In the paper you just mentioned, you showed that: "Whenever capital is freely mobile, the global financial cycle constrains national monetary policies regardless of the exchange rate regime." What implications does this finding have on central banks pursuing fixed exchange rate regimes? Does this imply that these regimes are less effective, at least when it comes to financial stability?

What I find is that credit growth and asset prices are very much synchronized around the world, so obviously there are some national effects. However, there is also a very important global factor and this is regardless of whether your exchange rate is freely floating or if you have a fixed exchange rate. The idea of the trilemma is that if you have freely floating exchange rates, you can isolate yourself perfectly from outside shocks and if you can isolate yourself perfectly, you have monetary policy independency. What I find in the data is that this is not true in the sense that all countries are subject to the global financial

cycle. This can mean that they are afraid of letting the exchange rate move too much so they manage the exchange rate and so they constrain their own monetary policy or it can mean that they already have a fixed exchange rate and do not have an independent monetary policy anyway. In any case they are subjected to the global monetary cycle. This is why I push for the additional instruments such as macro prudential policies or capital controls to intervene on the global regulation side and to prevent too much leverage for financial intermediaries. One could also think of the strong role of fiscal authorities. If you have for example a booming real estate market you might not want to subsidise housing but you might want to tax it a bit more.



European Central Bank new building under construction Frankfurt Germany.

3. What implications does this have on developed countries' central banks? Does this mean that once the Fed starts hiking rates, the European Central Bank and the Bank of Japan are expected to keep monetary policy loose for longer: should the Eurozone and Japan start thinking about managing their capital accounts? If so, what does your paper recommend as a policy rule?

You have to have a reason to manage your capital account. Usually that means that you're afraid of booms in asset prices. In the current situation it is more about avoiding deflation and this belongs to a different set of issues. Therefore right now traditional monetary policy tools such as a change of the interest rate and quantitative easing or credit easing which the central banks have been and are using are more interesting.

Thank you for the insights and your time! ■

International Debate on Re-Industrialization

A Panacea for Economic Recovery?

by Philine Schuseil and Christopher Sandmann
with the assistance of Demelza Hays

According to James Boxell of the Financial Times, the past decade has been miserable for France's industry. A good example is the auto industry where the number of jobs declined by more than half between 1980 and 2010. Yet the development in other European economies such as Germany proves that carmakers can employ more people today than they did three decades ago.

These days, the issue of désindustrialisation figures heavily on the French political agenda. One of President François Hollande's campaign promises in 2012 has been to help the French industry get back on its feet. In late 2013, French Industry Minister (Ministère du redressement productif) Arnaud Montebourg presented 34 measures in order to redress ("re-industrialize") the French economy. Montebourg presents himself as a fervent fighter for the French industry: "We will fight to the death for our industrial base". The General Public got a taste for this fight when Montebourg decided on the acquisition terms of one of the nation's showpiece companies and manufacturer of the TGV, Alstom. The French government now holds a 20 % stake in the company and monitors the new owner General Electric carefully to abide to its promise of new job creation. According to Guido Hülsmann, our second contributor, libertarian and staunch believer in market self-regulation, government interventionism is partly to blame for the decline in industrial production in the developed economies.

Can re-industrialization really help the French economy get back on its feet?

Francesco Daveri, our first contributor, from Parma University believes that re-industrialization can play an essential role in the economic recovery of Europe. He cites the convergence rates of manufacturing in Eastern Europe after the crisis as compelling evidence. "GDP growth has often recovered faster where manufacturing production has regained weight at a faster speed." However this entails reverting a long run trend that has been prevalent in developed economies regardless of the dominant economic policy. Indeed one pattern in the structure of developed economies since the late 1960s is the decline of the manufacturing sector employment in manufacturing as a share of total employment has fallen dramatically. Economic historians generally identify a number of factors which may explain the long-run deindustrialization trend of mature economies, especially in the U.S. and Europe.

Productivity (i.e. output per worker) has been shown to rise faster in manufacturing than in services. As a consequence, employment shifts to the service sector because fewer workers (relative to the service sector) are needed to produce the manufactured goods the economy requires in the future.

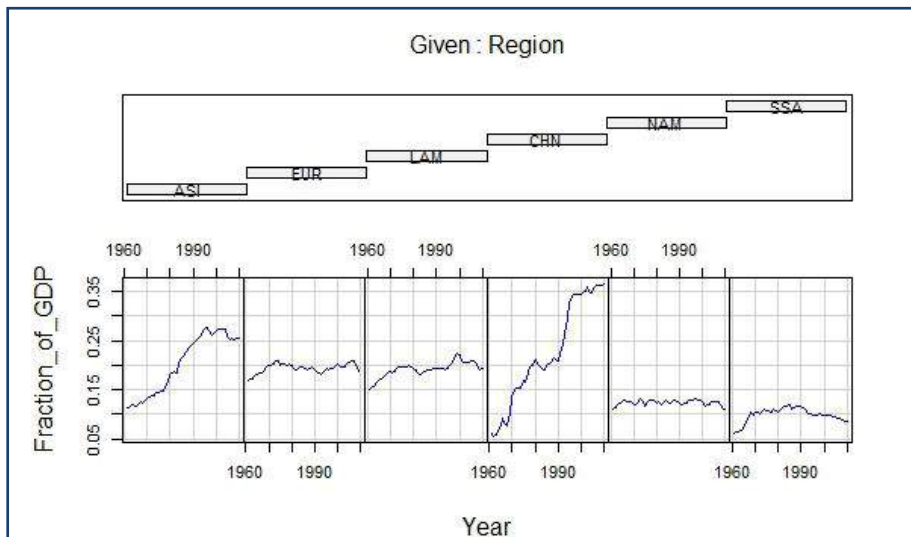
As **real incomes increase**, individuals tend to prefer to spend more of any extra income on services rather than on manufactured goods. This strengthens the effect of different productivity

rates across sectors. **Labour mobility between countries** of divergent socio-economic development is constrained relative to the mobility of capital. Therefore, manufacturing firms can outsource labour to developing countries, not just because wages are lower, but because wage-productivity ratios are in some cases much lower.

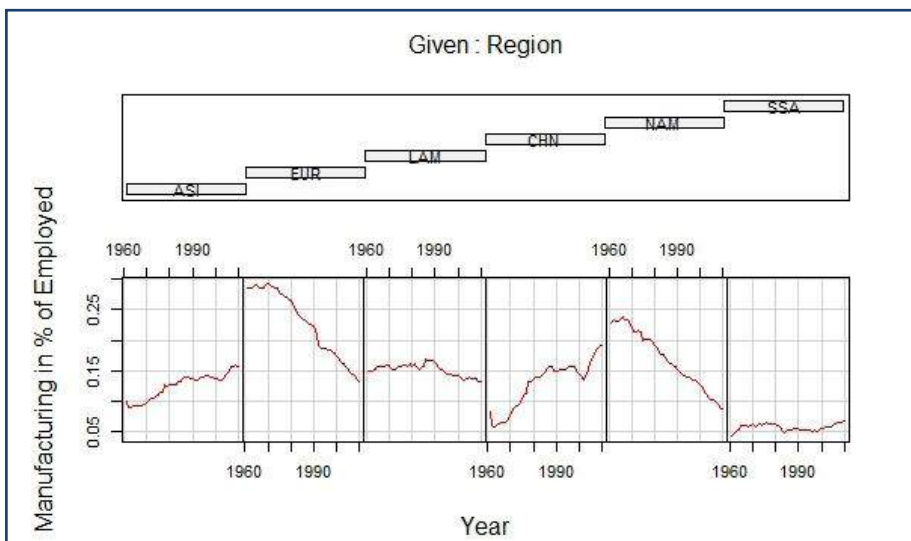
The de-industrialization phenomenon has given rise to a debate about its causes and likely implications. Many regard it with alarm and suspect saying that it has contributed to high unemployment in Europe. Some suggest that it is a result of the globalization of markets and has been fostered by the rapid growth of North-South trade. They also argue that the fast growth of labour-intensive manufacturing industries in the developing world is displacing the jobs of workers in the advanced economies.

However, an IMF working paper by Rowthorn and Ramaswamy (1997)¹ concludes that deindustrialization is **not a negative phenomenon, but rather a natural consequence of further growth in advanced economies**. Trade among industrial countries (rather than between industrial and developing countries) accounts for some of the differences in employment structure between different advanced economies - the phenomenon is not due to increasing North-South trade. Moreover, future growth within the developed world is likely to depend increasingly on productivity growth in services.

¹ IMF Working Paper 1997: "Deindustrialization: Causes and Implications", by Robert Rowthorn and Ramana Ramaswamy.



Manufacturing Output in Percent of GDP



Fraction of Employed Working in the Manufacturing Sector

Is this debate limited to advanced economies or is deindustrialization a more global phenomenon?

Meanwhile Andi Rodrik, our third guest author, from Princeton University has observed a troubling trend. Deindustrialization is not exclusive to advanced economies but prevalent in all regions but Asia. Developing nations are becoming service economies without having had a proper experience of industrialization. He has coined this process "Premature de-industrialization". In a new paper he argues that the conventional explanation of de-industrialization is incomplete. De-industrialization is not only driven by technological progress but also determined by globalization. As prices are determined globally developing countries are exposed to the world market. In other words, they must compete with low prices that didn't exist when today's advanced economies industrialized. ■

Reindustrialization - a panacea for Europe?

by Francesco Daveri (Università di Parma)

After two decades of outsourcing and offshoring, things may be changing in the Western world: insourcing and onshoring have now become the buzzwords of the day. In the United States, generous State aid and the discovery and exploitation of extensive shale gas reserves have revived the American industry after the crisis of 2008-09. Manufacturing production in the US economy has gone up by 20 percentage points compared to its low of June 2009. The rapid increase of manufacturing was twice faster than the (remarkable) growth of US GDP over the same period of time.

Reindustrialization is not an exclusive feature of the American economy. The variety of growth experiences in Europe shows that GDP growth has often

Graph Description

The data is taken from the University of Groningen GGDC 10-Sector Database.² The red graph shows the number of people employed in manufacturing as a percentage of the overall employed population. The blue graph indicates the output share manufacturing in percent of total GDP. Time series are plotted for China (CHN) and cross country aggregates for Asia (ASI), Europe (EUR), Latin America (LAM), the US (NAM) and Sub-Saharan Africa (SSA).

recovered faster where manufacturing production has regained weight at a faster speed. Germany, with its 10 per cent GDP gain paralleled by a 25 per cent recovery in manufacturing production since early 2009, is an obvious case in point. Yet more impressive numbers apply to many countries in Eastern Europe. In Poland, Slovakia, the Czech Republic, Hungary and the three Baltic States, GDP has undergone fast recovery driven by rapid growth in the manufacturing sector, from a minimum of 24 per cent (Hungary) to a maximum of 59 per cent (Estonia) since their 2009 lows. For Eastern Europe this continues the former process of rapid manufacturing development, prematurely discontinued by the Great Recession. Part of this growth may be driven by the offshoring of some German manufacturing activities in search of low-wage engineering and technical skills. But these numbers also indicate that Eastern Europe's manufacturing can compete with its Turkish and Chinese competitors. In the rest of Europe, the UK and France has shown GDP and manufacturing growth at similar, intermediate, speeds, while both industry and overall Gdp growth is still largely missing in Southern Europe.

The variety of growth trends across Europe invites the question of whether the post-Lehman return of industry in some countries represents a chance to end the current crisis even in those countries where growth has returned yet. If yes, then reindustrialization may be a panacea for Europe's problems. The answer is a qualified yes. All European countries are global economies whose consumers need imports to carry out their preferred consumption plans. And imports require exports (plus net income from abroad) to be sustained. And, in turn, exports still largely mean maintained industrial competitiveness.

²The data can be found under the following address <http://www.rug.nl/research/ggdc/data/10-sector-database>



The return of industry is thus, to some extent, a necessity rather than a choice. Many object that, if every European country specializes and exports similar manufacturing products, this would result in excess supply and eventually in a self-defeating loss of terms of trade. Yet this argument overlooks that the trade of European countries is largely of an intra-industry nature. The foreign trade of France and Germany does not merely involve the exchange of Champagne for refrigerators, but also the within-industry reciprocal exchange of cars (of somewhat different qualities). If this component of trade remains majoritarian, reindustrialization may still be a panacea for Europe, after all. ■

by Jörg Guido Hülsmann (*Université Angers, Senior Fellow Mises Institute*)

Is deindustrialization a “natural phenomenon” of developed economies? Have “re-industrialization” measures nevertheless the potential to contribute to the recovery of European economies such as France?

Let me first state my position and then add a few arguments to back it up. Economic growth typically entails a re-allocation of labour away from industrial production, but it does not all by itself lead to falling industrial output. The decline of industrial production in the US and France in the past thirty years is to some extent due to capital exports, but especially to government interventionism in the form of mushrooming labour, business and financial

regulations, education policies, social security funding, and taxation. This decline cannot be stopped through more interventions, even if they are designed with the good intention to reindustrialise the country.

Now let me offer a few considerations in support of these contentions.

The reallocation of labour in a growing economy results most notably from capital accumulation and from changing preferences of the working-age population. Further investments and extensions of the existing structure of production make it necessary to spend more time devising new methods, preparing industrial activity, coordinating and monitoring supply chains. Low-quality blue-collar labour diminishes, whereas there is some increase in high-quality blue-collar, but especially an increase in white-collar workers in and around the supply chains.

Increasing real revenues affect people's lifestyle choices. Rather than labouring long hours that provide essentially a monetary reward, they increasingly prefer enjoyable activities that provide immediate psychological and emotional rewards. Thus the blossoming of artistic, intellectual, and scientific activities in developed countries, at the expense of traditional industrial pursuits.

As a natural consequence of economic growth, therefore, industrial production declines relative to what it could be if it attracted even more people. But this does neither imply a shrinking

physical industrial output, nor does it imply shrinking industrial revenues. Capital accumulation and technological progress make it possible that industry thrives even when less people have industrial employment. Germany provides an example.

In the past thirty years, western capitalists have invested large amounts of capital in formerly communist countries of the East and Far East. This reallocation of capital, though beneficial from the overall point of view of the world economy, has been detrimental in the short-run to the industrial development of those western countries where the capital would otherwise have been used.

But capital investments in countries such as France and the US have declined even more as a result of mushrooming government interventions. Welfare cheques diminish the incentive to accept low-paying and non-gratifying industrial jobs. Massive subsidies for secondary and higher education artificially prolong schooling; reduce the supply of qualified manual labour; and create an artificial bias among the working-age population for scientific, intellectual, and artistic activities. Panoply of regulations have, on the one hand, increased the costs of doing business and, on the other hand, stimulated rent-seeking and manifold forms of evasion and regulatory arbitrage. Today they are feeding entire armies of lawyers, accountants, auditors, and financial advisors, all at the expense of ordinary business.

³ This is a reprint taken from Andi Rodrik's weblog <http://rodrik.typepad.com/>. The paper discussed is “Premature Deindustrialization,” NBER Working Paper No. 20935, February 2015.

These tendencies cannot be stopped through so-called reindustrialisation policies, which boil down to even more government spending, premised on the spurious notion that irresponsible (and often also inexperienced) politicians know best how to use the available scarce resources. Such policies have utterly failed in the past (Airbus included), and will fail in the future. Genuine reindustrialisation requires more oxygen for industry. It requires nothing less than a rollback of the artificial obstacles for industrial development that government interventions have created in past generations. ■

Premature deindustrialization in the developing world³

by **Dani Rodrik** (*Princeton University*)

Mention “deindustrialization,” and the image that comes to mind is that of advanced economies making their way into the post-industrial phase of development. In a new paper, I show that the more dramatic trend is one of deindustrialization in the developing countries. This is a trend that is appropriately called premature deindustrialization, since it means that many (if not most) developing nations are becoming service economies without having had a proper experience of industrialization.

Latin America appears to be the worst hit region. But worryingly similar trends are very much in evidence in Sub-Saharan Africa too, where few countries had much industrialization to begin with. The only countries that seem to have escaped the curse of premature industrialization are a relatively small group

of Asian countries and manufactures exporters. The advanced countries themselves have experienced significant employment de-industrialization. But manufactures output at constant prices has held its own comparatively well in the advanced world, something that is typically overlooked since so much of the discussion on deindustrialization focuses on nominal rather than real values.

The conventional explanation for employment deindustrialization is based on differential rates of technological progress. Typically, manufacturing experiences more rapid productivity growth than the rest of the economy. This results in a reduction in the share of the economy’s labor employed by manufacturing when the elasticity of substitution between manufacturing and other sectors is less than unity. This explanation cannot account for the decline in the output share of manufacturing at constant prices, however, as differential technical progress in manufacturing would increase the MVA share. Moreover, developing countries tend to be small in world markets for manufactures, where they are essentially price takers. The above mechanism, which operates through relative price changes, does not work for small open economies. In the limit, when relative prices are fixed, more rapid productivity growth in domestic manufacturing actually produces industrialization, not deindustrialization (in terms of both employment and output). So the culprit for deindustrialization in developing countries must be found elsewhere.

The obvious alternative is trade and globalization. A plausible story would be the following. As developing countries opened up to trade, their manufacturing sectors were hit by a double whammy. Those without a strong comparative advantage in manufacturing became net importers of manufacturing, reversing a long process of import-substitution. In addition, developing countries “imported” deindustrialization from the advanced countries, because they became exposed to the relative price trends produced in the advanced economies. The decline in the relative price of manufacturing in the advanced countries put a squeeze on manufacturing everywhere, including the countries

that may not have experienced much technological progress. This account is consistent with the strong reduction in both employment and output shares in developing countries (especially those that do not specialize in manufactures).

