NEW HORIZONS
MAGAZINE FROM UPPSALA UNIVERSITY

1:2
2013

THEME: WORKING LIFE

Taking the pulse of working life

Relax from the IT stress
His job and hers – in the 1500s
The connection between environmental toxins and diseases
World peace from the school bench
New Horizons 1/2013

THEME: WORKING LIFE

4 Three scientists on the working life of today
8 Work without boundaries gives rise to new challenges
10 Difficult to switch off from new IT systems
12 Who worked with what in the 1500s?

UPDATE

14 Problem solving on Gotland
16 Gearing up for China – new strategy for research collaborations

SCIENCE

17 Environmental toxins can be linked to common endemic diseases
20 Anders Hagfeldt: Among the world leaders in solar cells
23 The price of intelligence studied in the aquarium
24 Resistant bacteria – a global threat

EDUCATION

26 World peace from the school bench
28 Mission: Peace observer in Colombia

INNOVATION

30 Idea bank for teachers
31 Algae factory turns sun into energy

COLLABORATION

32 New technology costs less when multiple users work on the electron microscope
33 New fund for incurable disease: "Further research is required"

CULTURE

34 Rowing draws in a lot of academics
35 The meeting of art and chemistry

ALUMNI

36 Niklas Zennström: "No problem is too big to solve"
38 The student radio creates networks
GALE FORCE WINDS batter the labour market throughout Europe. In Sweden too, the rate of unemployment is on the rise. Is there a risk that certain groups, such as young people and newly arrived immigrants, will fall to the back of the employment queue? And just how strong is the social safety net in Sweden, compared with other countries? At Uppsala University, many researchers are following the development on the labour market. They are studying the new, flexible working life which offers freedom whilst placing tough demands on the individual. And how should the IT environment be designed in order to facilitate the work and not simply create stress?

The question is whether working life is in step with current developments at our university, where 40,000 students are building their futures. At Uppsala University’s newest campus – Campus Gotland – a Liberal Arts Education is starting this autumn, which educates “flexible problem-solvers” for a changeable working life. For those looking to further themselves internationally, a hot tip is to become an exchange student abroad. New Horizons has met students from different countries who have gathered in Uppsala to do a master’s degree in international peacekeeping. You can also read about two alumni who, following studies in Uppsala, travelled to Colombia as peace observers.

In terms of jobs and future prospects, the IT entrepreneur and alumnus Niklas Zennström has a great deal of good advice to offer students. One tip is to choose partners carefully. Another is to ensure to make the most of all opportunities during studies. Uppsala offers great opportunities to build a future working life – for example by becoming involved in student nations – and in the proximity of the university, new businesses are constantly springing up. Another lesson Niklas Zennström has taken with him from Uppsala is that “no problem is too big to solve if you have a methodology to attack it with.”

THE QUESTION IS WHETHER WORKING LIFE IS IN STEP WITH CURRENT DEVELOPMENTS AT OUR UNIVERSITY ...

By choosing this paper we have reduced our climate impact by more than 35 per cent. The paper is produced in Sweden, and the amount of water used in its production is uniquely low. The raw materials come from “FSC forests”.

PERNILLA BJÖRK
Director of Communication
Taking the pulse of working life

What’s the outlook for the Swedish labour market? Have we entered a tougher climate, where weak groups are at risk of being excluded? And what do we have to do in order to thrive in the new, flexible working life? We asked three researchers: Economist Eva Mörk, political scientist Joakim Palme and sociologist Michael Allvin.

What can we do to adapt to the new, flexible working life?

Have we entered a tougher climate, where weak groups are at risk of exclusion?

Just how strong is the social safety net in Sweden?
APPLYING TO THE MUNICIPALITY for income support or social benefits is the last stronghold for those without support. As unemployment increases in Sweden, this group grows.

“During the crisis in the 90s, the group of unemployed people who didn’t qualify for unemployment insurance benefits just grew. Today, the group constitutes 40 per cent of those receiving income support from the municipality and includes young people and foreign nationals,” says Eva Mörk, Professor of Economics.

Together with research associate Linus Liljeberg, she is behind the report ‘Fattig, sjuk och arbetslös’ [Poor, sick and unemployed], which is based on statistics from IFAU’s extensive register of Sweden’s population between the ages of 18 and 64, as well as statistics from Arbetsförmedlingen.

MANY MUNICIPALITIES require those receiving income support to be registered with Arbetsförmedlingen. They must also participate in the municipality’s own action programmes. If in addition they are on partial sick leave, they also need to have contact with the Swedish Social Insurance Agency (Försäkringskassan).

Eva Mörk sees a number of risks in the lack of coordination between the systems.

“You need to go to a number of different places and might receive a work evaluation that differs from one place to the next. Most of all, it’s not clear who has the main responsibility.”

“There are municipalities where social services have provided people with temporary jobs just so that they’re eligible for unemployment insurance benefits. So they disappear from the municipalities’ budgets and end up at Arbetsförmedlingen instead.”

In reality, municipalities are not responsible for helping people to find work, but many run their own “activation programmes”. We know very little about the effects of these measures. One exception is the activation programme that was run in Stockholm in the early 2000s, which Eva Mörk and her colleagues have studied.

