

Cooperation under the Banner of Innovation

Ten years of collaboration between the Max Planck Society and the Fraunhofer-Gesellschaft



The cooperation program is aimed at creating knowledge for application and putting new solutions into practice. The two partners each specifically support projects that bring the core competencies of their respective organizations to bear: for the Max Planck Society, that is discovery-driven basic research, and for the Fraunhofer-Gesellschaft, it is industry-centric technology development. The research organizations make up to four million euros available for the undertaking each year.

“This is an important contribution we are making to Germany as a location for innovation,” says Max Planck President Martin Stratmann. He explained that the program is based “not on a sequential concept of collaboration, but on an integrative understanding of it.” Consequently, it isn’t as if the Max Planck scientists hand over the findings of their basic research to their Fraunhofer colleagues: “What we actually do is have all parties work together from the start with the focus firmly on discovery and solutions.” The spectrum of topics covered ranges from new types of high-capacity magnets to early testing for dyslexia to improved investigation and restoration methods for the ancient site of Pompeii.

Vividly illustrated: Fraunhofer President Reimund Neugebauer (left) and Max Planck President Martin Stratmann presented their joint projects in Berlin.

Thought Leaders in Religion and Modernity

Alexander von Humboldt Foundation and Max Planck Society honor Bryan S. Turner and Hans Joas

What is the significance of religion in our day? What is it that ensures cohesion in multicultural societies? It is on questions like these that social philosopher Hans Joas and religion sociologist Bryan S. Turner have produced

groundbreaking efforts toward explanations and solutions. The two scholars firmly believe that the widely claimed secularization of modern societies is merely a highly simplified view of the matter. According to Joas, even

non-religious people have something akin to religious experiences, such as through striving to find the meaning of life, pursuing a higher goal, or in the relationship with a loved one.

Turner, on the other hand, focuses on matters pertaining to law. In light of social, cultural and religious pluralization, the law serves as an anchor of social cohesion. The Max Planck Research Award is funded by the German Federal Ministry of Education and Research and is endowed with 750,000 euros for each recipient. The award ceremony took place in Berlin on December 8.

Reflective: Bryan S. Turner (left) and Hans Joas focus on secularization and religious plurality.



Ironic Prize for a “Huh?”

Max Planck linguists win the Ig Nobel Prize for Literature

The Ig Nobel Prize is bestowed every year to “honor achievements that make people laugh and then think.” And that is just what some of the findings emerging from the Max Planck Institute for Psycholinguistics in Nijmegen do:

Mark Dingemanse, Francisco Torreira and Nick Enfield discovered that little words like “huh?” are the cement that holds interpersonal communication together. People around the world use them to signal that they haven’t under-

stood what someone was saying to them. The Ig Nobel Prize enjoys cult status in English-speaking countries, where self-deprecation is part and parcel of polite conversation. Indeed, many young award winners have gone on to enjoy a career in science. The most prominent among them is Andre Geim, who won the Ig Nobel Prize in 2000, followed by the Nobel Prize in Physics a decade later.

These findings from Nijmegen were actually only a by-product of a larger research project on how people worldwide “repair” misunderstandings in communication. In parallel with receiving the Ig Nobel Prize, the team was able to publish new and insightful findings: Besides the “huh?” interrogative, they discovered in different languages two other universal strategies whereby listeners interrupt the conversation and pose a question to clarify what has just been said.

Universal: German speakers say “häh?”, English speakers “huh?” and Icelandic speakers “ha?” when they haven’t understood something. Max Planck researchers discovered similar interrogatives in 31 languages.



Novel Imaging System for Cell Analysis

Start-up raises a million for innovative application

The Stuttgart-based company Venneos GmbH is working on a new type of imaging system for analyzing biological cells. A consortium comprising Business Angels and Family Offices, the High-Tech Gründerfonds and the Max Planck Society is investing in the company to develop the product to market readiness and prepare the first generation for market launch. Venneos, a spinoff of the Max Planck Society, is working on a silicon-chip-based imaging system for analyzing bi-

ological cells. The system is based on an innovative measurement method that allows customers to recognize cellular changes that other technologies can't detect.

The company is currently refining the prototype in conjunction with pilot customers. “The cooperation with customers demonstrates that there is a need for Venneos’ new systems both in academic research and in drug development,” explains Jonas Lehmann, one of the founders.

“Complicated rules that very few are happy with”

Interview with Jens Beckert from the Max Planck Institute for the Study of Societies on the inheritance tax reform

In 2014, the German Federal Constitutional Court declared the law on inheritance tax and capital transfer tax unconstitutional because it doesn't tax business assets to the same degree as other types of assets. The exemption rules in place for companies gave them an unfair advantage. The reform has been initiated, and a draft law is currently facing opposition, predominantly from the business sector. This isn't a new topic for Jens Beckert. The Director at the Max Planck Institute for the Study of Societies already presented a sociology of inheritance law in 2004, and published a book on inheritance in an achievement-oriented society in 2013.

Last year, the state received around 5.5 billion euros in inheritance tax from estates worth an estimated 250 billion euros. Why is that so little?

Jens Beckert: Although tax rates are up to 30 percent for close relatives and even as high as 50 percent for non-related heirs, the figures show that estates are taxed at just slightly more than 2 percent on average. There are various reasons for this. First, the tax-free thresholds are high. In a family situation with an inheriting spouse and two children and a family home involved, it is ultimately possible to bequeath assets worth almost two million euros tax free. But few estates are that large. Second, business assets are almost completely untaxed. And then there are tax loopholes that can be taken advantage of.