In sum, while technological progress is no doubt a large part of the story behind employment deindustrialization in the advanced countries, in the developing countries trade and globalization likely played a comparatively bigger role.

Deindustrialization has been long been a concern in rich nations, where it is associated with the loss of good jobs, rising inequality, and decline in innovation capacity. For all these and many other reasons, it should be a much bigger problem for developing countries. Premature deindustrialization has serious consequences, both economic and political.

On the economic front, it reduces the economic growth potential and the possibilities for convergence with income levels of the advanced economies. Formal manufacturing tends to be technologically the most dynamic sector, exhibiting unconditional convergence. Deindustrialization removes the main channel through which rapid growth has taken place in the past.

The political consequences of premature deindustrialization are more subtle, but could be even more significant. Mass political parties have traditionally been a by-product of industrialization. Politics looks very different when urban production is organized largely around informality, a diffuse set of small enterprises and petty services. Common interests among the non-elite are harder to define, political organization faces greater obstacles, and personalistic or ethnic identities dominate over class solidarity. Elites do not face political actors that can claim to represent the non-elites and make binding commitments on their behalf. Moreover, elites may prefer – and have the ability – to divide and rule, pursuing populism and patronage politics, and playing one set of non-elites against another. Without the discipline and coordination that an organized labor force provides, the bargains between the elite and non-elite needed for democratic transitions and consolidation are less likely to take place. So premature deindustrialization may make democratization less likely and more fragile. ■



Data Security in the Digital Age:

Why Data Breach Notification Laws Can Help

by Ying Lei Toh



We live in the digital age. Rapid technological advancement has enabled firms to collect, store and analyze consumer information in an unprecedented fashion. While this has created undeniable benefits, it has also sparked privacy concerns among consumers. These concerns are further heightened by recent massive data breaches at companies such as Target, Home Depot and EBay. The type of data that has been compromised in

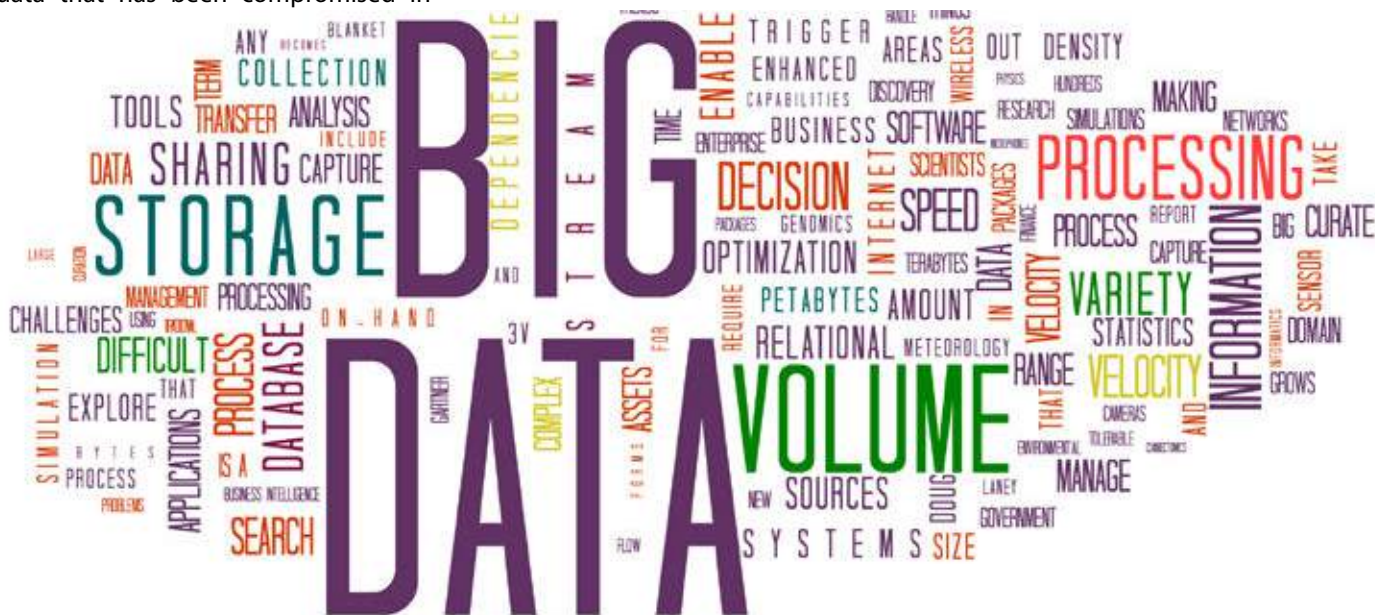
these breaches ranged from financial information to personal information such as passwords, e-mail addresses, etc. According to a recent report by Gemalto¹, over one billion data records were compromised in 2014; the Home Depot data breach alone accounts for 109 million of these records.

The number and scale of data breaches that has occurred seem to suggest that firms are underinvesting in data security. Indeed, data security is an externality problem. Firms fail to consider the benefits of their data security investment that accrue to consumers – a higher level of investment reduces the occurrence of data breaches and the losses they cause to consumers. Since firms do not internalize these losses, they underinvest in security.

The underinvestment problem is exacerbated by information asymmetries. Prior to interacting with a firm, consumers often possess little or no knowledge of the level of data security at the firm. If consumers were informed about the firms' level data security, they could punish firms that do not

make adequate security investment by boycotting them. A second source of information asymmetry arises from the possibility for firms to conceal data breach incidents. The occurrence of a data breach may serve as an indication to consumers that a firm is not investing sufficiently in data security. Some consumers would choose to terminate their interaction with the firm as such. This loss of business would be costly to the firm. According to a research² conducted by Javelin Strategy and Research, firms may lose up to one-third of their customers post data breach. Since data breach incidents are usually privately known to the firm, the firm would prefer not to disclose such incidents whenever possible. Thus, the presence of these information asymmetries implies that firms may be able to attract and retain customers despite their poor data security practices. In other words, in the absence of intervention, the market is unable to instill sufficient discipline on the firms.

For this reason, there has been extensive discussion in the United States



¹ <http://breachlevelindex.com/pdf/Breach-Level-Index-Annual-Report-2014.pdf>

² <http://www.identityfinder.com/us/Press/20140428164358>

concerning the enactment of a federal data breach notification law. Data breach notification laws would make it mandatory for firms to inform their customers of data breaches and could help to address the second source of information asymmetry mentioned above. Despite the growing attention on this issue, the economic literature on data security is scant. Thus, through my research, I hope to be able to contribute to the ongoing policy discussion by providing an economic framework that captures the aspects of information asymmetry and consumer learning.

I develop a simple framework where a website interacts with consumers across two periods. The website provides a free

service and generates revenue by advertising to its user base. Consumers do not observe the website's data security investment; they base their initial usage decision on how safe they believe the website to be. The website could suffer from a data breach during the first period, and when this occurs, consumers may detect it with some probability. This probability captures the extent of information asymmetry in the market. Upon learning about a breach, a consumer will update his belief about the security of the website and may choose to terminate his relationship with it. Absent of any intervention, it is this potential loss of consumers (and hence, reduction in advertising revenues) that provide the website with the incentive to invest in

security. By investing in security, the website lowers the probability that a breach occurs and is detected by consumers, thereby reducing expected customer churn. Thus, if the probability that a consumer detects a breach is small (i.e. the information asymmetry is large), the website will have little incentive to invest in data security.

In this framework, mandatory breach disclosure sets the probability of breach detection to one. By eliminating the information asymmetry in breach incidents between the website and its consumers, the law raises the website's stake in the event of a breach, strengthening its incentive to invest in data security. I establish this result in my paper. ■

PhD exchange: London Calling

Student: Arthur Alik

Visiting Institution: IFS/UCL (Centre for the Evaluation of Development Policies (EdePo) at the Institute for Fiscal Studies (IFS))



What is your main research topic?

I work on the impact evaluation of public work schemes in developing countries, also called workfare. These programs provide a low paid employment guarantee to individuals in selected public works. I work on the theoretical literature motivating the use of this policy tool (mostly based on mechanism design and incentive compatibilities) trying to adapt the available models to the particular case of poor rural economies. I am also involved in two empirical impact evaluations: one on India's MNREGA with a team from the World Bank and one on Colombia's Empleo en Accion, here in London at IFS.

Does this visit help you to advance your research project(s)?

Yes, a lot! I work on a nice randomized control trial of the workfare Empleo en Accion. I interact with great researchers from IFS and UCL, which gives me a unique opportunity to deepen my expertise on these programs. I also had the opportunity to present my work on MNREGA in an internal workshop and I got very interesting comments.

Do you like the environment there? Is it very different from that of TSE? What are the main differences?

Yes, definitely. IFS and UCL are great research institutions.

IFS is still a new place for me, but my feeling is that researchers at IFS are more committed to introducing economic facts into the public debate than addressing an academic audience. Moreover, I would say that there is complementary with the research done at TSE: many researchers in Toulouse work on theoretical research, whereas UCL has a long tradition in structural econometrics. It is thus great that IFS, UCL and TSE have developed this strong relationship over the years.

Overall, do you enjoy this experience? Do you recommend to other TSE students to visit another institution for some months during their PhD studies? Do you want to add anything else about your experience?

Yes, a lot. I do recommend visiting IFS and UCL, in particular to those working on applied micro and microeconometrics!

Besides the academic life London is a great city. I have met great people and I enjoy London's hectic life style! ■

Quis custodiet ipsos custodes?

Jean Tirole: imperfect competition and regulation in the electric power industry

by Claude Crampes and Thomas-Olivier Léautier*



*School of Athens, Raffaello Sanzio, 1509-1511.
In the middle, Plato allegorically pointing to the heavens, and Aristotle down to earth.*

Jean Tirole has recently received the Nobel prize in economics from the hands of the King of Sweden in recognition of his outstanding research, in particular on imperfect competition and the regulation of monopolies. A large portion of Jean's work examines the electric power industry. This article, originally published in the TSE Debate and for the first time also in the Florence School of Regulation's blog, summarizes its main contributions.

1. Asymmetric information and monopoly regulation

In the early 1990s, research conducted by Jean-Jacques Laffont and Jean Tirole ushered a permanent and far-reaching shift in the theory and practice of regulating monopolies.

In some instances, a company is a *"natural monopoly"*.

An electricity distribution company is an often-used example: it would be economically inefficient to build two electricity distribution networks in the same city; hence the network owner is naturally a monopoly. In the absence of competition, public authorities, in this case regulatory agencies, must determine how to regulate access to the distribution grid and how much the monopoly can charge for its services. All agree that the price should be equal to the cost of providing a connection.

**Thomas-Olivier Léautier* is professor of management at the University of Toulouse where he is responsible for the Master in Risk Management, and Research Director at TSE. His research interests include restructuring of the electric power industry, and risk management strategy.

Claude Crampes is professor emeritus at TSE and senior researcher at Institut D'Economie Industrielle (IDEI). He currently acts as an advisor for EDF, the main electricity producer and supplier in France.

Both Claude and Thomas teach TSE-M2 students The Economics of Energy Markets.

A higher price would generate undue profits and a lower price would ultimately lead the company into financial difficulties because no company can operate for any length of time without covering its costs.

The challenge for the regulator is to determine this cost. A first possibility is to use accounting costs reported in the company's financial statements. However, if the company is allowed to pass on its costs to consumers, it has no incentive to reduce them. As John Hicks pointed out in 1935¹: "The best of all monopoly profits is a quiet life."

Can the regulator estimate a firm's cost reduction potential?

No, because the company has and will always have more information about its costs and performance potential. **Given this information disadvantage, what can the regulator do?** Jean-Jacques Laffont and Jean Tirole have solved the problem². They show that the regulator has to explicitly take into account the asymmetry of information and give the regulated firm a menu of contracts, which propose a variety of cost-sharing options. The company then chooses the contract that best fits its performance potential. The contract includes incentives for the company to achieve this potential. In return, the company gets an informational rent. Good contracts minimize this rent, i.e., they deliver the service at minimum cost, given the necessary information rent.

This first example illustrates the main features of Jean Tirole's work. First, he applies the tools of economic theory to solve real-life problems faced by societies. When the authors of this blog contributed to set up regulatory agencies in Argentina in 1995, they were able to directly implement the recommendations developed by Jean-Jacques Laffont and Jean Tirole and summarized above.



Professor Claude Crampes

Second, his research depicts the world as it is, and not as we would like it to be. **Jean Tirole considers actual imperfections, especially the asymmetry of information between regulators and companies, and offers solutions that acknowledge these imperfections.** While it is sometimes necessary to leave information rents to certain agents, the mechanisms are designed to minimize them.

Third, the models Jean Tirole develops to portray our reality are simple and elegant. Thus, they have served as a starting point for countless other researchers.

2. Electricity transmission networks

When the electric power industry was restructured in the 1990s, policy makers and academics spent a great deal of time focusing on the **transmission grid**. Since the grid is the physical location of the wholesale market, everyone agreed that its access must be fair and non-discriminatory. Countries that restructured the industry adopted different structures to guarantee fair access. European countries, with the exception of France and Germany, carved out the transmission grid from integrated incumbent utilities to create independent transmission companies. In the United States, the grid remains owned by the utilities, but is operated by Independent System Operators (ISOs).

Two other issues had to be solved. First, **under which economic conditions should access to the transmission grid be sold?** This was a new problem: the question had never arisen because electric utilities had been vertically integrated. The most natural solution was to define and trade physical access rights. For example, if a French producer wanted to make an intra-Community trade and export to the United Kingdom, he had to purchase physical capacity on the interconnection for the duration of the trade.

William Hogan, professor at Harvard, proposed another solution that appears less natural but is more in line with the physical complexity of meshed grids. In a seminal paper³, he demonstrated that **financial transmission rights** – which compensate rights holders for the difference in prices at the extremities of the right – **are more effective than physical rights (under perfect competition)**. If financial rights are used, the producer no longer needs to obtain physical capacity on the line. He buys a financial instrument that offsets the price difference between the United Kingdom and France. Then, he produces electric power and sells it on the French wholesale market, and delivers electricity to its customers purchased on the British wholesale market. Financial rights protect him against any difference between the British and French wholesale prices, caused by congestion on the interconnection.

As mentioned earlier, financial rights are efficient if markets are perfect. Along with Paul Joskow, professor at Massachusetts Institute of Technology, **Jean Tirole examines the situation when markets are imperfect**⁴. They demonstrate that if a monopoly producer (or a monopsony buyer) exerts his market power, he can increase this market power by using transmission rights. They also show that financial rights are usually preferable to physical transmission ones: a producer holding

¹ John R. Hicks, Annual Survey of Economic Theory: The Theory of Monopoly, *Econometrica*, January 1935, page 8.

² Jean-Jacques Laffont and Jean Tirole, *A theory of incentives in procurement and regulation*, MIT Press, 1993.

³ William W. Hogan, Contracts networks for electric power transmission, *Journal of Regulatory Economics*, 4, 211-242, 1992.

⁴ Paul Joskow and Jean Tirole, Transmission rights and market power on electric power networks, *RAND Journal of Economics*, 31(2), 450-487, 2000.



Professor Thomas-Olivier Léautier

physical rights could increase his profits by withholding from the market a portion of the capacity acquired. This would not be possible with financial rights.

The second issue to solve involved *opening up development of transmission lines to competition*. To a great extent, the restructuring of the electric power industry resulted from the acknowledgment that electricity production had become a competitive business. This in turn was spurred by recent technical advances, in particular (i) the exponential growth of data processing capability enabled an independent market to coordinate the production of dozens of power stations, and (ii) the development of combined-cycle gas turbines that were smaller and less capital intensive than the nuclear or coal-burning power plants of the 1980s lowered the cost of entry into power generation.

In the early 1990s a new kind of production plant called *merchant units* arrived on the scene. These plants *sold their production on wholesale markets* or through long-term contracts and were *no longer part of an integrated electric utility*. Numerous analysts suggested that the same approach could be used to build interconnections. Why not authorize “merchant” interconnections, which would rely on wholesale markets to cover their investment cost? A natural solution would be to grant interconnection investors the new financial rights that the interconnection creates.

Paul Joskow and Jean Tirole examine this problem, observing that investments in the transmission network are “discrete” and not continuous, and sequential⁵. Let us use again the example of an interconnection between France and the United Kingdom. Under reasonable assumptions, one can show that as the interconnection capacity increases, the price difference between the extremities decreases. The socially optimal capacity is such that the price difference precisely equals the marginal capacity cost. Under imperfect competition, the first investor strategically selects its line’s capacity. It can maximize its profits, for instance by building a line with capacity lower than optimal to capture a larger price difference. It can also attempt to block another investor’s entry by building a line such that the post-construction price difference would be too low to allow competitors in.

How did these papers influence public policies? Most of the North American and European electricity markets have gradually chosen financial rights over physical ones, and regulators subject merchant interconnections to specific scrutiny, e.g. in Europe they are considered as essential facilities. Thus, recommendations from these papers have been followed. It is never easy to attribute public policy to papers published in academic journals. Nevertheless, these works’ main intuitions are well anchored in policy makers’ minds and have probably influenced them: financial rights are harder to manipulate than physical ones, and developers of merchant transmission lines can exert market power.

3. Electricity retail competition

In the 1990s most analysts thought that competition in electricity retailing was sufficiently high that only light oversight – if any – would be required. Consequently, electricity supply activities (and natural gas ones) did not attract much academic research.