“We found that fewer people receive income support when programmes of this nature are implemented,” Eva Mörk tells us.

IT SEEMS PARTLY to have acted as a deterrent, primarily for young people. Another effect is that there is an outflow of people gaining employment.

“In strong groups, there is a tendency for employment to increase. The weak groups are foreign nationals, who have no connection with the Swedish labour market, and single parents with lots of children.”

There is a risk that these people will now fall to the back of the queue as unemployment in Sweden rises. When the researchers looked into who received Arbetsförmedlingen’s job and development guarantee, they found that there were fewer people in the group receiving income support from the municipality.

“It’s a fault in the system, says Eva Mörk, which leads to the compensation system determining the help people receive.

“If a person needs a certain measure, such as work experience or training, it shouldn’t matter whether they’ve worked previously and have unemployment insurance or have never worked before and are receiving income support. The measure the person needs is presumably the same.”

She demands a clearer division of responsibility between the municipality and Arbetsförmedlingen.
A CURRENT REPORT compares the development of health, occupational injury and unemployment insurances, based on an average industrial worker’s salary. The results reveal that several countries have passed Sweden on all three insurances.

“This isn’t the Olympics, but it’s a little surprising that Sweden, which was previously set to take all the medals, is now in the middle of the pack. And the biggest setback is in the area of unemployment insurance,” says Joachim Palme, Professor of Political Science.

From being the second highest in the world in 2005, Sweden fell well below the average when the OECD countries were compared. Less than a third of the Swedish population are below the ceiling and have the right to 80 per cent of their salary in unemployment insurance benefits.

Others may of course have additional insurances, but there are risks involved in relying on private solutions, according to Joakim Palme.

“If you want political stability or sustainability in a society, a good recipe is normally that you have a majority of the population that don’t just help pay for the party; they can also get something in return. If a majority of the population have their primary insurance interests outside of the official model, this can affect the willingness to pay taxes.”

Joakim Palme believes there are a number of advantages to a public social insurance system; first and foremost, the redistribution of income, for the benefit of those who are on low incomes or have poor health.

Another advantage is the avoidance of the lock-in effect resulting from separate insurance systems for different groups on the labour market.

“Another advantage is the avoidance of the lock-in effect resulting from separate insurance systems for different groups on the labour market. “This is particularly true for pensions, where changing from the private to the public sector and vice-versa entails a certain degree of risk-taking when systems are structured differently.”

Recently, a number of different political parties have highlighted the issue of raising the ceiling for unemployment insurance benefits.

Joachim Palme and his research associates have also participated in the debate and argued in favour of a radical reform of the

Social insurances compared

The report Sveriges socialförsäkringar i jämförande perspektiv (2012) [Sweden’s social insurances in a comparative perspective] has been commissioned by the Parliamentary Committee on Social Insurance. It is an analysis of the development in 18 OECD countries from 1930–2010, in a collaboration between Joakim Palme and researchers at the Swedish Institute for Social Research (SOFI) at Stockholm University.
social insurances. They also call for more of an investment approach to labour market policy.

“In times of crisis, we should invest first of all in active measures that improve people’s opportunities to return to work. Here too, Sweden has fallen behind in international comparisons, whereas other countries have raised their ambitions.”

**IN THE 90S**, many questioned whether labour market initiatives were tax money well invested, but the situation has now been reappraised.

“In the current state of the market, a lot of economists have advocated investment in the quality of the labour market policy. We need to raise the qualifications of job-seekers,” says Joakim Palme.

The same applies to health insurance. Here, he feels that rehabilitation is an unused resource, at a time when the rate of illness is increasing in Europe and an ageing population needs support.

“Here we see a public interest among the European countries and the OECD countries to invest more offensively and hopefully learn from one another.”

---

**An expanding field**

At Uppsala Center for Labour Studies, researchers within the field of economics, political science and law gather together. With joint conferences, seminars and the dissemination of information, an interdisciplinary discussion is held.

“THE PROBLEMS BRING us together, but we have different angles of approach. To a certain extent, this can lead to concrete collaborations between e.g., political scientists and economists, but the principle aim is to build contacts and enrich one another in the long-term,” explains Director Bertil Holmlund, who is a Professor of Economics.

Uppsala is also home to IFAU, the Institute for Evaluation of Labour Market and Education Policy.

“This is an unusually strong research environment, both nationally and internationally. Today, 40–50 researchers are associated with the centre. We have a good reputation and numerous international contacts,” says Bertil Holmlund.

“The many registers in Sweden are a great competitive advantage. It’s only in the Nordic countries that we have access to such a large bank of statistics. This makes us interesting as partners,” says Per-Anders Edin, Professor of Economics and Vice-Director.

Sometimes the researchers obtain controversial results, when for example they examine the link between social insurance and occupation and the consequences that the education policy and family policy have on the wage packet.

What happens when reality does not correspond to the political rhetoric?

“Generally, it tends to even out. Sometimes the research findings end up on the right, sometimes on the left, politically speaking,” says Bertil Holmlund.

---

**Uppsala Centre for Labour Studies**

… is a ‘FAS centre’ with funding from FAS (Swedish Council for Working Life and Social Research). It was founded in 2010 and has funding for five years.