Low-income earners inherit less, and less often. If that is so, why is inheritance tax still frequently perceived as unjust?

Because the tax exemptions are so high, very few heirs will ever have to pay inheritance tax. And half of the population doesn't inherit anyway. Nevertheless, opinion polls regularly show how strongly people dislike the tax. This isn't something we fully understand. Many people simply don't know that, where close relatives are concerned, inheritance tax affects only very large estates. And many people see inheritances as a purely family affair, and think that the state should keep

its nose out. Another explanation is that – just like playing the Lotto – people hope they'll one day receive a surprise inheritance, and then they won't want to share it with the government.

Why does Germany need an inheritance tax when numerous European countries don't have one?

The trend in the distribution of wealth in past decades indicates an increase in social inequality. This can eventually prove detrimental to economic development and democracy. Inheritance tax can serve as a corrective element by reducing the value of large estates when passing them on to the next generation, and thus create more equality of opportunity.

What would you say to people who insist that inheritance tax is taxing income twice?

I consider this argument to be wrong. Inheritance tax is collected from the heir to the estate. The heir hasn't paid tax on this income before. When you buy a loaf of bread from the bakery, the baker has to pay tax on the money you hand over even though you've already paid tax on it yourself.

What do you think of the reform as it concerns business assets?

The proposed reform that's been before the cabinet since the summer is going to create complicated and ambiguous rules that very few are happy with. The underlying problem of business assets being virtually untaxed remains unresolved, in my view. But as for how we can tax companies in the event of succession without hampering their competitiveness – I think it's impossible. What was particularly interesting about the judgement of the German Federal Constitutional Court was the minority vote of three judges who declared that inheritance tax serves not only as a means of bringing in tax revenues, but also as an instrument of the welfare state. They said that wealth shouldn't be able to accumulate in the hands of the few over many generations on the grounds of birth alone. This is a new notion, at least in the recent case law emerging from the Court.



Jens Beckert

What would be your personal ideas on how inheritance tax should be structured?

I would argue for higher inheritance tax. Estates passed down should be taxed – after the deduction of tax-free limits – at the same rate as income. This would fit much better into our self-understanding as an achievement-oriented society. Why do we tax the work we do at up to 45 percent, but tax inheritances passed down to close relatives – where most estates do go – at no more than 30 percent? And that's only for estates worth 26 million euros or more! The additional tax revenues could be used to reduce income tax, which would create additional economic incentives.

What do you think of the proposal to have a single low tax rate?

The appeal of a single low tax rate of the kind the German Finance Ministry's scientific advisory board has proposed lies in the fact that it could drastically reduce the number of complex valuation rules and exceptions inherent in inheritance tax law. From the perspective of tax practice, this is an understandable objective. But it would mean giving up the goal of using inheritance tax as an instrument for correcting unequal opportunities in our society.

Interview: Susanne Beer

Liftoff for LISA Pathfinder

Satellite on its test mission in space

LISA Pathfinder is the test mission for the planned *eLISA* gravitational wave observatory. "The satellite contains brand new technologies with which we aim to later capture the sound of the universe," says Karsten Danzmann, Director at the Max Planck Institute for Gravitational Physics in Hannover. *LISA Pathfinder* will test the technologies in outer space. A crucial element, the optical precision measurement system, was developed and built under the supervision and with substantial involvement of the institute.

In recent weeks, the highly sensitive payload was installed in the satellite and the complete vehicle tested. *LISA Pathfinder* was launched into space from the spaceport in Kourou (French Guiana) on December 3. Meanwhile, the scientists are busy preparing for mission operations. As soon as *LISA Pathfinder* has reached its destination, they will test the technologies intensively, remaining in constant dialog with the satellite.

Tough test: The *LISA Pathfinder* scientific module and the drive module with thermal insulation before acoustic testing at IABC in Ottobrunn. Tests have ensured that the probe can withstand undamaged the enormous acoustic vibrations to which it will be exposed when starting its journey into space.



On the Net



The Max Planck Society in 75 Seconds

Knowledge is everything. And basic research helps us understand our world better and expand our horizons. The Max Planck Society has long been a special place for elite scientists engaged in basic research. What is it that sets us apart? A new video clip explains this with the help of sketchboard animations that accompany the narrative, illustrating the action in pictures – easy to understand and presented in just 75 seconds.

<https://www.youtube.com/user/MaxPlanckSociety>

Post from ...

Max Planck scientists cooperate with partners in some 120 countries around the world. In the course of their work, they also learn about everyday life in different cultures. Take quantum physicist Nora Kling, for example, who discovered a new and fascinating world on a visit to a laser lab in Riyadh, or Adrin Jalali, an Iranian doing his doctorate at the Max Planck Institute for Informatics in Saarbrücken: he talks about his experiences in a small German town and why he never wants to return to Tehran. The popular series from MAXPLANCKRESEARCH is now also available online at: www.mpg.de/9359216/internationality

Painting with Light

Within the framework of the International Year of Light 2015, the Max Planck Society held a light painting contest that attracted numerous entries. Light painting is a photographic technique in which exposures are made by moving a hand-held light source while taking a long exposure image. The top prize was participation in a light painting workshop with the *Lichtfaktor* artist collective. The winners were recently selected and you can see the prize-winning pictures at:

www.deutschland-geht-ein-licht-auf.de/einreichwettbewerb