Yet, *Paul Joskow and Jean Tirole observe a significant imperfection in electricity retailing*. Since most consumers do not have real-time meters, suppliers are selling to them based on an estimated load profile, which does not necessarily reflect their actual consumption. Since electricity prices on the wholesale market fluctuate greatly, flawed estimates can have



⁵ Paul Joskow and Jean Tirole, Merchant Transmission Investment, Journal of Industrial Economics, 53(2), 233-264, 2005.

considerable financial implications. In this case, *the imperfection comes from the metering technology*. Joskow and Tirole rigorously examine competition on the supply side when including this imperfection, and show that *lack of real-time metering reduces the efficiency* of this downstream market⁶.

Competition in the retail market has become a critical issue for the electric power industry. For example, policy makers and regulators in the United Kingdom have opened in 2014 a retail market investigation, suspecting collusion. In addition, the emergence of demand response operators in the United States and many European countries has revived attention for the structure and economics of the retail industry. The article by Joskow and Tirole offers a clear conceptual framework to examine these issues.

4. Generation investment and capacity markets

Starting in the mid-2000's, policy makers and academics began turning their attention to investment in electric generation capacity. *Are we sure that the market's invisible hand will lead to sufficient investment to guarantee security of supply?* In other words, will competition not cause too many outages? Here again, if the markets are perfect, the invisible hand works and investment is optimal.

However, California's crisis – where market power exerted by some electricity producers and traders caused blackouts in one of the world's most advanced economies – shook the faith of analysts in the efficiency of electricity markets. One solution proposed by some academics and implemented in most North American markets is to create capacity markets: four or five years before a given date, the Transmission System Operator purchases capacity from producers. At expiry, the latter receive a capacity payment, which remunerates their contribution to security of supply, whether or not they produce any power.

Paul Joskow and Jean Tirole examine the issue by relaxing several assumptions about perfect markets⁷. Their paper develops a rigorous economic representation of the coexistence between (industrial) consumers who adjust to wholesale prices and others facing a fixed price over time (primarily residential consumers), which enables an accurate definition of security of supply. Joskow and Tirole then lay out the conditions under which capacity markets lead to optimal investment and those under which other instruments are required.

This paper is as relevant today as it was then. The United Kingdom has just concluded its first capacity auction, while France is refining the rules for its own capacity mechanism.

* * *

For the authors of this blog, this work is a cause for optimism. Contrary to many naïve assumptions, *neither markets nor regulations are perfect*. Some actors are endowed with advantages, for example an informational edge. However, Jean Tirole's research shows that not everything is lost. Regulatory contracts aimed at obtaining the best results possible can be implemented, even under these imperfections.



Nobel Prize Professor Jean Tirole

In order to apply these articles' recommendations, competent and independent regulatory agencies are required. For instance, regulators should be prepared to leave a visible rent to regulated companies, to provide them with cost-reduction incentives. When the public and politicians criticize them for visible laxity, they should be prepared to stand their ground, and argue that incentives are needed when regulated firms have better information than regulators about their costs and demand.

Unfortunately, *human nature is imperfect*. Regulatory agencies are run by professionals, who are also thinking about their careers. In certain cases, these professionals are subject to explicit political pressure. In other cases, the exerted pressure is less obvious. Sometimes, regulated companies themselves put pressure on regulators and even corrupt them. *Since regulators themselves are also imperfect, they need oversight*.

Should politicians exert this oversight? Their time-horizon is notoriously short, that extends only to the next election. Should ordinary citizens exert this oversight? They are also victims of a significant information asymmetry and often lack the required technical knowledge. *Who should then exercise this oversight?* This question is not new. It appeared more two thousand years ago in Plato's Republic⁸ and in Juvenal Satires⁹ under the form "*Quis custodiet ipsos custodes?*" and more recently in the great comics Watchmen¹⁰ under the form "Who watches the watchmen?"

The answer from Jean Tirole – the same that Plato attributes to Socrates – is resolutely optimistic: every generation produces men and women who, like Jean-Jacques Laffont and Jean Tirole, put the collective interest and the pursuit of a common goal above their own interests, and tirelessly conduct their work with diligence and honesty. This cheerful thought is a wonderful Christmas present. ■

⁶ Paul Joskow and Jean Tirole, Retail electricity competition, RAND Journal of Economics, 37(4), 799-815, 2006.

⁷ Paul Joskow and Jean Tirole, Reliability and competitive electricity markets, RAND Journal of Economics, 38(1), 60-84, 2007.

⁸ The Republic, book III, chapter XIII.

⁹ Satire 6, lines 347-348.

¹⁰ Alan Moore, Dave Gibbons, and John Higgins, Watchmen, DC Comics, 1986.

Παιδεία and Εὐδαιμονία after Socrates' Death:

Education and Happiness in the Ancient Greek Society

by Marica Valente

In this piece I will deal with our human nature when there is a conflict between paidèia (παιδεία, education) and paidèia apousia (απουσία), the absence of education. Eudaimonía (εὐδαιμονία, happiness) will then enter the analysis since, as economists, we may lack some of it from time to time. Hence, this article is well worth a read, as it ambitiously aspires to be put in direct competition with Galileo's Dialogue Concerning the Two Chief World Systems

What happened after Socrates' death? Why did Athens allegedly fall into chaos, confusion and disorder after having erased the threat of someone instilling some freedom of thought in its citizens?

also make this search easier for others.

How could this happen?



La Mort de Socrate, Jacques-Louis David, 1787. Among his anguished pupils including Plato sitting at the foot of the bed, Socrates in the act of drinking the cup of poison raises his left hand's index to the sky, willing to teach his last lesson: "The hour of departure has arrived, and we go our ways—I to die, and you to live. Which is better God only knows" (Plato, The Apology of Socrates, line 42).

Socrates' death represented the failure ex ante of a social system based on "free" education where each individual has the chance to question all knowledge passively assimilated from the socially established common sense. Even though each society owns an inevitable conservatory character which shapes the values and the culture of its citizens, *the example offered by Socrates had the potential to simultaneously match the pursuit of the collective "good" with the individual search for happiness.* Optimizing the welfare in the private sphere may not only bring the same effect into the public one, but may

In economic terms, because of *positive spillovers* from paidèia (παιδεία), education. This requires the presence of two essential factors, in particular two types of "liberations". Allegorically, the first is needed to remove the chains blocking your feet, and the second to take away those on your neck. Leaving metaphor behind, the basic requirement for the formulation of any independent thought is the actual possibility of "moving" and have the opportunity to choose (first liberation). Moreover, and more importantly, the ability to assimilate, share and improve your knowledge by looking at

others' beings and behaviors can begin only with the freedom of "turning" (second liberation). Thus, every paidèia starts with a torsion, a twist, a re-positioning from a past status of paidèia apousia (absence of education) towards a new one of possible paidèia.

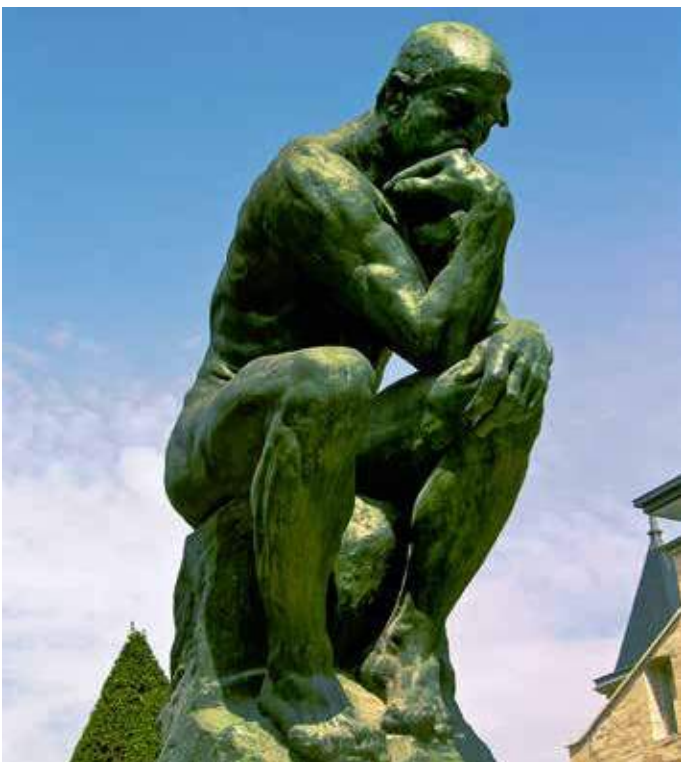
Do we really need this second liberation? What does paidèia essentially mean?

The previous example contains in se ipse the answer to both these questions: education is mainly an interior phenomenon which presumes the *possibility to discover*, thus not just to move and look at the reality around you, but also the *opportunity* to actually *see* the reality from different angles and perspectives in search of the truth. In short, paidèia means to *see beyond the visible*. In order to achieve the truth, we may need to reconstruct and model the invisible reality, to hear and see with the ears and the eyes of the intellect.

As the reader has probably realized, the image I used to illustrate the concept of paidèia and the way to approach it come directly from *The Allegory of the Cave* used by Plato (Πολιτεία, Politeia, The Republic, book VII). However, the aim of this piece is not to point out – as Plato did – the condition of ignorance of the majority of the population nor to criticize those – myself included, perhaps – who have not realized yet that the light outside the cave is much stronger and more colourful, and that the figures on the wall are not real, but just shadows projected by a fire burning behind their back.

What I find extremely challenging is to *define what "a good education" means and what is the best way to achieve it once we are liberated*. As, in my view, science can contribute to knowledge only if it is able to capture the reciprocal relations occurring in nature, I would like to offer an insight on the *interconnections between happiness, knowledge and justice*, as both an individual and a collective experience.

Perhaps some of you would ask me why I am associating these three concepts, and why I am interested in understanding the reciprocal relation between them. If possible, I would love to



Le Penseur, Auguste Rodin, 1880-1902

"In order to achieve the truth, we may need to reconstruct and model the invisible reality, to hear and see with the ears and the eyes of the intellect"

do some causal inference to get the net average impact of each one on the others. However, before proceeding with my last contribution to this topic, I may philosophically answer this potential skeptical inquisitor by adducing my personal point of view.

The human soul aims at contemplating the being and cannot continuously repeat to itself "I know that I know nothing" – which, incidentally, cost Socrates his life. My standpoint is that *knowledge may be an instrument for humans to achieve happiness*, interpreted as the Aristotelian *eudaimonia* (εὐδαιμονία) where –daimon literally means "demon".

Thus, what is happiness?

Being happy means fulfilling our "good demon" and express the energy we have inside us. However, to quote the last statement scrawled across a page of a battered copy of Doctor Zhivago by Chris McCandless, the young American adventurer who died alone in the Alaskan wilderness, back in 1992, "happiness is only real if shared". How is it possible to share something in the cave? There, we cannot move or turn, so it's not. Thus, how can we be happy once outside the cave? The answer is straightforward: *through fulfilling our good demon by gaining and sharing different knowledge and experiences achieved through paidèia*. And, ultimately, by going back to the cave to tell the remaining "prisoners" what there is outside and help them to get rid of their chains.

Nevertheless, the only mechanism that allows us to do so – and thus to be happy – is to have a *just society*. In order to enjoy the positive spillovers of knowledge, we need "just" people and a righteous system which enables citizens to have equal access to education, and equal opportunity to first recognize, then express their personal natural inclinations. Only if citizens are not discriminated against by the circumstances of their birth, will they have the opportunity to try different realities, recognize their natural abilities and realize them. In fact, through the fulfillment and expression of what makes us individually happy, we can achieve a high level of wellbeing at a collective, social level.

Of course, in this ideal setting, I *assume abilities' expression and happiness to be positively correlated*. As I am mainly talking to economists, I feel I need to justify my assumption by briefly citing some evidence. Since we are not searching for causation but for mere correlation, one could use modal syllogistic, in particular Aristoteles' ontological transitivity to clarify this point. Given that democratic systems are generally known to allow fairly equal possibilities to express someone's abilities, and unhappy citizens will not live in a peaceful democracy for long, we can say that if happiness is positively correlated with democracies, and democracies with the expression of abilities, then *happiness and the expression of abilities will go hand-in-hand with each other*. Luckily, we are not asked as economists to test this hypothesis with inference since I can

see huge endogeneity biases on the horizon and very weak IV as possible proxies. Actually, this should reinforce my argument when I saw that there are deep, **complex interconnections among happiness, education and justice**.

To conclude, this thought experiment has associated these three terms in what Puccini would call a **trptych**, where **happiness refers to our private soul, education to our social one and justice to politics**. In fact, Socrates was convinced that humans' aim in life should be "the care of the soul" (achievable through the art of maieutics – from *μαϊευτικός*, "obstetric"); according to Plato, politics – like music for Puccini – is the only cure for the soul (*Φαίδων*, *Phaidōn*, *Phaedo*, "On the Soul"): in fact, "the care of the soul" means to live the most ethical life possible which in turn coincides with the wellbeing of the polis (i.e. the city state). Again, it turns out that our aim in life which can be called "the care of the soul", happiness or alike seems to be intrinsically interlaced with knowledge, education, thus an increased ethical sense and a shared political life.

Coming back to our initial question about **what "a good education" is** and what is the best way to achieve it, I will offer one **last insight on this issue**. When theorizing the ideal state, Plato put philosophers – *phylakes* – in the government of the polis, since he thought that "the friends of knowledge" (i.e. philosophers) are also friends of politics, in particular because they have the ability to "stay awake" and watch over the polis (from *philake*, to patrol the city at night).

How to allow for happiness and education in such an ideal state?

As previously argued, in order to guarantee individual and social happiness we need equal access to knowledge and fair opportunities to express our abilities. It is in this context that Plato introduced the **role of the family** in his ideal state (*Πολιτεία*, *Politeia*, *The Republic*, books V-VI). The family is the place where all private interests start to grow and take shape. It is in the family that the idea that my children are better than the others, and deserve to have more, is created. Family brings discord in the society insofar as it implies leaving a legacy, and discriminates *ex ante* based on the status of the newborn.

Everybody should get the **same opportunities at birth and along life**, because who can guarantee that someone with very high qualities will not come from the lower class, and vice versa for the upper class? In an imperfect society, we cannot take this risk. In fact, it is already very hard to select our governors among those whose intelligence, perseverance and intellectual curiosity have allowed them to get high-level education. In fact, in the course of their studies (which goes from 20 to 50 years old, according to Plato) they should have been demonstrating to be extremely righteous, ethical and incorruptible in order to aspire to become *philakes*. For this reason – a political one – we cannot afford to waste potential talents by allowing either aristocratic or high-income families to self-select as the only possible future ruling class of the polis. Therefore, Plato was in favour of abolishing every hereditary right, as seen in the fact that even the *philakes* would never receive any monetary payment: their privilege would consist in obtaining sustenance from the public revenues for one year. The **areté** (*αρετή*), **the moral virtue, is philakes' only source of wealth**.

Last but not least, Plato felt the need to underline the **role**



The wanderer above the sea of fog, Caspar Friedrich, 1818

of women in the state: despite the fact that Athenian society was extremely chauvinist, male-dominated and considered women as intellectually inferior creatures and mere child bearers, Plato put forward a highly revolutionary vision of totally emancipated women. In his view, they would have exactly the same opportunities to rule the polis as men. Again, it would be risky and counterproductive to exclude women from the possibility to get educated and show their abilities, since – *ex ante* – they present an equally probable potentiality in abilities and ethical sense as men. Plato even points out that, for all the years of education devoted to athletics (i.e. until one reached 20 years old), women should also exercise naked together with men as the latter normally used to do, because isolation would inevitably lead to the discrimination of **potential high-skilled future female phylakes**. Plato was not the first feminist of the Western civilization: indeed, the peer role he destines to women is a political-based theorization perfectly consistent with his model.

In summary, Plato identifies the family as the starting point for every discrimination, and, to emphasize his argument, he declares to be against the recognition of both maternity and paternity. Only in a fully equal society – without any hereditary bias and related self-interest restricted to your own family members – each individual could aspire to achieve **happiness**, which involves **the realization of citizens' natural inclinations put to use in the collectivity thanks to the acquirement of the level of knowledge one is willing or able to achieve**.

As an immanent result of the transcendent archetypal world of ideas (the *Hyperuranion*), Plato formulates a concrete, ideal form of primordial communism. Therefore, unlike those who depicted him as an authoritarian aristocrat, Plato may be considered as **one of the most inclusive philosophers** who dreamt about an egalitarian society made by freely educated, happy and righteous citizens guided by wise, unselfish men...and women. ■

The debate is open! Feel free to contact the author for any appreciation, curse or conflicting view: tweet @maricaibox

WHY PEACE IS ACTUALLY THE WAY

Causes and Consequences of the War in Colombia

by Juan Nicolas Herrera



If we achieve peace in Colombia, the peace in any part of the world can be achieved" said Juan Manuel Santos, the President of Colombia, at the United Nation's General Assembly no more than 5 months ago. The aim was to present an assessment of the current peace process between the Colombian government and the FARC-EP guerrilla group.

For many it could be part of another political speech. In my opinion, it reflects on two things: how hard it is to solve a conflict which has left more than 220.000 victims dead over the last 50 years, and the hope of a nation which despite of the suffering of so many years of conflict still awaits the moment that all comes to an end.