There are three main areas dealt with here:
- labour market relations
- unemployment and social security
- income, education and schooling
A FEW YEARS AGO he conducted a study on “work without boundaries”, based on a representative sample of the Swedish population. The study revealed that just 16 per cent of people had a traditional job with fixed working hours and duties. People with completely free forms of employment such as consultants and architects constituted 8 per cent of the workforce. For the rest we have the entire scale in-between, but a common factor for all of these was a great deal of freedom, lots of responsibility and flexible working hours.

“Those with jobs that offered the most freedom were happy; they were often highly educated and accustomed to managing their own time. But many people had difficulty adapting to the new terms. They hid their insecurity from others but felt anxious when asked to ‘decide their own duties’. Many found it hard to handle the freedom and flexible hours”.

Michael Allvin previously worked at the National Institute for Working Life (Arbetslivsinstitutet), which was closed in 2007. At Uppsala University, he has continued his research on the development of working life.

A LOT IS GOING ON in the area, not least due to increasing deregulations. Temp agencies have been very successful in Sweden whilst globalisation and the IT development have changed the fundamental working conditions.

The service industry has grown, customer contact has become increasingly important and it is no longer sufficient to keep the office open until five. Many of the demands of working life require a high degree of social competence: big responsibilities, no long-term colleagues and colleagues on the other side of the world.

“You need to be able to spend time with people and create contact networks. Social skills are important; even jobs in industry have become service positions. As a motor mechanic, you don’t just fix cars, you also have to talk to the customer. There is not one job in which you don’t need to function socially.”

AT THE SAME TIME, more responsibility is placed on the shoulders of the individual. The new form of work without boundaries suits some, whilst others find it harder to adapt.

“What used to be part and parcel of the rules of procedure, which you could learn, carry out and get good at, isn’t enough anymore. Nowadays there are so many different requirements that don’t always go together.”

In his research, he has seen a number of different strategies for handling conflicting requirements.

“The most detrimental strategy, which is also the most common initially, is to work more when subjected to high demands and unclear expectations, despite this not making matters any better. This leads to problems and frustration.”

There are different ways of handling more freedom on the job, says Michael Allvin.
A better strategy is to contact others and try to find fundamental solutions, ask for help when there is something you don’t understand, and to keep a certain self-distance.

“The third strategy is where you say: ‘I don’t care about any of this, I’m just going to do what I’m supposed to do’ and push aside everything else. We become cynical and indifferent, which is not entirely uncommon in health care,” says Michael Allvin.

He has recently started a new project on how these new working conditions have changed organisations.

“Previously the demands came from the outside; they channelled into the organisation and were then taken care of by management, who formulated the working conditions. We’re going to look into what happens when the whole thing is loosened up so that the demands, which are often contradictory, are filtered deeper into the organisation and are instead placed on individuals or groups.”

**Flexible working conditions ...**

- No fixed working hours
- No specified rules of procedure; the individual is expected to plan and take responsibility for carrying out the work
- Instead of a formal hierarchy, the individual is expected to work on their own initiative to create the social contacts necessary for them to do their job
- When a fixed employment is no longer a guarantee for the development of the individual – both financially and in terms of expertise – he/she is expected to compete with others on the labour market (be employable)

... may result in:

- The freer the work, the more difficult it is to separate work from free time
- A change in social requirements within and outside the workplace
- Uncertainty, insecurity and alienation

---

**Focus on health**

There are no shortcuts to the perfect workplace, but now researchers have identified thirteen factors that help us in the right direction

**TEXT: MAGNUS ALSNE**

**AS THE AVERAGE AGE** of Sweden’s population is increasing, the dependency ratio increases for those with jobs. A decision to raise the age of retirement has already been spotted on the political horizon, but is it really feasible for all professions?

Over the past year, 870,000 Swedes reported that they have had health problems as a result of their work. Many of these have professions that are linked with early withdrawal from the labour market.

In the report *Den goda arbetsmiljön och dess indikatorer* [Good work environments and their indicators], Eva Vingård, Professor of Occupational and Environmental Medicine, recommends a completely new approach to creating healthier workplaces.

“Studies reveal that it is no longer enough to eliminate risks. We know that both the organisation and its employees feel and perform better in an environment that promotes good health. In the USA, positive organisational psychology is an established term. In Sweden, the area is advancing and many business owners want to know more about how they can better promote good health and not simply prevent ill health,” Eva Vingård explains.

The report gathers 13 factors which according to the science have a positive impact on wellbeing and efficiency. Examples include available managers, participation and acknowledgement.

“It’s nothing out of the ordinary really. It’s a matter of clarity and transparency, but above all of trust, and being seen and respected as an employee”, Eva Vingård remarks.

“Our workplaces always have room for improvement. Constantly working with and allowing these thirteen factors to characterise operations is a large and important step. At the same time, the report must not be mistaken for an answer; this is an overview of knowledge in the field which is primarily intended to provide direction.”