Farc-EP (Revolutionary Colombian Armed Forces- People's army) is a subversive organization, which does not owe allusion to its whole name. They

are a Colombian armed forces, no one doubts that. However, they are not revolutionary. In fact they don't share any ideology, nor are they the "People's army". The group was born as a Marxist-Leninist guerrilla around 1964, as a consequence of the armed confrontation between the liberal and the conservative party, the two main political parties at that time. In the beginning they were a peasant army, which rose up against the conservative government. Their aim was to concentrate the violent reactions of small rural groups to create a mass-organized violence against the government in order to implement socialism in Colombia.

Essentially, the conflict was the result of inequality and the concentration of the ownership of land . Colombia is a country with one of the highest income inequalities in the world. This can be well observed by looking at the Gini

index, which ranges between 0 and 100 percent. Perfect equality is represented by an index of 0 while an index of 100 represents perfect inequality. Colombia's index has steadily been between 59 and 53 during the last 30 years. The latest World Bank estimate amounts to 53,5. In comparison, the Gini index of the US, who is renowned for a challenging wealth gap, was 41,1 in 2010, far below Colombia. The Gini index of France is as low as 32,7.

It is thus not very surprising that in a country with high inequality, a significant part of the rural population supported them during the first years of conflict. The FARC promised people to challenge the concentration of political power shared between a few families and take the power by force in order to implement politics that achieve a more egalitarian society.

"If you think education is expensive, try ignorance" goes an old African proverb. In reality, many of the combatants were farmers without any education, which saw the answer in arms that the government didn't give them. Yet over the course of time, the group lost their ideology. They began to finance the conflict by kidnapping, killing, drug trafficking and extortion, or even worse, they recruited child soldiers from rural families.

How can they call themselves "the People's army", when their actions are against the people? According to "Human Rights Watch", more than 5 million people have been displaced and around 220.000 people have been murdered during the last 50 years. 81, 5% of these people were civilians, most of them from the rural population. Admittedly FARC has not been present in the principal cities.

A conflict does not mean that you are walking in a city as the capital Bogota and then you can see the guerrilla and

“Conflict is a central issue in the agenda of each government. The country is polarized as to how to face the war. A candidate’s public stance on the issue could guarantee his victory and even determines the course of the government.”

they could kidnap you as many uninformed news channels or movies have showed many times. But neither the rural nor the urban population supports any act of the subversive group nowadays.

For these reasons conflict is a central issue in the agenda of each government. The country is polarized as to how to face the war. A candidate’s public stance on the issue could guarantee his victory and even determines the course of the government. According to the Colombian Ministry of Defense, the annual expense in security is 3, 4% of GDP. In fact, 6% of this budget is directly associated to the war against FARC. Nevertheless, even if the conflict finished today, these expenses would not be eliminated instantly or moved to social investment. The money has to be devoted to prevent the formation of new insurgent groups and the reparation of victims. In any case, the conflict will be a fiscal burden at least for the next 20 years to come.

Since August 26, 2012, the Colombian government and FARC have been negotiating the peace in Havana, Cuba around six main points. Two of those have already been partially discussed: “Comprehensive Agricultural Development Policy” and “Solution to the Problem of Illicit Drugs”. Although agricultural production is really important for the country, it is underperforming as a consequence of insufficiency of technology, poor investment associated to scarcity in credit opportunities, lack in human development, deficiency of infrastructure and concentration in lands.

According to the 2005 census, 16, 55% of the Colombian population lives in rural areas. They are in the focus of the conflict. This issue is not only life threatening but also an economic obstacle. Farmers don’t invest in long term crops, despite the fact these are more profitable, because they are scared of having their yields stolen by armed groups. This ultimately leads to less productive agricultural production. Moreover, access to education and health is more difficult in

zones of high conflict. According to Sánchez and Rodríguez, the conflict reduces the mean years of schooling by 8.8%. In the worst case people are forced to migrate; almost 4 million people have been displaced because of violence towards big cities in the last 30 years. This creates another problem. As the transition from a rural to an urban work takes time, displaced have not many choices and opt for informal jobs or even begging.

FARC is nowadays one of the biggest producers of illicit drugs in the world. Kalmanovitz finds that the FARC also owns about half of the resources of drug trafficking in Colombia, which is available close to 0,7% of GDP, about \$US 1,7 billion to finance the operations of about 10.000 men at arms. Most of this production is supplied by families, which had to substitute their farming activity with illicit crops. The problem of the drugs is not easy for the Colombian population who had to suffer for many decades from the horror associated to the drug trafficking. For anyone this issue is a joke. Nowadays the government faces a challenge not only by the substitution of illegal crops but also by the need to employ those families that currently grow them.

To resolve this issue, the two negotiating parties accorded to a “land of free distribution fund” for the purpose of returning land to the peasants. To be effective this measure has to be accompanied by subsidies or access to credit to impulse the agricultural sector and investment in infrastructure to connect farmers with the cities. Meanwhile, the protection of property rights over the lands and prevention of ownership concentration are fundamental in order to avoid the resurgence of new conflicts generated by inequality.

Some believe that the peace process is not being carried out in the best way, and they are against what is negotiated in Havana. For instance, the opposition claims that there will not be justice with the agreement, because the government will downgrade the crimes against

humanity to political crime. Thus, guerrilla chiefs won’t be punished at the end of the process.

However, their opposition seems more of a personal revenge since it is those politicians, who were directly affected by the guerrillas and whose previous government main policy was war, who are leading the movement against peace process. Vengeance will just create more conflict. We also have to remember that there are deceased from both sides. Even though the peace process will not give them back their gone relatives, it will avoid more dead.

Despite the fact that there are different opinions about the peace process, it has to be a reality. If we succeed in reaching an agreement, general welfare will increase. According to the Conflict Analysis Resource Center in the absence of the conflict the economy had grown by 8% on average per year. Investment increased and financial markets developed due to an increase in investor confidence and financial inclusion. The country’s tourism industry could have risen. Education, health and housing could have lived up to their potential. Without conflict, the government will return land to displaced peasants and thereby improve the distribution of the land that was one of the sources of the conflict. In fact, 110.000 additional hectares could be used in farming which would uphold 700.000 tons of extra food.

All sectors in the Colombian economy will benefit from peace, directly or indirectly. I can only hope that this time will be different and that the hate of a few does not take us back to a time that no one wants to remember. Peace should not be conceived as an option. When will we understand that the war is not ended with more war? Dialogue and tolerance are the only ways to finish the dispute. Although the road is still long, I believe that we can overcome all the problems of the past. Colombia deserves a better future, every day many people work for it, people that despite the problems have never given up and who have faith in a better tomorrow. If we achieve peace in Colombia, we could show to the world what sets us apart, that no matter how difficult the circumstances, what anyone intends to accomplish, it can be accomplished. ■

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Internship Reports

Thomas
Andrieu
Freshfields

1. What was your role during your internship?

My hope was to gain exposure to legal issues related to competition law matters within *one of the largest global law firms worldwide*.

In recent years, the Paris office has been involved in the entire spectrum of competition law assessment in France from anticompetitive practices to merger clearance and also State aids.

My aim was to acquire a strong professional-oriented *knowledge on competition matters and issues*. I would like to be a lawyer with an economic background, using my knowledge on various competition/regulation cases.

In my time at Freshfields I was involved in various cases related both to the advisory side of the job as well as to the litigation part that a lawyer has to handle: first, I joined the team to recommend a course of action for a client. This recommendation depended much on the law in jurisdictions where the client was selling its products but also on the economics around.

2. How did your experience at TSE help you on the job?

A concrete example would be a multi-national firm willing to reduce its packaging costs by using a similar packaging design for all countries across Europe. Is this legally feasible? In that particular case, industrial organization and competition law are closely linked to each other.

The competition economics courses as well as the competition policy cases courses gave me a very thorough understanding of concepts at stake within those cases. With regards to State aid, I had to deal with a worldwide firm in the energy sector, which sued a Member State of the European Union for damages because

of alleged stranded costs. The aim here was to develop a highly motivated argumentation to defend the case taking into consideration the underlying economic theory. My competition law classes and the workshop on law and economics also helped me to be proactive during case shaping meetings.

The main part of my work was related to the notification of a merger on behalf of the acquired company, first before the European commission and then before the French Competition Authority. I had to negotiate with both the acquiring company attorneys and in-house legal counsels, and with case handlers before authorities and courts. This was very challenging! And at this stage, it is absolutely necessary to have a strong knowledge of the horizontal and vertical relationships within the value chain from an industrial organization point of view.

"I had to negotiate with case handlers before authorities and courts"

As for now, it is said by practitioners of competition law that we are on the cutting edge of the current increase in private actions. We are acting in ground-breaking competition litigations before national and European courts mainly due to *cross-border antitrust litigation strategies* as well as a substantive incorporation of economic theory within competition law provisions.

3. How did you get the internship?

I actually found information about this internship from a business talk, Jérôme Philippe, one of the partners of the *Anti-trust, Competition & Trade* department of Freshfields held in TSE last year. I met him there. He kindly shared his experience of being an economist in the legal world. After an interview I was accepted.

"I was able to contribute to both legal and economic aspects of cases"

What I learnt at TSE was very helpful during the interview and while being an intern. Indeed I was able to contribute both to legal and economic aspects of cases and have a global overview of hot topics in competition matters such as MFNs in the media sector or pay-for-delay deals in pharmaceuticals. ■



Toulouse School of Economics
École d'économie de Toulouse

TSE : PREPARING SUCCESSFUL CAREERS !

Iris Florin SNCF



Iris Florin

1. What was your role during the internship?

I worked in the **Finance, Strategy & Legal Department** and more precisely in the "Grands Projets & Prospective" Pole. This Pole uses forecasting models to analyze the revenues and the costs if a new railroad is built. To **forecast passenger traffic**,

SNCF needs a database which fully traces every journey of each passenger. My job was to analyze this kind of database. To complete my task, I had to understand the meaning of each variable and made an official report defining them. Once the understanding of this database was perfectly clear to us, I was asked to **implement a code in SAS** in order to automatically update annual traffic and mean prices data on a particular journey – let's say Paris Toulouse. On a weekly basis, I met my supervisor to talk about the progress of my work and to explain to him how I was creating my code. I felt like my internship was really meaningful to the Pole team, because my code is now used if they need to know the mean price of a specific journey. That's why, at the end of my internship, I had to explain to the team the whole process of my code.

2. How did your experience at TSE help you on the job?

As explained above, my internship was oriented towards statistics and not really towards economics. I would say TSE brought me some background in the use of statistical software. The project of Applied Econometrics in M1 gave me experience in using R.

Once you know how to use a particular software, it gets easier to learn how to use a new one. Luckily, I was not a beginner in SAS thanks to an Econometrics course

in L3. I would advise you to do as many econometrics projects as you can in order to be at ease with cleaning, rearranging and manipulating databases. In the professional world, you will never have a clean database so get used to do that kind of tasks even if it is time-consuming.

3. How did you get the internship?

I got the internship thanks to my network. However, the offer I applied for was online on the SNCF website. I got interviewed during one hour. They asked me about my knowledge of SAS, econometrics and time series.

"I think there will be many jobs for us as economists in regulation or competition "

I advise you to take a look on their website, since there are plenty of interesting internship offers. I really loved working at SNCF. I am now even considering a career in the railroad network world. Since SNCF will not be a monopoly anymore from 2020 onwards, I think there will be many jobs for us as economists in regulation or competition. ■

Hussein Bidawi AXA Investments Managers

1. What was your role during your internship?

The AXA Group is a French global investment, retirement and insurance group headquartered in Paris, with companies operating in 57 countries. With total assets amounting to more than 700 billion euros in 2011, the need to have an active asset manager owned by the group was evident, hence, the creation of AXA Investment Managers (AXA IM) in 1994. AXA IM is one of the world's leading asset managers with assets under management of 536 billion euros as of 2013. Both these entities cannot be top global

performers without having cutting edge research teams providing **key insights on the state of the global economy and the global financial markets**.

Eric Chaney, Chief Economist of the AXA Group and Head of Research at AXA IM makes sure that the investment professionals are equipped with high-quality analyses, notably through providing regular macroeconomic scenarios and asset allocation recommendations. My gap year was centered on a rather broad role of being his research assistant. In practice, this meant the usual tasks of updating

and developing his models, by summarizing articles, looking for datasets and incorporating new tools to his already existing models. For example, I worked with the Euro Area economist and the interest rate strategist on explaining the OAT-Bund spread. In addition, I worked with a tutor from the research team to produce a research note on the US job market recovery (published here <http://www.axa-im.com/en/research-news-archives/-/news/research-research-and-strategy-weekly-fed-and-us-labour-market/41825838/maximized/CNp9>).



Hussein Bidawi

Lastly, I used to coordinate a project on long run projections of macroeconomic and financial variables between the AXA Group top management, the Group Risk Management and the Chief Economist. The idea was to harmonize all the economic assumptions that the AXA companies around the world are using in their balance sheet projections (since insur-

ance policies usually have a long horizon, for example a life insurance could be cashed in in 30 years) that they present to the relevant regulatory authority, which needs to make sure that this company is solvent in 30 years for example. Teams developing new investment or insurance products (to see if they are profitable) will also use this or not. This role was more organizational, and my contribution was mainly to make the preparations for the quarterly meetings more systematic, which required a full understanding of how the 200+ variables of interest were projected over the 30 years horizon, and improve the process of projecting them. This permitted me to interact with all the team members of the Research and Investment Strategy (Eric's research team) and learn more about how they do their forecasts and what is their view on the economy or asset class they follow.

2. How did your experience at TSE help you on the job?

I would say that the most useful tool for this kind of work was Microsoft Excel, as Eric uses it heavily, as well as Power Point. Eviews was also helpful sometimes, so I recommend the M1 course Time Series to get familiar with this software. The most useful course to this kind of analy-

"AXA is one of the world's leading asset managers"

ses is the M2 course Macroeconomics 1 that I hadn't taken yet unfortunately back then. Basic macroeconomic intuition was enough though most of the time to follow the analysis of market moving events. An understanding of finance is a good plus as well.

3. How did you get the internship? Do you have any advice for students looking for a job in a similar field?

I got the opportunity to meet Eric Chaney when he came to give a Business Talk in TSE, and then to get to know each other better during an interview for the TSEconomist (<http://www.youblisher.com/p/628666-The-TSEconomist-Fourth-Issue/>): this was enough for him to offer me a internship with him for one year! The lesson, in my opinion, is that there are always opportunities out there, and one should have an open mind and be proactive enough to grasp them. The second lesson is obviously to join the TSEconomist! ■

**Brenda Medaglia
Bocconi University**

1. What was your role during your internship?

During my time at Bocconi University I worked as a research intern for IEFE (Istituto di Economia e Politica dell'Energia e dell'Ambiente). IEFE is the Center for Research on Energy and Environmental Economics and Policy directed by Michele Polo. The institute coordinates and conducts applied *research in the fields of energy economics, focusing on energy markets and natural resources, environmental economics*, with a special focus on environmental policy and environmental management and economics of public utilities related to energy, water and waste management. As an intern at IEFE I was working for three different projects:

- I performed a cost-benefit analysis under the guidance of the professors of the center on Natural Gas distribution sector on the behalf of Italian regulatory authority for Electricity Gas and Water.
 - I worked on a scientific publication for ENEL FOUNDATION about the effects on social welfare of renewable energy sources' post-deployment. This document will be published in April under my name.
 - I was in charge of the review of scientific publications about the development of an IO model applied to EU gas markets before and after liberalization. This publication is not ready yet and I am still working on it.
- Also, I had the extraordinary possibility to freely take part to all the conferences, table

ronde and the seminars of Bocconi University that I founded relevant with regard to my research.



Brenda Medaglia

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"I was in charge of the review of scientific publications"

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regards to my researches.

2. How did your experience at TSE help you on the job?

The M1 in Economics provided me with the theoretical background I needed to deal effectively with my tasks at IEFÉ. Among the different classes I attended, I believe that the courses in "Industrial Organization", "North-South Economic relations", "Econometrics" and "Public Economics" proved extremely useful for the understanding of the issues I had to deal with every day at work.

3. How did you get the internship?

My objective for the end of the Master's of Science in Economics in Toulouse was

to obtain both research and professional experience. So, in order to get a research internship I got in touch with one of the professors working at Bocconi University and I asked him if he was interested in hiring a student during the summer. I passed an interview with the professor and I obtained the position and also a scholarship from Bocconi University. I encourage students interested in doing a PhD after the master to apply for internships in research centers in Europe or in the US. Another good strategy is to send an e-mail to professors in order to ask them if they hire students for the summer. Research internships are a well-regarded work experience, also in the professional world. ■

Master 2 Choice: The Future is Yours!

by Brenda Medaglia

The end of the academic year is approaching and students will be asked to choose between the 7 Master 2 offered by TSE. It is a difficult time for each M1 student and maybe just reading syllabi and different Master descriptions is sometimes not enough to make the "right" choice. That is why we decided to interview current students and alumni and gather their opinions about each master.

PPD – Public policy and Development
Program Director: Jean-Paul Azam



Marrit Teirlinck

Current student : Marrit Teirlinck

1. M1 Internship:

In my M1 internship at the *German Institute for Economics Research* (DIW Berlin) I analysed geospatial and climatological data with Arc GIS as part of the project "Coping with Shocks in Mongolia: Vulnerability, Assets and Migration". One of my contributions was the creation of an exogenous indicator for weather shocks based on snow depth data,

which could then be used to examine the impact of these weather shocks on households.

2. What are the main strengths of your M2?

Students applying for PPD should have a great curiosity in development economics. For me the M2 PPD program corresponds greatly with my own interests and ambitions in economics. I have a passion to travel and to experience first-hand the socioeconomic situations of people in different parts of the world. This has inspired me to understand the inequalities we are facing and have been my main drive to study development economics. In my opinion, this specialized master enables students to obtain a theoretical base in development economics, the ability to compose and analyse academic papers as well as applied econometric research. The program is definitely a good preparation for working in international institutions, like the World Bank and the UN, but also for accomplishing a PhD.

Alumni : Fanny Mégret

1. Current position:

Economist in the Public Policy Monitoring and Evaluation Unit, Prime Minister's Office, Port au Prince, Government of Haiti / ODI fellow

M2 Master's Thesis: Data collection and analysis of public servants in Paraguay

2. Career options:

There is really everything. In my year people continued to work for the OECD or the FAO, they did PhDs or another master. The M2 PPD is the best master at TSE to prepare you for working in public organizations, especially those concerned with development. One thing is that this is the

M2 where most people end up working abroad, and in pretty interesting countries (Burundi, Australia, Brazil, Haiti...!).

3. Master's thesis or not?

It really depends on what you want to do... I would say that you should definitely work on a thesis if you want to continue your studies (not just after TSE, but at some point in your life). Otherwise, it is a choice: if you have few experiences and want to work straight after your master you should do an internship. If you think that a thesis would be important for the type of work you want to do, then this is what you should do.

4. PhD possibilities afterwards?

A fellow student of mine is doing his PhD in Australia, another has chosen to stay at TSE, meanwhile others went to Belgium. I would say that this master is probably one of the most practical ones at TSE, with the least math involved. So it is probably not the best choice if you're really serious about doing a PhD afterwards.

5. Further suggestions?

If you are interested in development, go abroad as much as you can!

Careful, the master is a lot more about Development than it is about Public Policy (if one wanted to work in developed countries' governments, you could be a bit disappointed). ■

ERNA - Environmental and Natural Resource Economics

Program Director: Henrik Andersson

Current student : Maude Jolly

1. M1 Internship:

At the end of my first year at TSE I did an internship in Togo within a local NGO. I was working in the agricultural sector and more precisely dealing with the limited access to financial services by the households. Yet I didn't go for the PPD master but the ERNA one.

2. What are the main strengths of your M2?

ERNA is the perfect choice for anyone interested in environmental issues and natural resources management that arise with any economic activity. It provides a solid understanding of the various economic policies that can be implemented in order to handle those problems. It finally combines both theory and concrete examples over a wide range of sectors.

3. Which are the most important prerequisites for your M2?

The elective called Environmental Economics available in M1 is a plus but not essential. I believe the mandatory courses at TSE for the first year of the master are

sufficient in order to understand the various classes of ERNA.

Alumni : Adam Theising

1. Current position:

Consultant, Economics Department, OECD (M2 internship: OECD)

2. Career options:

Coming out of the ERNA, you are well qualified for some very interesting options in both the public and private sectors. Given the core coursework of the program, the path of least resistance is probably governmental/international policy work on environmental and economic issues, or environmental consulting if you prefer the private sector. But depending on one's pre-ERNA formation, professional interests, and how well one tailors their elective coursework and extracurricular pursuits, one could certainly prepare her/himself for some fascinating opportunities in energy, health, agriculture, or transport.

Based on the small sample of my cohort, I think everyone stayed in France – at least for the short term – with a highly diverse

outcome mix in terms of work sector.

3. Master's thesis or not?

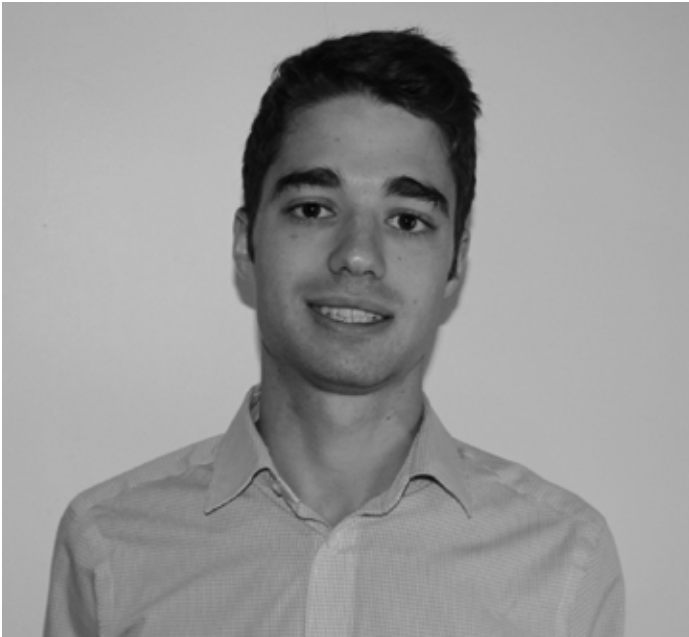
The answer to this entirely depends on your aspirations. If your goal is doctoral studies, then a thesis should be your choice 95% of the time. If your goal is to work internationally, then this might also be the best option. That said, for a non-academic, there is immense value in an end-of-studies internship where you have responsibility, create something substantive, and build a network in your chosen field.

4. PhD possibilities afterwards?

Absolutely! In economics and in interdisciplinary subjects, as well. One or two classmates are currently undertaking doctoral studies in French labs. Another classmate received an offer on an ERC-funded project in Italy. Expanding the sample size, students from previous years have entered PhDs in France and Canada. At the moment, I'm personally waiting for responses from a number of programs in the US- follow up with me to see how it goes...! ■

EMO – Economics of Markets & Organisations

Program Director: Farid Gasmî



Antoine Grelety

Current student : Antoine Grelety

1. M1 Internship:

I was an intern at the economic consulting firm E.CA Economics. I was involved in projects of competition litigations (mergers, cartels, abuse of dominance...).

2. What are the main strengths of your M2?

It gives a good insight on market mechanisms and regulatory decisions. Thanks to an interesting mix of economic modelling, applied projects and case studies, you acquire good analytical tools and problem-solving skills that are applicable to many business related issues. The M2 program remains general, which allows the exploration of many different industries and markets. Besides, there are many electives especially for the second semester. The job opportunities are very diverse

since you can work in consulting firms, regulatory authorities or private firms but you can also consider doing a PhD.

3. Which are the most important prerequisites for your M2?

A good background in Industrial Organization and Econometrics is of course very valuable. It is important to have a good intuition of the micro-economic concepts. Basic knowledge of Game Theory is also useful.

After some years in consulting I have three career paths in mind: staying in the private sector (consulting or industry), German public sector (i.e. German Ministry of Finance or Economics) or European institutions by entering via the official EPSO concours. The M2 EMO gives you the right skills and techniques to have a chance in all these three different career paths.

3. Master's thesis or not?

The possibility to replace the master thesis by an internship is very special to the French educational system. In my experience, doing an internship is very appreciated by recruiters in the UK and Germany. Therefore, I do not believe that doing a master thesis is essential to your CV – unless you would like to work for research centres or pursue an academic career.

4. PhD possibilities afterwards?

In order to obtain a PhD contract in other universities you need outstanding academic results from a leading university. TSE is a leading university (especially with a Nobel Prize!), it therefore depends not so much on the M2 you have chosen, but more on your profile, your motivation, your research experience and – most of all – your grades.

5. Is anyone of your previous classmates pursuing a PhD? Could you give us a good example?

R. Molinier is doing a PhD at Ecole Centrale Paris. ■

Alumni : Philine Schuseil (Airbus Political Affairs in Toulouse)

1. Current position:

Deloitte UK, Senior Associate in Economic Consulting (M2 internship : Airbus Political Affairs in Toulouse).

2. Career options:

Consulting, both economic and management (Bain, McKinsey, etc.), is definitely a good career start. You'll get a lot of exposure and acquire skills and knowledge within a short period of time. Moreover, you work with different clients across different industries, which allows you to specialise at some point in a particular industry.

Join the Alumni Network !

<http://alumni.tse-fr.eu/>

ECL - Economics and Competition Law

Program Director: Yassine Lefouili

To apply to this program, students should demonstrate a sufficient knowledge in law

Current student : Ludovic Vaudou

1. M1 Internship:

I did a gap year program between my M1 in Economics and Law and my M2 in Economics and Competition Law in order to acquire a significant professional experience. I worked during one year as intern analyst for the economic consulting firm MAPP Economics, based in Paris.

I was involved in several competition cases in the fields of merger control, unilateral conduct and restrictive agreements. I studied and assessed different markets such as financial products, food, online accommodation booking, and building materials.

2. What are the main strengths of your M2?

My M2 is strongly focused on Economics of Competition and Competition Policy. Almost every course offered is related to the field of competition. Consequently, I think it is the best academic training you can get to work in this domain. For example, the course of Competition Econometrics taught by C. Bonnet provides students with a strong basis of the econometric methods performed in the Competition Authorities and economic consulting firms. The empirical project which the students must conduct along the semester enables them to work on each step of an econometric analysis applied to a competition case: definition of an economic problem, choice of the model and of the estimation method, data collection, data management, interpretation of the results and draft reporting.

Furthermore, I really feel that my M2 helps me to acquire the crucial economic intuitions that are necessary to work in the decision making process of a company. The competition cases we are studying also have a strong strategic dimension that we need to identify. I have also chosen this M2 because many professional lecturers take part of the teaching and share with us their professional experience and advice. The class has a reduced number of students and the director of

the M2, Yassine Lefouili is very involved in our academic and professional accomplishment.

3. Which are the most important prerequisites for your M2?

As this M2 is highly focused on Competition Economics, I would recommend students that want to follow this path to be particularly interested by competition issues. I know that one of the compulsory prerequisites is to hold a bachelor in law but this should not be considered as a significant barrier to entry. This M2 is definitely a Master's in Economics and I warmly encourage the students that want to acquire a strong understanding of Competition Policy to apply!

Alumni : Hugo Molina

1. Current position:

Ph.D. candidate in empirical industrial organization at Ecole polytechnique (Université Paris-Saclay).

2. M2 Master's Thesis:

"Bargaining power in agrofood industries" under the supervision of Céline Bonnet & Zohra Bouamra-Mechemache. The aim of this work was to use a structural econometrics model in order to estimate the bargaining power between manufacturers and retailers in the French soft drink market. Assuming different contract terms between manufacturers and retailers (e.g. a single product contract using a linear pricing, bundling contracts), the approach adopted was the following. Based on the demand model, which allows to capture consumer behaviour, we compute retail margins. From these retail margins, we can recover manufacturers' margins by solving the Nash bargaining game. Once the bargaining model solved, we are able to infer the contract scheme that fits better the data.

3. Which are in your opinion the most common career path after your M2?

Actually it is difficult to answer this question. Of course, the ECL program trains people in the field of competition policy, but to be honest, I am not sure that this master's degree is sufficient to ensure a job in this field (at least in France). I think that students have to see this diploma as a springboard for additional education (e.g. French bar schools for the field of competition law, ENSAE for the field of competition economics). Except if you have high skills in a specific field (e.g. computer programming, data management) or if you are a very lucky guy, I think that you have to make this additional effort in order to make the difference in this highly competitive job market.

4. Do you think that writing a Master's Thesis at TSE could be an important added value to your CV or to your studies? Why?

It depends on what you want to do. If you plan to do a Ph.D. writing a master's thesis is a mandatory step. However, I think that could be an added value in a sense that when you do a master's thesis, you work on a specific economic field at a very high level. Consequently, a master's thesis is a very good opportunity to deepen your personal knowledge and then present your work to recruiters working on that specific field (e.g. people working in consulting firms).

5. Do you think that your M2 gives you the real possibility to obtain a PhD contract in other universities?

I am the second ECL student to be currently involved in a Ph.D. program, Matias Pietola was the first, he is a PhD student at TSE. I think that the TSE label, which has a significant value especially in the field of industrial organization, gave me the possibility to obtain a Ph.D. contract. But obtain a Ph.D. contract also depends on your marks, your motivation, and your relationships with your master's thesis advisors. ■

MIF - Master in Finance

Program Director: Sébastien Pouget

Current student : Camille Thomas

1. M1 Internship:

I did my M1 internship as a research assistant in financial history at Institut Louis Bachelier. I was hired in a project called Equipex D-FIH launched by the Paris School of Economics aimed at building a comprehensive database of French stock exchanges from 1796 to 1976.

2. What are the main strengths of your M2?

The former MiF was often seen as too theoretical and not oriented to the job market. As a student of TSE you can apply to one of the masters in finance at IAE, and end up with a dual degree. I'm currently enrolled in the FIRE which is a stimulating combination between theory and applications. We also have the chance to meet professionals either during conferences or through classes. Indeed, half of the classes are taught by TSE researchers and the other half by professionals.

3. Which are the most important prerequisites for your M2?

Finance electives (Market and Corporate Finance) are more than recommended, as well as probability and stochastic processes; it will actually make your life easier. However, your project is more important than the classes you have taken and some of us did not have any background in finance. Although, the class is mostly composed of TSE students, it turns out to be quite heterogeneous since there are also students from IAE and from an engineering school (INSA).

4. Further suggestions?

The internship you will do in M1 is really important. I would even encourage you to take a gap year (ideally two internships) after the M1 in order to get significant experience in the field and increase the opportunities for when you will seek a final internship study.

Alumni : Angela Carvajal

1. Current position:

Ph.D. Student in Finance at IAE Toulouse School of Management

2. M2 Master's Thesis

I'm interested in the link between financial analysts' recommendations, proprietary trading and adverse selection measures. Do advisor banks in mergers and acquisitions use private information about takeovers for proprietary trading? In fact I do find evidence for that. Information leakage in the market as well as abnormal proprietary trading is observed prior to the announcement.

3. What are the main strengths of your M2?

Some things have changed about the organization of the master. When I followed the programme I was still enrolled in core PhD courses at TSE. Since TSE offers a unified doctoral track in their ETE programme the MiF has been consolidated with the collaboration of IAE Toulouse School of Management. Students have a lot of choices in terms of specialization as to how to pursue their studies: the second semester is all about an internship or a research dissertation.

4. Do you think that your M2 prepares you well for a PhD?

If you want to pursue a career in finance IAE is definitely a good choice. The program allows you to look in depth into different areas of finance and also pursue a finance PhD: some of the best TSE researchers in finance head the master



Angela Carvajal

programmes and will help you with your studies and research.

5. Which are in your opinion the most common career path after your M2, public or private, abroad or in France?

I have friends who continue to work in central banks, investment banks or other financial institutions not only in France but also abroad. The school encourages you strongly to do an internship and this is how many friends enter the professional world eventually.

6. Do you have any further suggestions?

Don't hesitate to talk to the master director or students currently enrolled in the MiF programme and take a look at their website <http://www.iae-toulouse.fr/en/finance-2>. ■

ETE - Economic Theory and Econometrics

Program Director: Patrick Fève

Current student : Olga Bernard

1. What do you think is the most important to succeed in ETE?

I think a strong background in mathematics is really helpful, not to say necessary, to succeed in ETE. Moreover, during this master, you have a lot of free time but you really need it to study hard. Being very well organized and efficient is the way to pass the year successfully.

2. How is the working environment in ETE?

To compare with past years, there are much less students in ETE. Last year, they were around 50 whereas we are 30 students this year (this will continue like this). That's why we are in a more friendly and nice working atmosphere. Asking for someone's help is something straightforward; we form a knit group. At the same time, everybody is looking for a place in PhD!

3. Why do you want to pursue a PhD at TSE (for other reasons than the Nobel prize)?

I love applied economic theory. In this field, many of the most brilliant researchers in the world work at TSE, like Jean Tirole (whom I shall not quote!), Patrick Rey and Jacques Crémer. TSE is the perfect place to do a thesis in economic theory topics. The quality of life is amazing and I would spend four more exciting years in this outstanding environment. ■

Economics and Statistics

Program Director: Christine Thomas (TSE), Jean-Marc Azaïs (IMT)



Joanna Morais

Alumni : Joanna Morais
(Master 2 in 2013-2014)

1. M2 internship/Master's Thesis

In the Master 2 EcoStat, we have to do an internship of at least 4 months, but offers are usually for 6 months. During my internship, I was responsible for statistical analysis in a company called Inbox (<http://inbox-group.com/>) based in Malakoff which is also active abroad. It is specialized in customer value optimization consulting and CRM. I was working with SAS, Excel (VBA) and R essentially for various application fields.

2. Actual position/Actual university

Since October, I am writing on my thesis (thèse CIFRE) with a market research company, BVA, in Boulogne-Billancourt. I found this opportunity thanks to the M2 EcoStat: during this master we have a statistic consulting project to do in groups of 4 students for a real company on a real subject. My sub-

ject was to study the possible econometric models to assess the efficiency and to optimize the commercial spending budget of firms in the automotive market for BVA. At the end of the master they offered me to continue with this study within the framework of a thesis. My thesis advisors are Christine Thomas and Michel Simioni, who were my teachers during the statistic consulting project.

3. What are the main strengths of your M2? What are the advantages of a bi-disciplinary program?

The main strengths of this M2 are the following:

- A lot of different courses are offered so even if you don't have the time to go very deeply into all of them it provides you with a good overview of a lot of application in the fields of statistics and econometrics.

- Some courses are divided in two parts: a theoretical part taught by a TSE teacher, and a practical part which is taught by a professional (often TSE alumni). This permits an adequacy between the real world and the academic world. It also permits us to construct a network and sometimes to find an internship or a job thanks to these external actors.