---

**Good work environments**

- The report has been compiled by Eva Vingård, Uppsala University, and Per Lindberg, University of Gävle.
- You can download the report in its entirety from the Swedish Work Environment Authority’s website: [www.av.se](http://www.av.se)
**Difficult to switch off with new IT systems**

Stress caused by poorly designed computer systems is a work environment issue we must take very seriously. Far too many organisations have employees who have experienced considerable stress in conjunction with the introduction of new IT support, according to Åsa Cajander, researcher in the field of Information Technology.

**ÅSA CAJANDER** specialises in how organisations can best introduce new IT systems. She laid the groundwork in her doctoral thesis, in which she worked with projects on the working environment, IT and stress at nine different authorities. Her work uncovered many examples of bad practices.

There were systems which did not allow administrators to help citizens change their contact details, programs that could not be paused or exited when a person enters the room, administrators that had to send letters with quoted legal texts without first being able to see a preview of the letter. At one authority, the employees had to work out for themselves how long a case had been ongoing as the system withheld the information.

"There were so many strange examples. It was quite surprising at times," Åsa Cajander recounts.

**A FUNDAMENTAL CONSIDERATION** when designing and implementing new IT systems is who will use the system and what will they use it for, but developers often focus on the technical requirements instead, with less consideration for the organisation and the work carried out.

"That’s why it’s important to involve the users at an early stage and listen to what they have to say. They must be a part of the process from the beginning. We have to learn to include quality aspects that are difficult to measure," says Åsa Cajander.

This means that the interface must be adapted to the user so that he or she can get the necessary overview.

"Everyone needs to feel that they have control over what they do and that they’re able to gain an overview of the situation. An advanced user might feel more secure having a lot of information in front of them, whilst those who perhaps don’t use the program so often may become stressed by an interface like this."

**ÅSA CAJANDER BELIEVES** that in order to improve IT systems, the client, the supplier and the user must share responsibility for their design.

This means that the person working in a program needs to get used to reporting things that don’t work, instead of adapting themselves into absurdity. In addition, the client needs to learn to include non-measurable quality aspects in the specification of requirements and the supplier has a responsibility to point out the consequences of different aspects in the system.

Apart from the structure of the IT support itself, it is also important to think about how the system is implemented. A new computer system is a change that always entails a certain amount of stress for those affected.

"The idea is that the new system makes the work easier, which is why there is often a lack of understanding for the stress it causes, and the users are expected to deliver the same quality of work."

But the introduction of new IT systems requires broad social support, an understanding of the fact that the process can take time, and everyone must know who to turn to when they have problems, explains the IT researcher. Working with a system which we do not understand can be incredibly stressful.

"People often sit with a problem for a long time; they don’t take coffee breaks or go for lunch because they want to rectify the situation," says Åsa Cajander.

She feels that it is perhaps not a coincidence that stress-related illness is becoming more and more common whilst the use of IT is on the increase, and that a lot of people would benefit from more thought being put into the implementation of IT systems, and greater usability.

"The problem is that a lot of people think in the short term. There’s a certain budget, which is often adapted to the measurable aspects of the project and which doesn’t include fluffy concepts like stress and usability. Considerations like customer benefit and functionality are prioritised instead."

---

**A good system is characterised by:**

- Taking into consideration the individual’s cognitive capacity.
- Making it easy to gain an overview.
- Making use of intuitive symbols.
- Being designed so that it is easy to understand how decisions are made in the system.
- Having been produced with the participation of users throughout the development and design process.
- Being adapted to local needs and requirements.
It's important to take a break from the computer screen once in a while, says Åsa Cajander.
IN THE 1500s, the Swedish State administration expanded. A new administration was created, the armed forces grew and the Crown ran its own production in agriculture, handcraft and mining.

This expansion led to the creation of new forms of work and new opportunities for provision.

What was unique about the expansion of the Swedish Crown was that it left behind a wealth of source material, including very thorough accounts from large estates. All of this carefully recorded information has made it possible for researcher Christopher Pihl to study in detail which factors came into play when the work was organised and the significance of the work for the people of the time.

“The source material from the Crown’s estates is fantastic. It’s as far back in time as you’ll find detailed sources”, says Christopher Pihl, who in the winter defended his thesis about which people got which jobs in the 1500s.

IN HIS WORK on the dissertation he could see that, with the expansion of the Crown, men took over a number of professions that were previously considered typical women’s occupations, such as brewing. The view of the knowledge behind the craft changed and the work was considered more skilled.

“The men who took over the women’s work gained a stronger professional identity than their female counterparts. Men became masters whilst women were often thought of simply as ‘womenfolk’”, Christopher Pihl explains.

It was not only gender that opened or closed doors in the 1500s. Social status and marital status also played a role in the type of profession available. Unlike today, it was important in the 1500s that people aspiring to higher positions were married. This was particularly important for women, and consequently, all women in higher positions were “wives”.

IN HIS RESEARCH, Christopher Pihl has also compared the salaries of men and women. In lower positions such as farmhand and maid occupations, men and women earned roughly the same. But if we look further up the occupational ladder, women’s salaries begin to slide and come to around 60–80 per cent of those of men. In addition, women soon hit the “glass ceiling”. Certain professions and positions were quite simply exclusively for men.