- It is quite easy for the students of this Master to find an internship and a job thanks to the master's network and also

because the job market needs a lot of statisticians and econometricians as we are entering in the "big data era".

M2 EcoStat classes take place in TSE and in Paul Sabatier, which reflects the fact that courses are a combination of an economic vision and a mathematical vision. This is very valuable for the students who come from these different fields to see the links between them.

I did not do the Magistère because I arrived at TSE in M1. From my point of view it is not a real determining point for hiring or for the wage you can obtain because I am not sure that it is well-known by the companies. But I am convinced that people who did the Magistère are much better than me in statistical softwares and programming because they practiced more!

4. Which are the most important prerequisites for your M2?

You should have a good knowledge about econometric modeling and statistical analysis. You should also have basic knowledge about programming in R and SAS.

5. Which are, in your opinion, the most common career paths after your M2?

The most common career path after the EcoStat is to work in statistical analysis in France. (Contrary to the others masters programmes at TSE, this one is mainly composed of French students, maybe it will change in future years [editors note: has already begun to change this year]). This includes the private sector, and one of the three following fields: marketing

and CRM, biostatistics, and the banking sector.

6. Is anyone of your previous classmates pursuing a PhD? Could you give us a good example?

People who do the Master 2 EcoStat usually don't want to do a PhD because it is a professional master without a doctoral track and because we can't do a PhD at TSE with it. But I know other people like me who are doing a CIFRE thesis; it could be with the Doctoral School of Mathematics (UT3) or with another university. Some students who graduated from M2 EcoStat are completing their courses with a master year in ENSAE or in ESSEC. ■

An Interview With

Jorge Padilla

Teacher in Master
2 ECL Programme
and Head of
Compass Lexecon
in Europe

"Education is a Great Equalizer"

by Alexia Lee Gonzalez, Brenda Medaglia and Georgios Petropoulos

Dr. Jorge Padilla is Senior Managing Director and Head of Compass Lexecon in Europe. He earned M. Phil and D. Phil degrees in Economics from the University of Oxford. He is a Research Fellow at the Centro de Estudios Monetarios y Financieros (CEMFI, Madrid) and has written numerous papers on competition policy and industrial organization. Dr. Padilla has given expert testimony before the competition authorities and courts of several EU member states, as well as in cases before the European Commission. He has also given expert testimony in various civil litigation (damages), international arbitration cases, and competition cases in non-EU jurisdictions (Argentina, Chile, China, Colombia, India, Israel, Jamaica, South Africa and Turkey).

1. While you initially chose the academic path, later you decided to enter the professional world. What was your motivation for this change in your career path?

It was not entirely my choice. My parents went bankrupt and somebody had to pay the debts and provide for two families. I had a very decent academic salary, which nonetheless was insufficient to maintain two families and repay creditors. I had to look for a job outside academia to help my parents. At that time, I had no clue about what consulting was about. A former student of mine put me in touch

"When I was asked by NERA to create my competition group, we were three people in Madrid. Now that group works for Compass Lexecon and has 90 economists all over Europe"

with a consulting firm. I started working as a consultant one day a week. To my surprise, I proved to be a rather competent consultant. After two years working as a part time consultant, it became clear that I wasn't going to be able to cope with two jobs for long. It was difficult to excel in both jobs and this was frustrating. So, I asked for a leave at CEMFI. Eventually, I became a research fellow there and we have maintained a close relationship over the years. More or less at that time, my company was approached to work in the Microsoft 2004 case. I was part of the team led by David Evans that advised Microsoft on that case. I enjoyed it tremendously because I was applying all my IO to that case. In the meantime, my consulting practice was growing; I was working on many deals and antitrust matters. I was good at what I was doing. I managed to help my parents out of their financial troubles. I became a consultant by accident but liked the job, so I decided to continue working as a consultant and leave academia behind for a few more years. When I started I was the only competition economist in my company, NERA Spain. When I was asked by NERA to create my competition group, we were three people in Madrid. Now that group works for Compass Lexecon and has 90 economists all over Europe. I feel very close to them; many of them are former students and some of my best friends work in the team. This is why I've postponed a return to the academic world, which nonetheless is likely happen in not a too distant future.

2. What are the benefits of being in a top consulting company like Compass Lexecon rather than a full time professor in an academic institution?

There is one point in common: you have to work very hard. You work as hard as an academic as you work as a consultant. The difference is that, as an academic, you have control over your time to an extent that as a consultant you don't. There are things that you don't control fully as an academic, such as teaching hours, but

you have some control over your agenda. Your agenda as a consultant is controlled by others. Yesterday, for example, I started with a recruitment meeting at 8am, from 9am until 5pm I was in a client meeting. At 5pm I was in a conference call until I jumped on the plane to Toulouse. In the plane I was preparing the class for today. When I landed, I went to the hotel and I had a conference call at 11.30 pm, with a client from the US West Coast. This is my fourth country this week and today I will

"The main con of a consulting job is that you are always rushing"

deliver the fourth seminar this week. And this is not an exceptional week. The main con of a consulting job is that you are always rushing. It is stressful. My company hired a psychologist to help me cope with stress because my productivity was suffering. You are always rushing. Sometimes you would like to have one or two more weeks to think about this or that other problem, but it is impossible because your clients need a solution now. In academia you have more time to think about problems, more time to polish the answers, and this is more satisfactory intellectually.

Consulting has also some pros. It is a well-paid job. Consulting can also be exciting. The Financial Times today reports news on many of my cases: telecom mergers, patent disputes, abuse of dominance investigations. These cases involve fascinating issues. They often pose problems for which we may not have an answer yet. It is amazing when you find that the theoretical and econometric tools that you studied can be used to answer difficult problems in high stake matters. So, as a consultant, you get involved in very interesting cases, meet very clever people, and learn about the real economy and its complications. If you like to fight, there is nothing like being cross examined in court; your adrenaline goes incredibly

high. You confront somebody that is trying to trash your work and you have to defend it. It is exhausting, but exciting. What I have tried to do, it is to work as a consultant without losing contact with academia. I still write papers. I don't have the time to write papers for the RAND Journal of Economics, but I have written for professional journals such as the Antitrust Law Journal. I wrote a couple of books, one on Article 102 and another on renewable energy, and I like to teach. I teach competition economics at the Barcelona Graduate School of Economics and now I am teaching here, in the Master 2 ECL programme. I like to teach because I like to be in contact with young people. Young people keep you honest. There is nothing as disarming as when a young student asks you a candid question about the position you took in a given case. Teaching also helps you understand what you did and discover ways in which you could do your job better. It is not the first time that I am speaking to a class and I find the solution to some of my own doubts. I am fortunate that I have been allowed to teach.

"TSE is the best center in Industrial Organization in Europe"

3. Despite your busy schedule, as you said you started teaching at the Master 2 ECL programme of TSE. Why did you choose TSE to teach? What do you think about the school?

TSE is the best research center in Industrial Organization in Europe; the people that teach and do research here are among the best in Europe. Collectively, possibly, TSE is the number one group and individually, one by one it has great people. It is widely recognized, and this year the Swedish Academy has recognized it too. It is a great opportunity for me to interact,

for example, with people like Jean Tirole, Patrick Rey, Bruno Jullien, as well as many others. Having the opportunity to come and give a seminar here is really fantastic! It allows me to check if what I'm thinking is correct or absurd. It gives me the opportunity to keep learning new things. That's super!

The other interesting thing is that this school has very good students, and my business is a human capital Qbusiness. You need to look for human capital, and you have to go to the best places to look for the best human capital. Top human capital is not abundant, it's unique, and you have to find it wherever you can, so having access to TSE students has a fundamental importance for me and for my business.

"I believe I need to give back to society what society gave me at that time and help others to grow"

One more thing: I feel I have been very lucky in life. Someone one day decided to give me a grant to study in Oxford, where I did my PhD. In Oxford people like Paul Klemperer, my thesis advisor, decided to spend a little bit of his scarce time with me, teaching what he knew, instead of spending his time on his own research or on more lucrative alternatives like consulting. I believe I need to give back to society what society gave me at that time. And help others to grow. I believe that education is a great equalizer, and for that to work you need to put people in teaching positions that can help young people grow.

4. We guess that one of your usual tasks is to communicate with judges and lawyers about competition policy cases. How difficult is it to explain to them economic and econometric models? Do you identify a gap in a way of thinking and implementing competition policy between people with law and economics backgrounds? Any ideas on how we could have a convergence?

I'm in direct contact with lawyers every day because my wife is a competition



Jorge Padilla

lawyer. We work together sometimes and in some other cases we work against each other. Jokes apart, it is true that part of my job is to make sure that whatever we do that is technical is then understood by decision makers. And decision makers tend to be lawyers with limited knowledge of economics and relatively weak mathematical backgrounds. And even the economists that are in decision making positions tend to be applied economists without Ph Ds.

So as part of my job *I need to translate our models into non-technical narratives*. But I don't think personally that this is a worthless activity. On the contrary, I actually think it is value enhancing. Let me explain why. I'm pretty sure you don't like your smartphones because the fantastic technologies embedded in its chipsets or the beauty of the code that is part of their operating systems. You like them because their functionality plays a fundamental role for you and they have user interfaces that are nice and easy to use. If they were hard to use, they would be less valuable to you. As consultants we develop "user interfaces" that lawyers can use and understand. In doing so, when you have to explain economic theory to someone who is a complete outsider, you find that some of the assumptions that we never challenge in economics are hard to justify. Lawyers may not be strong in maths but they are clever. They are extremely logical. They have big decision trees in their minds. So they tend to challenge our

theoretical assumptions because they are trained not to accept any premise without a good empirical reason. And then you ask yourself, but why are we making this assumption? Because lawyers will never accept an answer of the type "this is common practice in economic theory", you are forced to re-think the foundations of economic theory. Their questions help you understand your models more deeply and, sometimes, to think outside the box and develop new models based on more realistic assumptions.

5. Even if you are not allowed to disclose specific names and details, could you describe us the most challenging competition policy case you have been involved in?

Look, I think you learn more from cases that you lose than from cases that you win. I think that for me the first case that ended up badly was the most challenging case I have ever encountered and the case in which I learned more. This was the Microsoft 2004 case. It was challenging because I was trying to deal with the

"I learned that in order to be successful in competition matters, what you need is: DATA, DATA, DATA"

"But how do we assess whether a market is transparent? Do we have objective criteria? And how much transparency is enough? The answer to these questions is never black and white; there are various shades of grey"

complexities posed by the case as an academic. I was trying to find the right model that would allow me to solve the issues raised by that case in an unequivocal way. I was trying to find the perfect theory that would explain everything and that nobody could challenge. And that was a futile exercise, because my models and theories were too abstract and missed many of the facts that were relevant to the case.

What I have learned since is that, despite being trained as an economic theorist, if I want to be successful in actual cases, I need to focus on the facts and process market data using workable, parsimonious economic and econometrics models. I need to develop testable hypothesis and confront them with the data. I need to be designing models that can yield identification theorems, as opposed to possibility or impossibility theorems which are the sort of models I developed as an academic. This is why I am now reading on identification problems in social sciences. I had approached the case from an entirely abstract perspective and then I learned that in order to be successful in competition matters what you need is: DATA, DATA, DATA. A friend of mine who is now Chief Economist of DG-Market and before that was deputy Chief economist of DG-Competition, Miguel de la Mano, once said to a client in a meeting in which I was sitting, "In God we trust, from everyone else we want data". And I think that was a great summary of the attitude that economists need to have in competition cases.

So that was the most challenging one, it was a failure, but I think I learned the lesson.

6. There is a common agreement that the introduction of the leniency program in the EU during the previous decade was a major antitrust innovation. Do you think that it is an effective tool in the fight against cartels? Do you have any policy recommendations of how to improve its efficacy?

I think that the leniency program is working extremely well in most jurisdictions. There are some jurisdictions where it is not working as well, and I am not sure exactly that I understand why. For example, it seems to work very well in Brussels. In my own home country, Spain, it is working much better than anyone expected if we look at the number of cartels that have been uncovered. On the contrary, I am told that, in your country Brenda (Italy), the leniency program is not working as well and I am not sure why. I am concerned, however, that the leniency programs may not be stopping all cartel activity though. My sense is that the cartels that the leniency programs are uncovering are relatively old cartels, cartels that are relatively ineffective, and cartels that are denounced because a company wants to acquire another one and as part of the due diligence process the cartel is discovered and the deal cannot proceed unless the acquirer obtains immunity. I'm concerned that there may be more recent and effective cartels, where the leniency program is ineffective, and I thus wonder whether the European Commission and other jurisdictions should consider other programs.

The other point I would like to make on this is that, at the same time, now that we have leniency and it seems to be working and we have less of a problem with cartels, we need to be particularly careful with horizontal mergers, because mergers can produce very similar effects. That doesn't mean that we adopt a maximalist position where we prohibit every merger. But we do want to understand the business rationale behind mergers, because mergers may be the substitute to cartels in a world in which cartels are hard to sustain. So I think that reinvigorating horizontal merger control is an important policy objective these days.

7. In the case of mergers, we observe that when a proposed merger is investigated, there is a focus on the poten-

tial unilateral effects that this merger may have. What about its coordinated effects? Do you think that should be taken into account? Do we lack models that could predict such effects? Could they be proven to be more harmful for competition and social welfare than the unilateral effects that people tend to focus on in merger cases?

There are few coordinated effects merger cases these days. It may seem surprising because the case law on coordinated effects is fairly well aligned with economic theory. The case law, starting with Airtours and Sony/BMG, has adopted the paradigm of dynamic game theory and is consistent with its teachings. The Commission's guidelines on coordinated effects are consistent with the law and hence also well-grounded in economics. So it would seem that there is a good basis for enforcement in the law. But there are no cases. The problem that competition authorities face in practice is that proving the various conditions that one needs to prove in order to conclude that the merger is likely to create coordinated effects is virtually impossible. The sort of information that would be required to discharge the burden of proof is simply not there or is very difficult to collect. In other words, we have an identification problem. For example, economic theory says that one fundamental requirement for coordinated effects, is that the merger increases transparency in the market. But how do we assess whether a market is transparent? Do we have objective criteria? And how much transparency is enough? The answer to these questions is never black and white; there are various shades of grey. And transparency is just one of the conditions that competition authorities must establish. There are at least other three criteria and all them are equally challenging empirically. So, in short, we see few coordinated effects cases because it is very difficult to prove a coordinated effects theory of harm to the requisite legal standard. ■

LCL PARTNER OF TSE TOULOUSE BDE



The TSEconomist Coffee Talks

by Hussein Bidawi

If you are passionate about debating, or eager to always learn from others' points of view, JOIN US for free coffee and open discussions!

The first Coffee Talk of 2015 took place on Jan. 27th at 12:30 in MF 323, and was held in memoriam of the victims of Charlie Hebdo. The focus of the talk was the question of freedom of speech as a universal value.

The next meeting took a special format: The TSEconomist proofreading team organized a workshop on Academic Writing skills. It tackled three main aspects of writing: Christopher Sandmann took the audience back to Plato's and Aristotle's time, by opening the black box of how to ask questions and transition from having ideas to starting the writing process. Julia Martí Hoefer then detailed how one should structure a scientific paper. Russel Black entertained the crowd with a short survey of the best and worst uses of the English language inspired by examples from literature, journalism and economics.

The workshop also featured a bonus on presentation skills, by yours-truly. Find below the best of the Workshop:

- The shortest story ever written: "For sale: baby shoes, never worn." Ernest Hemingway. I couldn't think of a more efficient nor tragic use of the English language!

- Good Life Advice: as a rule of thumb, have one idea per paragraph.

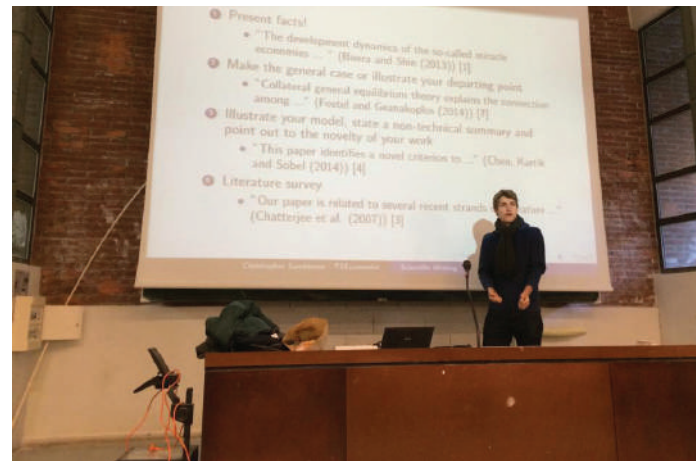
- 4 tips for writing a good paper, **make your reader a date!**

- Pick her up
- Don't show her what she already knows
- Respect the rules of the game
- And don't be boring!

- There's no point of doing good work if others don't know about it or can't understand what you did, so focus on presenting well, and by that we mean the 3 Ps: **Practice, Practice and Practice!**

- **"Do NOT start writing when you have finished the theoretical/empirical work.** Writing should be intricately related to the work itself, and the paper should be written all along the course of the project.

- **Write as if you would explain your research to your grandma.** Use a relaxed tone, avoid technical words." Sylvain Chabé-Ferret. ■



Christopher Sandmann at the workshop.

Coffee talks are the perfect bi-weekly occasion to develop your ideas and expose your arguments in an eloquent way. Students and prospective researchers alike are cordially invited to discuss important questions in an open and welcoming environment. Plus, there are always coffee and delicious sandwiches for everyone. This is not the only way you can get involved: we also welcome volunteers to moderate the talks. Each meeting requires one moderator and one topic. Our Coffee Talks team will be glad to help you chose a question of interest to you, and give you tips on how to moderate the talk. Don't hesitate to participate, as this is just one more occasion to practice your presentation skills! If you are interested to attend our Coffee Talks, follow us on Facebook to get the latest news and visit our blog [tseconomist@wordpress.com](http://tseconomist.wordpress.com), to join the ongoing debate! For information on how to get involved as a moderator (or in the TSEconomist), e-mail us at the.tseconomist@gmail.com

Junior Etudes Note



by Mialy Rakotondrazaka and François Pène



TSE Junior Etudes members 2015

TSE Junior Etudes is part of the CNJE (Confédération Nationale des Juniors Entreprises), which helps the junior entrepreneurs by giving advices and trainings, and controlling a proper process of missions.

As an economic consulting office, TSE Junior Etude has completed 8 missions this year for different clients, such as Toulouse Métropole and Etam, and several translations for TSE researchers. The annual turnover is about 20 000 €. There are 3 missions still going on, and 2 others yet to come.

For its annual handing over, the chairwoman Elodie Guihard and her fellow Ibtissam Benibrahim will be succeeded by Guillaume Chenetier and Léa Lavie, both students in 3rd year at TSE. With a lot of enthusiasm, they proudly present their program for the year 2015-2016 with aims

such as promoting the TSE Junior-Études alumni's network, programming trainings provided by CNJE's partner such as ALTEN, and creating/expanding partnerships. To support them in their new venture, the previous team will advise them for 2 more months, so that the new team will be perfectly prepared, trained to undertake the management of the association, and not redo the errors that led to last year's crisis.

This leads to the point we want to put forward here: cohesion. As Elodie said during her last monthly meeting on Thursday, February 26th, by joining our team you will meet people with whom you were not supposed to have a connection with. This year has been full of events for TSE Junior Etudes members, such as afterworks, dinners, skirail and sporty walking in a vineyard. ■

BDE Note

by Sarah Lacroix & Florent Laval



BDE members at TSE GALA 2015

The year is almost over, but the associations will remain! Every BDE member would like to thank everyone from the school for coming at the Gala on February 27th. We've gathered more than 500 persons, more than 80% of the school! The BDE would be pointless without the students attending our events and we want to thank you all for that.

For this night, with months of preparation and setting up, ideas sharing, scheduling, the team gathered on the D-day at 8 am to build the night step by step, willing to give to everyone a night that they would remember.

An hour and a half of ambient jazz, great food and wine, then the speeches of David Alary, Christian Gollier and the associations' presidents. Followed by the TSEconomist's Teaching Awards ceremony concluded by desserts and champagne.

The BDE has known its year with the most memberships, the most people attendance during the events and, of course, the aim is to reach and beat these scores by far. Among 140 members, we have 48 different nationalities represented and the goal for next year is to have a board mixed between French people and foreigners. So if you liked the gala, if you want to help us to make the school a better place to live in or have some ideas for new event we can organize it's always the right time to join us ! We also organize members or inter-association events, a good way to meet new people from all promotions ! You can also just come over to our office MC205 to have a chat !

The next big event will be the integration week end in september but expect some surprises. ■



Jean Tirole at TSE GALA 2015

The TSEconomist presents...

Teaching Awards 2015

Everyone has a favourite moment from the Gala. Ask any student, professor, or administrator to name their fondest memory of the event, and you are sure to get some interesting answers: some remember the dresses, the music, or the nice view of the Stade Toulousain. Others certainly can't forget being overshadowed in a picture by a friendly cardboard man.

But for many students, amongst which are the members of The TSEconomist team, the part of the evening that we hold dearest to our heart is the presentation of the Teaching Awards. For the third year in a row, we honoured the student's favourite professors and TA's with a small award ceremony - one we like to consider as the Oscar's of the TSE.

This year, we could see an obvious increase in the popularity of the Teaching Awards. During the weeks prior to the Gala, we launched an online survey where students could cast their vote and leave their comments. It was nice for us to see that students took the time to encourage others to vote through their respective Facebook groups. However, we were surprised when one particular master class decided to go a bit further, and made a clear attempt at collusion (campaigning for their favorite, conducting a pre-voting, enforcing participation, etc).

Though not the sort of behavior we encourage as economists, it is exactly the spirit that the Teaching Awards wish to capture. As we have said before, the awards are nothing but "thank you" trophies by the TSE students for the professors and teaching assistants. The nice comments and small stories that students shared with us are a clear example of the enthusiasm and respect that great teachers can inspire; and we are delighted to see that we have so many of those at TSE.

Thank you, professors and TAs, for your incredible patience and hard-work, and thank you, TSE students, for allowing us to continue with this tradition. ■



Christian Gollier



François de Soyres

Mohamed Saleh - M2 teacher of the year
Anne Ruiz-Gazen - M1 teacher of the year
Christian Gollier - L3 teacher of the year

Alexandre Nouvel - L3 TA of the year
François de Soyres - M1 TA of the year
Georgios Petropoulos - M2 TA of the year



Georgios Petropoulos

A selection of students' comments...

"Sharp and powerful, witty and pungent, expansive and meticulous, energetic and understanding, insightful and inspiring, French but not too much, what does a professor need more to be defined as the best ever had???" (*on Thomas Lèautier, Economics of Energy Markets*)

"Hearing *Professor Hellwig (Macroeconomics 2, M2 ETE)* talk in class is just like reading a well written academic paper. The way he speaks is just so well organized and concise."

"I just recall what Georgios was saying in class in order to motivate us to ask questions: There are no stupid questions. There are only stupid answers." (*Georgios Petropoulos, TA Microeconomics 2, M2 ETE, Winner of the TSEconomist Teaching Award, "Best TA", for M2 2015*)

"Gollier knows how to teach a course that fascinates himself. He doesn't hesitate to give his opinion with humility. First teacher who gives his opinion since 3 years in economics." (*Christian Gollier, Introduction à la Finance, Winner of the TSEconomist Teaching Award for L3 in 2015*)

Renato is production-efficient, funny and sexy. I only hope he could pay more attention to his in class hairstyle and his broken-lovely jeans! (*Renato Gomes, Microeconomics 1, M2 ETE*)

"What i liked about my favorite class is the fact that it was an open discussion. The teacher begins a subject, gives an example and then opens it to discussion. I think in M2, it is more efficient to have this type of teaching because it helps us learn how to think instead of just computing hard mathematics. It would also be nice to focus more on empirical projects than written exams, simply because it gives us a better overview of how to apply the theory." (*Nicolas Treich, M2 Cost Benefits Analysis*)

"The game theory professor is very kind, he even gave us an extra class in repeated games." (*Jérôme Renault, M2 ETE Game Theory*)

"The enthusiasm and the energy

of Emmanuelle Auriol during her lectures were so communicative that I couldn't leave the room... And what to say about the "bonbon" rewards... (Coffee taste is my favourite!)" (*Emmanuelle Auriol, M2 Governance, Industrial Organization & Development*)

"Nice that dude" (*Azam Jean-Paul, M1 Development Economics*)

"I love how Ananya explains and he has a cute accent." – "If Ananya had been an option, I would surely have voted for him! (Please tell him that)" (*another student from M2 about Ananya Sen, TA M1 Game Theory*)

"Andrii Babii was, is and will be the best TA ever. His domain over the vast subjects of Econometrics, from asymptotic theory, to non-parametric methods, passing by GMM, made us believe we were in the presence of a super-human. Or a robot with Wikipedia installed. Personally, I would have bought an "I love Andrii" t-shirt. He is a worthy Floren's TA." (*Andrii Babii, Econometrics 1 M2 ETE*)

"He is the best TA" - "Francois de Soyres gave an amazing, practical interpretation of all we saw this year in macroeconomics! He is an excellent TA who explains very good the subject and knows how to keep our interest! It would be a pity for TSE to lose him!" (*Francois de Soyres, Macroeconomics M1, Winner of the TSEconomist Teaching Award in M1 2015*)

"Hard choice... Really great quality in PPD teacher... Honestly to me at least 3 deserved it..." (*happy student from M2 PPD*)

"Jean Tirole is just impressive in his ability to convey the core ideas behind models in a simple and intuitive fashion." (*Jean Tirole, M2 Competition & Market Strategies*)

"They both explain well, they are really interested in the lecture they teach and the last but not the least, they are really focused about the fact that students assimilate well the notions." (*Adrien Blanchet, Advanced Calculus and Oleg Poliving, Game Theory, M1*)

"Professor Rey has created a very

good course, by far the best course I have ever attended." (*Patrick Rey, Microeconomics 2 M2 ETE*)

"Go Saleh" – "He worked a lot and it showed. His classes were clear and prepared. I really liked his approach and all the topics we studied (and there were a lot!). He managed to motivate the troops early in the morning and have a lively classroom atmosphere." - "Saleh Saleh" (*Mohamed Saleh, Individual & Households in Developing Countries M2, Winner of the TSEconomist Teaching Award in M2 2015*)

"Professor Lefouili is the most helpful teacher I've ever had! He's also an outstanding master's program director." – "He is extremely close to his students." (*Yassine Lefouili, Workshop on the Law & Economics of Competition Policy, M2*)

"Patrick Feve is definitely the most inspiring teacher." - "Outstanding pedagogical capacities" (*Patrick Feve, Macroeconomics M1*)

"François Poinas is very nice and always listening to your problems" (*Francois Poinas, Econometrics*)

"Volery can explain maths in a funny way, although some times he's going a little bit crazy, he is interested that people learn." (*Jean-Luc Volery, Mathématiques/Optimisation TD, L3*)

"He brought back some food from England to talk about add" (*Andrew Rhodes, Business Strategy M2*)

"Ms. Benedicte is always ready to answer student's questions, and she is patient to arrange extra office hours before exam for any question of us." (*Alziary-Chassat Benedicte, Dynamic Optimization M1*)

"Anne Ruiz enseigne très bien, elle est patiente et prête pour toutes les questions. Elle a la pédagogie. C'est la troisième fois que je fais ce cours, mais je n'ai jamais aussi bien compris. C'est une bonne enseignante." (*Anne Ruiz Gazen, M2 Survey Sampling & Time Series, the TSEconomist Teaching Award winner in M1 2015*)

The Gala







A New Challenge:

“Place Attachment” in our Globalized Era

by Marica Valente
and Marco Maccarrone*

How did our perceptions, thoughts and behaviors evolve over time? Several factors make some places meaningful and preferred to others: how might globalization, high mobility and increasing depersonalization of social interactions influence place attachment?

“We leave something of ourselves behind when we leave a place, we stay there, even though we go away. And there are things in us that we can find again only by going back there.”

(Pascal Mercier, Night Train to Lisbon)

Is it an ever-changing phenomenon over history, or an existential need we will always require to shape our ideology and identity? This essay will give a brief overview on these topics by offering some psychologists’ and philosophers’ recent theories.

The psychologist Kurt Koffka, in his “Principles of Gestalt Psychology” narrates the following parable:

“On a winter evening in the middle of a driving snowstorm a man on horseback arrived at an inn, happy to have reached shelter after hours of riding over the wind-swept plain on which the blanket of snow had covered all paths and landmarks. The landlord who came to the door viewed the stranger with surprise and asked him whence he came. The man pointed in the direction straight away from the inn, whereupon the landlord, in a tone of awe and wonder, said: ‘Do you know that you have ridden across the Lake of Constance?’ At which the rider dropped stone dead at his feet” (Koffka, 1970)



La charrette. Route sous la neige à Honfleur, Claude Monet, 1867

Where did the horseman’s ride take place? Of course on the Lake of Constance, whose surface froze because of the cold winter. Yet, the horseman thought he was safely riding on a solid plain, and the presence of the lake under his feet did not influence his ride’s decision. As Koffka explained, the presence of the lake instead of the plain is a matter of geography, not psychology. Put in other terms, the horseman’s behavior and thoughts did not depend on the real geographic circumstances.

However, why was the horseman scared to death after he realized the truth?

*Dr. Marco Maccarrone recently obtained his MSc in Clinical and Community Psychology at the University of Torino, Italy. This article is the result of the read of his broader Master thesis “Place Attachment and Common Spaces: Towards a Synthesis Between Thought and Action”. Marco belongs to Libera, an anti-mafia NGO that runs confiscated properties. Together with other four people, Marco lives in Cascina Caccia, one of these properties, now named after the Anti-Mafia Chief Public Prosecutor Bruno Caccia, murdered by mafia in Torino, 1983. A deep thanks goes to Marco for his proactive involvement in his community and for being an incredibly intellectually curious man, in addition to a great friend.

The horseman would have behaved and thought differently if he knew about the risk he was taking by riding on frozen water, not solid land. Therefore, physical and psychological environments do not always coincide, but they often overlap and combine. In this way, both physical and psychological environments enhance the value of the place we are experiencing, and, at the same time, the value we derive from being in a place. *The context, the environment and the place are mundane details in our life. But they are also key factors that actively shape our individual and collective experience.*

The object of this article is to offer an insight on the *relationship between individuals and places* they live in. *The term "place" does not imply just a transition or a random coincidence, but an entity where we can find meanings and, more deeply, origins.* Which kind of relation exists between people and places? And which role do concrete and existential needs play in this bond? *Last but not least, how do the changes happening in our modern society influence this relationship?*

endogenous – variables strongly impacting the evolution and the intensity of our place attachment's level.

It is common experience to feel some kind of attachment, positive or negative, to certain places of the present, past or future (a particular spot in your city, your childhood's house, the place you desire to visit or you would like to go back to). All the feelings people have for these places and the communities who live in them (home-family/friends, working place-colleagues, neighborhood-neighbors, religious place-believers, city/country-citizens) help determine their personal identity and give sense to life adding new purposes, values and meanings.

A particular notion of place attachment may also be found – besides in sociological studies – in the field of *human geography*. Human geography – unlike physical geography – *is a social science which has a great focus on human activities of people, communities and cultures across space and place.*

"The context, the environment and the place represent, indeed, not only a frame of our life but also key elements that actively shape our individual and collective experience."

considered as a fundamental need for us humans (Relph, 1976). This need seems to emerge more and more in our contemporary society, characterized by increasing mobility and a higher and higher functionalist relation with places (the functionalist perspective, also called *functionalism*, sees each part of society as functional for the stability of the whole: society is more than the sum of its parts). *Growing globalization allows us to move, share and communicate faster and farther, thus every place can be more easily visited, crossed and eventually switched.*

This apparent paradox, of greater place attachment as society becomes more mobile, was the starting point of Tuan's analysis. How to solve this contradiction? By introducing a clear distinction between the terms *"rootedness"* and *"sense of place"*. *"Rootedness"* is an *unconscious*, deep intimacy with a place, which guarantees someone's continuity in living there. Instead, *"sense of place"* is conceived as the *conscious* effort to constantly preserve the place through sharing words, gestures, stories.

In Tuan's definition, rootedness and sense of place represent two opposite experiences and not two different levels of the same experience: the attempt to recover an intimate bond with a place is mutually exclusive with the unconscious character that distinguishes rootedness. Therefore, for our modern era, rootedness seems to be an unachievable mirage or an impossible Eden: nowadays, the relation with the place has lost forever its authenticity. A place's functionalist (or also dysfunctionalist) role has become the main choice variable to be consciously and rationally optimized by the world's globalized citizens.

The next question follows swiftly :

Taking into account increasing mobility, globalization, growing places' homogeneity and loss of their cultural specificity, are places still important to people?



"We do not dwell because we have built, but we build and we have built because we dwell"
(Martin Heidegger, 1971). Painting by Antoin Blanchard, *Marché aux Fleurs, Place de la Madeleine, Paris*

Place Attachment is the key psychological concept – our investigated response variable – chosen to explore these issues. Our individual and social identity, our values, culture, language and wellbeing are the explanatory – mostly

Yi-Fu Tuan, a Chinese-US geographer, supports the idea that *what turns simple geographic spaces into places is the emotional meaning people assign to them* (Tuan, 1974). This "love for the place" – also called *Topophilia* – is

If, according to Tuan, the place is defined by its historical continuity, uniqueness and non-substitutability, *then how can places – not geographical spaces – survive among modernity, high-speed technologies and the virtualization not only of the vital space but also of human relations themselves?* How much direct interpersonal contact influence place attachment? And what about the intimate, meaningful acquisition of identity and cultural values achieved through affection for places? It is also important to

tradition, adduced large evidence in favor of this thesis which would invalidate our paradox and question both Tuan's and Augé's vision. In his incredibly comprehensive study "The Fate of Place" (1997), Casey offers a philosophical history of the evolving theories of place and space in Western thought, starting with Plato

"All these mono-cultural values and uniformity strengthen humanity's need to have diversified places to be emotionally attached to in order to escape the depersonalized dominant economic and political paradigms of our modern civilization."

happen – increase people's awareness about the *impossibility to substitute certain places because of their singular and unique character among history.*

Casey admits that a homogeneous space identity on a global scale is diffusing – even to the extent that we may be confused about in which city we are, given the extreme architectural and commercial uniformity of nowadays buildings and infrastructures.