“Work and its significance must firstly be understood as something changeable, and secondly that it bears distinct traits of continuity. To be able to see clear patterns that still exist today is significant for our understanding of how the gender coding or salary grade of a type of work can change”, says Christopher Pihl.
By going through a vast amount of sources with a fine-tooth comb, looking for clues as to what kind of jobs people had in the past, the researchers at the Department of History can see contexts and patterns that have not previously been observed or could not be handled.

A unique database on work

TEXT: LINDA KOFFMAR • PHOTO: MIKAEL WALLERSTEDT

"IF THERE'S A GAP, the researchers want to get in there. The more unexplored and difficult to solve a problem appears, the greater the will to tackle it."

This is how history professor Maria Ågren describes the background to the work started by a group of history researchers on a database filled with observations on work. The report of the project’s results is due next year.

It is difficult to find information on what kind of jobs people had prior to the 1800s. Researchers in The Gender and Work Project are for example looking through court minutes and different forms of accounts from as far back as the 1500s. Even tiny fragments of information may be of use in the context of the database.

THE DATABASE FACILITATES further progress in areas of research where historians previously gave up due to a lack of sources. Despite the ambiguity in the process of gathering observations and despite the fact that gaps still exist, Maria Ågren sees more areas where the historians of Uppsala will be able to contribute new knowledge.

The researchers can see, for example, that everyone worked. In British research, there is a conception that women did not contribute financially to the household, but Maria Ågren believes this is completely wrong.

“This conception is based on the ideal housewife who was a later construction, and does not correspond to reality in early modern society; not in Sweden, and probably not in the UK either.”

THE GATHERED OBSERVATIONS also reveal that historically it was perceived as valuable to work. If you could show that you worked, provided for yourself and paid tax, you commanded a special type of respect. Work created social recognition, and people with jobs had special rights.

The work on the database has been funded by the Knut and Alice Wallenberg foundation. When the work is complete, the idea is to make the gathered information available to other researchers outside of the project.

Maria Ågren, history professor, is leading efforts to gather facts to provide a somewhat new picture of the labour market prior to the 1800s.
The Liberal Arts programme, led by Patrik Mehrens, prepares students for working life and a changeable environment.

UPPSALA UNIVERSITY’S Campus Gotland is the result of the university’s merger with Gotland University, which ceases to be a higher education institution in July. Having a campus in Visby opens up new and exciting opportunities for Uppsala University.

“Gotland is situated like a hub in the sea and has the potential to be an important meeting place for academia, organisations, companies and politics – especially where the Baltic Sea and sustainability issues are concerned,” explains Olle Jansson, the current acting Deputy Vice-Chancellor of Gotland University who takes up his new post at Campus Gotland as adviser to the Vice-Chancellor.

Sustainability issues are the focus of a new programme starting this autumn, making Uppsala University the second university in Sweden, after Göteborg, to invest in a Bachelor’s programme in Liberal Arts – a classic education model that is implemented in different parts of Europe and the US.

“Essentially, Liberal Arts is about providing the students with education, a wide range and contemporary skills so that they can become flexible problem solvers in a changeable working life,” says Patrik Mehrens, senior lecturer at the Department of Literature and coordinator of the new three-year Liberal Arts programme.

Scheduled for the first year in Visby are multidisciplinary courses with elements of
Tailwind for Uppsala University

With hundreds of new jobs, success in the competition for external research grants and a historically high application rate for programmes, 2012 was a successful year for Uppsala University.

TEXT: HELENA EDSTRÖM

OVER THE LAST FIVE YEARS, the average number of employees at the university has increased by 800 – a figure comparable with the total number of employees at a medium-sized university. The increase in 2012 alone was 240 people, according to Uppsala University’s annual report.

The research revenues from the Government and external financiers, such as the Swedish Research Council and the EU, have increased steadily over the past five years. It is this money that is now being used to open up new positions, especially in the category ‘researchers’.

“Environment and sustainability characterise the programme as it is the biggest issue of our time. All sectors of the labour market need to develop their expertise in these fields.”

The students graduate in one major – such as history, literature or archaeology – with Liberal Arts as a minor. Though the labour market is not yet used to the term, Patrik Mehrens does not see this as a big problem.

“The students will look for work as literary scholars, ethnologists, archaeologists or social geographers. It’s in the job applications and interviews that they’ll be able to compete with a high level of critical thinking, broad knowledge and communication and problem solving skills.”

And the potential for Liberal Arts schooling to be beneficial for a person’s career has been demonstrated elsewhere.

“Holland is a European leader in the Liberal Arts. Students there have proven to be very competitive both on the labour market and in higher education.”

STAFF AT UPPSALA UNIVERSITY. AVERAGE NUMBER OF EMPLOYEES

<table>
<thead>
<tr>
<th>Year</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>5,591</td>
</tr>
<tr>
<td>2011</td>
<td>5,924</td>
</tr>
<tr>
<td>2012</td>
<td>6,160</td>
</tr>
</tbody>
</table>

STUDENTS AT UPPSALA UNIVERSITY. FULL-TIME EQUIVALENTS

<table>
<thead>
<tr>
<th>Year</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>22,695</td>
</tr>
<tr>
<td>2011</td>
<td>23,426</td>
</tr>
<tr>
<td>2012</td>
<td>22,909</td>
</tr>
</tbody>
</table>

Oversight for the last five years, the average number of employees at the university has increased by 800 – a figure comparable with the total number of employees at a medium-sized university. The increase in 2012 alone was 240 people, according to Uppsala University’s annual report.

The research revenues from the Government and external financiers, such as the Swedish Research Council and the EU, have increased steadily over the past five years. It is this money that is now being used to open up new positions, especially in the category ‘researchers’.

“Uppsala University has seen a very positive development, with great success in its research,” says Vice-Chancellor Eva Åkesson. Another measure of the success of research is the number of articles published in international journals. Uppsala University’s publications have increased by around 20 per cent over the last five years. In 2012, some 4,400 articles were published in collaboration with over 10,000 colleagues from abroad.

Nearly 23,000 full-time equivalents studied at the university in 2012 and the application rate for programmes was historically high. At the same time, the number of students decreased for the first time in five years due to a reduction of state funding for education. The university is therefore asking for more student places in its budget proposal to the Government.

“The demand for our study programmes is greater than ever.”

---

Liberal Arts

... is an educational tradition with a centuries-old history in Europe and the US. Fundamental to the model is that it contributes to creating free-thinking citizens. Via Uppsala University’s Liberal Arts programme, the students will be well-prepared for a changeable labour market, thanks to a broad education in the humanities, natural and social sciences, critical thinking and sound communication skills.

Programmes at Campus Gotland

A total of 13 first and second-cycles programmes and over 100 courses are offered at Campus Gotland, which will open its doors in July. Read more:

> www.uu.se/utbildning

---

15
Gearing up for China

UPDATE

Uppsala University has developed a strategy for research collaboration with China. Five areas are highlighted in which collaboration with China already exists and where ongoing investments can benefit Uppsala University.

CHINA’S RESEARCH INVESTMENTS have increased dramatically in the 2000s and, within the sciences and technology, the country is on a level with USA in terms of the number of articles published. If Sweden is to remain competitive as a research nation, it is considered important from both a governmental and university perspective to keep in step with China. In 2013 the three research financiers, FAS, Formas and the Swedish Research Council, have therefore announced funding for collaborations between Swedish and Chinese researchers. The funding includes a five-year grant to the order of SEK 5 million per year and the opportunity for researcher exchanges between Swedish and Chinese universities. A prerequisite to compete for the money is that the higher education institute submits a long-term, comprehensive strategy for collaboration with China.

“We welcome research council initiatives. And for the universities applying, it’s a good idea to clarify in the strategy which collaborations are particularly qualitative and important to develop,” says Kay Svensson, International Coordinator at Uppsala University.

UPPSALA UNIVERSITY’S STRATEGY, which was finalised in January, highlights five areas in which the university currently has research collaborations with Chinese universities – global health, quality of life in old age, renewable energy, sustainable social development and the Silk Road. Some examples of ongoing collaborations are in the areas of diagnostics, information and communication technology, energy resources and sociolinguistics.

“A few years ago, we counted 35 Chinese universities with which we currently have collaborations. That figure is probably bigger today, so the strategy isn’t really comprehensive. But the highlighted areas are those where we know we can focus and develop.”

Access to Persian cultural treasures

THERE IS NOW A COMPLETE catalogue of the collection of Persian manuscripts at the Uppsala University Library. It is one of Europe’s most distinguished collections of oriental manuscripts and is now presented in digital and printed form, both in Persian and English. The catalogue contains roughly 700 titles, or 600 different texts, and is compiled by Ali Muhaddis, Iranist and employee at the University Library.

Housing researchers move to Uppsala

AFTER NEARLY 20 YEARS, the Institution for Housing Research, IBF, has left Gävle and moved to newly renovated premises in the Munken district in central Uppsala. Predecessor Statens Institut för bostadsforskning [the National Institute for Housing Research] was situated in Gävle, and when it was shut down its operations were divided among Uppsala University, the University of Gävle and KTH in Stockholm. Munken is one of Uppsala University’s oldest environments, where university studies have taken place for 250 years.
ENVIRONMENTAL TOXINS can be linked to common ENDEMIC DISEASES

There are connections between environmental toxins and a number of diseases such as arteriosclerosis and diabetes. Together with her husband and medical professor Lars Lind, environmental toxicologist Monica Lind has conducted a number of much discussed studies in the area.

It is only now that we are able to demonstrate the connection between environmental toxins and endemic diseases in scientific studies. Environmental toxicologist Monica Lind has worked with the issue for more than ten years.
Environmental toxins can be linked to common endemic diseases

**NEW HORIZONS 1:2013**

**CONT'D.** Environmental toxins can be linked to common endemic diseases. But it’s only now we’ve been able to show these connections in joint scientific studies.

**PHTHALATES**, which are used in plastics, and the environmental toxin PCB have proven to be linked to obesity and arteriosclerosis. PCBs entail a higher risk of type 2 diabetes and stroke. This is one of the much discussed studies recently conducted and published by Monica Lind, researcher in the field of environmental medicine, and her husband Lars Lind, who is a professor of medicine with a specialisation in metabolic syndrome.