However, and here Casey juxtaposes his main point, all these mono-cultural values and uniformity strengthen humanity's need to have diversified places to be emotionally attached to in order to escape the depersonalized dominant economic and political paradigms of our modern civilization. This is not just a matter of nostalgia. It is an *active preference for the uniqueness and specificity of the place*, which comes from the positive positive experience of what makes us feel unique as well. Thus, even if conscious we are so beautifully imperfect beings, we need to transfer emotions to what can enhance our sense of unicity: therefore to what? To our group identity, individual personality, story and history, in one word, to places. ■



The City Rises, Umberto Boccioni (Futurist artist), 1911

underline the contribution given by the French sociologist and anthropologist Marc Augé who denounced an increasing presence of *"non-lieux"*, non-places – a concept he first coined in 1992 in his *"Non-Lieux, Introduction à une anthropologie de la surmodernité"*. Augé defines *supermodernity* as the excess of events in time and acceleration of history, overabundance of space and the individualization of references. According to him, *if a place can be defined as relational, historical and concerned with identity, then it is a "place". All the rest would be "non-places", such as for example highways, airports and supermarkets, where everyone passes, but nobody stays – and, more importantly, nobody is.*

In light of our paradox presented before, it seems crucial to explain how it could be possible that nowadays – despite the rising number of *non-lieux* – *places themselves not only did not lose their meaning, but also increased their importance in our lives* (Gustafson, 2006).

The American philosopher Edward Casey, one of the most incisive interpreters of the Continental philosophical

and Aristotle until the last postmodernist conceptualizations. Casey believes that some devastating *phenomena occurred in the 20th century gave people a renewed sensibility towards places.* Like a nuclear catastrophe, all disasters that happened – either those we think could have happened or still may potentially



Jeune fille à la barque, Pierre-Auguste Renoir, 1870

“There are safer jobs than being a journalist. But they are also less exciting.”

Interview With Christian Schubert

Economic Correspondent of the “Frankfurter Allgemeine Zeitung” in France

by Christopher Sandmann and Marica Valente



Christian Schubert

1. Beginning with the perhaps most difficult question, what makes a good newspaper article?

The beginning of the article is quite important. Besides that, several criteria do apply. The content has to be new. It has to be written in a manner that draws the attention of the reader and generates curiosity. It must cite all important sources and most importantly is has to be profound and meaningful; why do things happen? Lastly, the story has to be balanced. It is not enough to report just one side of it; all the important players and stakes have to be included.

Nowadays, the layout of the article is also crucial for the article's success, and it should be supported by a coherent visual representation. There still exists an audience that is willing to read plain text, but it is shrinking.

2. Ad revenues have plunged by more than fifty percent and young people find it less and less common to get their news from the kiosk nearby. Can you recommend prospective economists to pursue a career in journalism rather than preparing for an interview with McKinsey or the competition authority?

Being a journalist today demands passion. Clearly our industry is under pressure and it has to find a new business model. Young readers are becoming increasingly scarce; older readers will die eventually. Meanwhile, the average reader of the printed newspapers is older than he used to be. As you may know, newspapers are essentially parts of what Jean Tirole has studied extensively as a two-sided market: revenue is made up by both sales and advertisement, and nowadays both are

The “Frankfurter Allgemeine Zeitung” (Frankfurt General Newspaper) is one of Germany's two leading quality newspapers, with the largest network of foreign correspondents among all European newspapers. It maintains an outstanding role in moderating the intellectual discourse in Germany and has been acknowledged as the “ordo-liberal conscience”¹ of the republic. Quite uniquely, a group of four editors, known as “Herausgeber” in German, cooperatively determine its editorial policy. The majority of its shares are owned by a non-profit foundation, ensuring the continuous independence of the newspaper

Has the digital age affected newspaper revenue? Looking at U.S. data, this question must be answered with a qualified yes.² Sales revenue has remained high at about US\$ 10 billion in total in the U.S. whereas retail prices have steadily risen. At the same time, from 2007 combined annual newspaper ad revenues have decreased from almost US\$ 50 billion in 2007 to just US\$ 22 bn in 2012. Just in comparison: Google outstrips the entire U.S. newspaper industry by far, with a revenue of almost US\$ 60 bn in 2013 and an operating income of close to US\$ 14 bn.

decreasing. This comes about at the somewhat ironic coincidence that our readership base is bigger than ever before. The only issue is that these readers do not pay. They read content online.

¹ According to historian Peter Hoeres, F.A.Z October 21st, 2014. For a full account see a comment by former editor Jürgen Jeske on the newspaper's role in guiding public opinion towards an ordo-liberal consensus <http://www.ludwig-erhard-stiftung.de/erhard-aktuell/standpunkt/marktwirtschaft-braucht-eine-stimme/>

² The Newspaper Association of America provides detailed information on latest sales and advertisement revenue <http://www.naa.org/Trends-and-Numbers/Newspaper-Revenue.aspx>

Amid these changes I see only two solutions: we can either make these readers pay, or attract as many readers as possible. So far the latter hasn't worked: prices for online advertisement are too low and they seem little willing to rise in the near future. In such an environment you have no other choice but to make readers pay for content using paywalls. Clearly this will decrease the readership base, but my hope is that total revenue will rise nevertheless. So far, every newspaper is trying out different things and none of them has found the big answer yet.

Thus arguably, if you join a newspaper today, you will not find the same environment that now-senior colleagues did. Salaries are lower and job security is an issue. It is risky to be a journalist nowadays, and you'll be probably on the safer side joining public service. But at the end of the day it is also less exciting.

3. Why do we need newspapers?

I think that journalism is a fundamental element of democracy, which is why it is also traditionally called the fourth power. We need professionals who report facts and opinions on a full time basis. Imagine a society that did not have such an institution. Just think of from where and from whom you would like to receive information: from the government, or politicians? People demand independent information.

4. Could this role be taken over by individuals that spread these information online?

I am skeptical as to what extent this role can be taken over by individuals such as bloggers. I see two issues here. Firstly, I know of hardly any blogger that works full time. Secondly, bloggers generally lack the resources to be present and distribute information alike. If the Americans decide to send soldiers to Iraq, we need someone there to follow the events. The public needs people with the capacity to independently validate events to follow the troops. And indeed the New York Times, along with other media, has maintained an office in Bagdad throughout all those years. This is essential. You need people on the ground that are not affiliated with either party. Imagine journalists were not around: where would a blogger sitting



1984 FAZ editon

in New York collect his information from? Does he have enough resources to spread them sufficiently?

5. Recently a number of newspapers such as "The Intercept" or "The Washington Post" were taken over or founded by wealthy citizens who consider sponsoring newspapers as benevolent to the society. Do you think that this is a sustainable model for the future and where do you see issues associated to that?

Patronizing publishers can be a model for the industry as long as incentives coincide. That is to say that both the newspaper staff and the owner are committed to publishing a quality product and thereafter to try to find readers for it. On the other hand, do I trust those articles published in the Washington Post about Amazon (Editor's note: Jeff Bezos, owner of the Washington Post, is founder and CEO of Amazon) when it comes to, say, tax evasion? These conflicts arise in some newspapers. Nevertheless I am glad Amazon purchased the newspaper, as it ensures its continued existence and preserves diversity of opinion.

6. An increasing share of the public doubts the credibility of news published in the mainstream media. How can a journalist avoid being a politician?

In media there's a tendency – and we are not completely exempt from this – to give what we call elements of explanation and interpretation as to why things happened. In the past we would present

things in a rather dry and sober manner, citing only the facts. But we believe that these days this is no longer satisfactory for the reader. Our readers do no longer share some homogeneous background knowledge but are highly heterogeneous, as the internet allows us to reach a broader audience. Thus reports are more interpretative, comments are more pronounced, sharper and less balanced. As a consequence facts and opinion are less separated in some articles of our newspaper than they were in the past. When you explain and interpret more you necessarily get into an area where different opinions exist..

7. We initially asked you to tell us what makes a good newspaper article. Where did we go amateurish in this interview? Do you have an advice from a professional point of view?

You did it quite well. One piece of advice: feel free to interrupt, turn the interview into a dialogue!

(Christian Schubert visited TSE during the Business Networking Day 2014. We are grateful that he did not only meet with us to find out about the environment at post-Nobel TSE but also took the time to answer our questions. His beautifully written piece has been published in the Frankfurter Allgemeine Zeitung on December 17th, 2014.³) ■

³ <http://www.faz.net/aktuell/beruf-chance/campus/franzoesische-hochschule-toulouse-school-of-economics-tse-13316471.html>

Economics Exam from Harvard University in 1953¹

“What distinguishes the ‘scientific’ economist from all the other people who think, talk, and write about economic topics is a command of techniques that we class under three heads: history, statistics, and theory. [...] Of these fundamental fields, economic history – which issues into and includes present day facts – is by far the most important.” – Joseph Schumpeter, 1954²



DEPARTMENT OF ECONOMICS

GENERAL EXAMINATION

(Three hours)

Please note on the front cover of your bluebook the number of each question upon which you write, in the order followed in your book, and HONORS or NON-HONORS.

PART I

(One hour)

Economic Analysis

HONORS candidates answer ONE question taken from questions 1-4.

1. “Depressions are caused by the exhaustion of investment opportunities and the rigidity of saving.” Discuss.
2. “Keynes’ theory may have undermined the neo-classical theory of the price level but it has left intact the neo-classical theory of relative prices.” Discuss.
3. “The basic criteria of anti-trust policy with respect to product markets are the same whatever the competitive structure of labor markets may be.” Discuss.
4. “Despite all the changes that have taken place in economic theory the profit motive continues to occupy the central role which it had in Ricardo’s theory.” Discuss the role of profit in (a) Ricardo, (b) neo-classical theory, (c) Schumpeter’s theory.

NON-HONORS candidates answer ONE question taken from questions 5-8.

5. “Future historians may well write the epitaph of our civilization as follows:

From freedom and science came rapid growth and change.

From rapid growth and change came economic instability.

From instability came demands which ended growth and change.

Ending growth and change ended science and freedom.”

Discuss this alleged conflict between economic growth and measures to secure economic stability. In your answer refer to the views of some of the great economists, for example, Schumpeter and Keynes, on this problem.

6. In explaining business cycles most economists place crucial emphasis on fluctuations in investment or capital goods.

Discuss the determinants of investment and the manner by which these factors operate upon investment to produce fluctuations in National Income.

7. The basic economic questions any society must somehow answer are:

- (1) What consumer and capital commodities shall be produced and in what quantities?
- (2) How shall the goods be produced, i.e., by whom and with what resources?
- (3) For whom are goods to be produced, i.e., how is the national product to be distributed among individuals? Outline the way in which these questions are answered in a perfectly competitive, free enterprise economy.

8. In addition to wages, interest, and rent, economists often talk about a fourth category of income: profit. What do economists mean by this return? What are the causes of profit and its function in a capitalistic system?

PART II

(Two hours)

All students are required to choose TWO of the four fields in Part II of this examination and to answer two questions in each selected field. Thus a total of four questions are to

¹ This is a reprint taken from

<https://mostlyeconomics.wordpress.com/2015/01/16/example-of-an-economics-exam-from-harvard-university-in-1953/>

² Schumpeter, J. (1954): History of Economic Analysis. Oxford University Press.

> NO ECONOMICS IN THE TITLE

be answered in Part II with an allowance of a half hour per question.

A. Economic History

9. "The very increases in the possibilities of unrestrained competition of the past seventy-five years, through developments in transport, technology, the size and organization of firms, etc. – may in themselves partly explain some of the restraints on price competition that have appeared in this century." Discuss both the developments and their alleged effects.

10. "In the past 150 years the United States economy has radically altered its relationship to the world economy and at intervals has been a seriously disturbing factor." Discuss, including references to periods in the 19th as well as the 20th century.

11. "In spite of the waste, apparent exploitation, and graft, the railroads more than paid for themselves in terms of American economic growth." Discuss.

12. Why did Hamilton favor a central banking system? What was the subsequent history in the 19th century of the issue that he poses? How satisfactory, in terms of the needs of an expanding economy, were the alternatives to a centralized banking system that existed prior to 1912.

B. Money and Finance

13. What are the relations between a country's balance of payments and its internal monetary and fiscal policies?

14. From a fiscal policy standpoint, what do you consider would be the best budgetary policy for the federal government to adopt in order to combat a growing deflationary trend?

Indicate the relative advantages and disadvantages involved in the policy you propose. Indicate practical as well as theoretical considerations.

15. "Classical economists tended to view the amount of taxes paid by the private sector of the economy as measuring the amount of 'burden' which the government imposed on the private sector." Do you agree with this view? If you do, what is the justification for your position? If you do not, what are some possible alternative ways of measuring the "burden" of the government on the economy, and for what purposes can they be used?

16. "Older business cycle theories emphasized fluctuations in prices while modern ones emphasize fluctuations in income." What is the theoretical and empirical justification for this

change in emphasis?

17. What role did the Federal Reserve System play in financing the Second World War?

Discuss the impact of this experience upon money and banking in the United States.

C. Market Organization

18. The spread between prices paid farmers for products used as food and prices paid for these foods at retail was 55% of the consumer's dollar spent for food in 1910-14. It was 54% in 1952. Account for the failure of this spread to increase in spite of the great increase in processing, services, and transportation sold with the food.

19. Although price discrimination generally is regarded as being contrary to the public interest, it is expressly sanctioned in railroad rate-setting under another name: the "value-of-service" principle. What cost and market characteristic of railroads might lead you to justify the use of discriminatory pricing in their case?

20. Bituminous coal is a "sick" industry. What are the causes of this "sickness"? What attempts have been made to impose "healthier" conditions on the industry?

21. Various techniques are used by oligopolistic industries in attaining stable and desirable price and production conditions. Explain at least three (3) of these techniques and discuss the possible reasons for using any one over another.

D. Labor Economics

22. What role did the courts play in labor-management relations in the latter part of the nineteenth century? How far was this situation changed subsequent to 1930?

23. What is collective bargaining? Is it a process of communication and education leading to agreement based upon mutually accepted and recognized goals and standards, or is it a temporary truce based upon balance of power with conflicting basic objectives?

24. Has organized labor "distorted" the wage structure and wage level of the country at the expense of the unorganized or the weakly organized and at the expense of the recipients of other functional shares?

25. How would you handle the problem of national emergency disputes?

April 29, 1953. ■

Errata to The TSEconomist, 8th Issue, Dec. 2014

We report below the contribution of Florian Schuett (Tilburg University) to the 8th Issue's Nobel Corner Section dedicated to Jean Tirole. We apologize with the author for having accidentally omitted his piece.

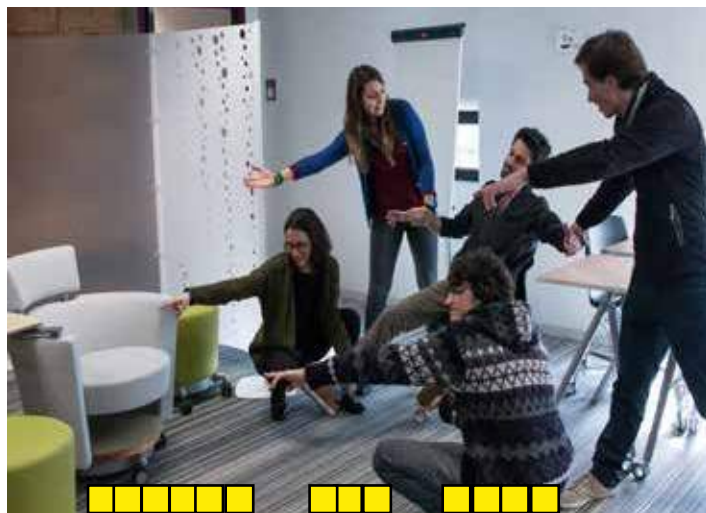
"I came to Toulouse in 2003 for the Master 2 (called DEA back then) and was lucky enough to be supervised by Jean Tirole from 2004 on, graduating in 2008. Although Jean told me in the beginning that supervising me was conditional on my performance (putting the theory of incentives to work right away), he also displayed great patience when my first two years of research produced little to nothing of value. In spite of Jean being perpetually busy, we met regularly during those first two years (at two-week intervals at some point).

Jean always read the notes I sent him, and his comments were sharp. His thinking tended to be lightyears ahead of mine. Some time after completing what eventually became my job market paper, I stumbled upon some of his handwritten notes from the early days of that research project. I realized to my great surprise that, from the very start, he had anticipated all of the findings it took me months to discover; yet somehow the significance of his comments had escaped me at the time. Jean continued to support me after my graduation. He asked me to keep him posted about good news. (This was remarkable given his fondness for the modeling assumption that "no news is good news.") Fortunately, and thanks in large part to his support throughout the years, there turned out to be good news to report every now and then."

Picture Quiz

Can you guess these terms from the world of Behavioral Economics?

Submit your four answers by July 1st to tseconomist.com and enter the draw to win one of two TSE sweatshirts!



Economic Jokes

Three German bankers are standing on a roof, about to jump off. A fellow shouts at them from an open window: "Why are you jumping?"
 "About an hour ago we saw three Swiss Bankers jump off a roof and if the Swiss are doing it, there's money in it".

You are a (TS)Economist iff:
 - You correctly predicted 4 out of the last 2 recessions.
 - You think the .pdf in Acrobat files stands for "probability density function".
 - You secretly think that lightbulbs should screw themselves in. (For very deep insights on lightbulbs see TSEconomist 8th issue.)

Last Issue's Answers: 1. Tragedy of the Commons
 2. Rebound Effect 3. Carbon Tax 4. Cap and Trade

Share your favorite economic jokes with us!!!
 Send them to: tseconomist@tse-fr.eu !

Take the TSEconomist on holiday with you!

Send us a photo of you holding the magazine
in the coolest spot of your summer!

The winning entries will be published
on the back cover of our September issue!

Send it to: the.tseconomist@gmail.com before August 20th