“We’ve known for a long time that environmental toxins affect the risk of common endemic diseases. But it’s only now we’ve been able to show these connections in joint scientific studies,” she explains.

THE IDEA OF COMBINING their expertise is an idea that both researchers have had since the early 90s. Lars Lind’s medical research has included an in-depth study of a group of 1,000 people. He has performed MRI scans, taken ECGs, looked at vascular functions and carried out numerous other examinations that are normally carried out when studying public health.

“He also had the foresight to keep tubes of blood in the freezer for future studies on environmental toxins.”

However, the discussion between the two researchers has hardly been put on ice. Monica Lind describes it as an exciting meeting between two different disciplines that has been going on for more than ten years.

“We have seen that the incidence of diseases such as osteogenesis imperfecta and cardiovascular diseases has increased as we are surrounded by more and more hormone-disrupting chemicals with the potential to upset the equilibrium in our bodies. But we’ve been unable to prove this scientifically as analyses of environmental toxins are both expensive and time-consuming,” Monica Lind explains.

FIVE YEARS AGO came the moment both researchers had been waiting for; they had the opportunity to perform a joint study into whether or not there were any gender differences in the connection between environmental toxins and endemic diseases.

Now the frozen blood from 1,000 people could be taken out of the freezer for analysis. The presence of some 40 different environmental toxins – metals, PCBs, pesticides and plastic chemicals – was analysed. According to Monica Lind, the chosen toxins are just ‘the tip of the iceberg’. In the European chemical Substances Information System (ESIS), around 140,000 different chemicals are registered, most of which are entirely uninvestigated in relation to our health.

The results of the environmental toxin analyses have since been compared with the presence of the diseases diabetes, osteogenesis imperfecta, cardiovascular diseases and abdominal obesity. And there is no longer any doubt as to the connection.

“We already know that the most im-
In a number of different studies, Monica and Lars Lind have demonstrated the connection between environmental toxins and different diseases by analysing data from the PIVUS study of over 1,000 70 year-olds in Uppsala.

- **Type two diabetes.** There is a connection between a type of phthalate that is used in cosmetics and plastics and the risk of diabetes among the elderly. *(Published in Diabetes Care.)*

- **Arteriosclerosis.** Environmental toxins such as dioxins, PCBs and pesticides can constitute a risk of arteriosclerosis, even if the individual observes traditional risk factors. There was also a connection with demonstrable evidence of fat accumulation in the arterial wall. *(Published in the environmental journal Environmental Health Perspectives.)*

- **Abdominal obesity.** High levels of the environmental toxin PCB have a connection with the distribution of body fat to the abdomen. *(Published in the journal Obesity.)*

**Connections with diseases**

In a number of different studies, Monica and Lars Lind have demonstrated the connection between environmental toxins and different diseases by analysing data from the PIVUS study of over 1,000 70 year-olds in Uppsala.

- **Type two diabetes.** There is a connection between a type of phthalate that is used in cosmetics and plastics and the risk of diabetes among the elderly. *(Published in Diabetes Care.)*

- **Arteriosclerosis.** Environmental toxins such as dioxins, PCBs and pesticides can constitute a risk of arteriosclerosis, even if the individual observes traditional risk factors. There was also a connection with demonstrable evidence of fat accumulation in the arterial wall. *(Published in the environmental journal Environmental Health Perspectives.)*

- **Abdominal obesity.** High levels of the environmental toxin PCB have a connection with the distribution of body fat to the abdomen. *(Published in the journal Obesity.)*

---

**More conflicts, fewer peace agreements**

**PEACE RESEARCHERS** on the Uppsala Conflict Data Program describe disturbing trends in the latest report on *States in Armed Conflict 2011*. In recent years, peace agreements in armed conflict have become increasingly rare, whilst the number of conflicts is on the rise.

“The idea that wars can be ended by means of negotiation has instead given way to hopes of victory. Victories are rare, however. They are expensive in terms of human life and do not always provide the stability hoped for. This is a big challenge for the international community,” says Professor Peter Wallensteen, Programme Manager.

**Ethical challenges of human brain simulation**

**THE HUMAN BRAIN PROJECT** is a new EU project which aims to improve our knowledge of the human brain and its diseases. The goal is to use all existing knowledge of the human brain and reconstruct it via supercomputer models and simulations. Researchers in neuroscience, medicine, computer science and philosophy from more than 80 European institutions are participating in the project. The Centre for Research Ethics and Bioethics at Uppsala University contributes studies into ethical issues and the impact of the simulation on society, as well as the consequences that the project may have for our understanding of human identity and consciousness.
When the research is at its best, it’s like being on a childhood adventure in a dense and impenetrable jungle. These are the musings of Anders Hagfeldt, acclaimed professor in physical chemistry, who enjoys challenges and is always eager to try unexpected ways of finding new solutions.

**EVERYTHNG STARTED** with a solar cell, the Grätzel cell, which defies all logic. Swiss researcher Michael Grätzel had the idea of producing solar cells chemically. This had never before been attempted. This suited Anders Hagfeldt, who was a post-doc with Grätzel. This was perfect, as he was driven by the idea of contributing to new discoveries.

“The solar cell is based on a completely different way of thinking; it works even though it shouldn’t. It was immensely exciting to work with Grätzel. We had to throw out all the theory books and just start exploring,” Anders Hagfeldt recalls.

Since then, the chemical solar cell has become a part of Anders Hagfeldt’s life. Much of the work in his research group is about understanding how electrical charges are generated by light and about materials development. Anders Hagfeldt and his research group have for example developed flexible polymer solar cells.

**THE RESEARCH GROUP** in Uppsala has a good reputation and is among the world leaders in the field. Despite its relatively small size, it is often said to be number two or three in the world. Professor Hagfeldt himself has been ranked as one of the world's top 50 material researchers. And most recently, just before Christmas, he received an award from the journal Nature for his work to engage young researchers.

He feels that the will to test new ways in combination with fruitful teamwork is part of the explanation for the successes.

“Sometimes it gives your own work a bit of a kick. But I’m also stimulated in the meeting with other people. One thing that’s particularly gratifying is the fact that we have a research environment with people from different parts of the world,” he says.

**AS A LEADER,** he tries to instil a sense of security, trust and the freedom to try one’s own ideas. He also believes it is important to have an open door and be good at listening. The willingness to listen is a beneficial quality in a workplace where a group of individualists from different cultures are to collaborate. The researchers often have different ambitions based on the opportunities available to them in terms of employment in their home country. In some countries it is especially important for a researcher to have many articles and for their name to be the first listed. Anders Hagfeldt often devotes his time to something that closely resembles diplomatic work.

“The work is often complex, as the research is based on collaboration. It’s about helping people so that they enjoy working together, he explains.

Work on the solar cell requires experts from a number of different areas. This means that separate entities must be brought together to form a whole. It also entails a constant flow of new people.

“There’s a dynamic in this that I like. It can be tricky at times, and you really have to use your brain. But it’s not negative; it’s more a matter of finding solutions,” says Anders Hagfeldt.
The heritage of the flycatcher

We know more about the flycatcher than ever before, thanks to our researchers at the Evolutionary Biology Centre (EBC). They have charted its gene pool, which can teach us more about evolution – for example, how new species are formed.

TEXT: ANNICA HULTH
PHOTO: MIKAEL WALLERSTEDT

LIKE PUTTING THE FINAL PIECE of a billion-piece puzzle into place. This was more or less how Hans Ellegren and his research group felt when they finished charting the flycatcher’s gene pool in autumn 2012. The results, which were presented in the journal Nature, attracted a great deal of attention internationally.

“We’re the first research group outside the big institutions that have performed a complete reading of a vertebrate’s DNA,” Hans Ellegren explains.

How did they manage this? The feat is partly explained by the group’s early latching on to the fast technological development in the field of biology. It was suddenly possible to analyse large quantities of data much quicker and cheaper. EBC was prepared.

Another part of the explanation is the long collaboration between ecologists and geneticists studying the same species of bird but from different perspectives and with different methods.

An important collaborator is Anna Qvarnström, Professor in Animal Ecology, who together with her research group is studying the flycatcher’s life on Öland.

THE ADVANTAGE with flycatchers is that they are fond of their home and return to the same nest every year. All across Öland, but particularly in Löttorp in the north of the island, nesting boxes have been set up in groves and populated by European pied flycatchers and collared flycatchers.

When a species has been studied for so long, the questioned can become increasingly complex, such as how new species are formed.

“It’s common for European pied flycatchers and collared flycatchers to mate and have hybrid offspring. By finding out why the hybrids aren’t doing so well, we can find out what it is that makes European pied flycatchers and collared flycatchers two separate species,” explains Anna Qvarnström.

The researchers were able to show that whilst the genomes of the two species were very similar – nearly identical – certain regions of the chromosomes differed.

“Maybe it’s not just the genes that play a role in speciation, but also how the chromosomes split. This is where these two species differ. It’s a general process that doesn’t just apply to flycatchers; it can explain speciation among other species,” Hans Ellegren explains.

The heritage of the flycatcher

Hans Ellegren’s research group has pieced together a puzzle of 1,125,141,679 DNA building blocks that make up the “blueprints” for a flycatcher.
Niclas Kolms has built a laboratory in EBC’s cellar. Here, around 6,000 guppy specimens swim in nearly 1,100 aquariums.

TEXT: ANNELI BJÖRKMAN
PHOTO: MIKAEL WALLERSTEDT

What price do we pay for intelligence? In a recently published study, evolution biologist Niclas Kolm and his colleagues found that guppies that developed larger brains have smaller stomachs and give birth to one less fry per clutch. This raises questions pertaining to the cost of evolution in other vertebrates, including human beings.

THE NEWS THAT GUPPIES develop a larger brain at the cost of stomach size and offspring spread quickly in international media at the beginning of the year. Niclas Kolm and his colleagues were behind the study at the Evolutionary Biology Centre, EBC, with the assistance of Swedish and European researchers. Niclas Kolm believes that the news about the brain development of guppies may lead to new insights into our own evolution.

“This is the first test that has been carried out on a species on the topic of the advantages and above all the costs of developing a larger brain. In all vertebrates, both the stomach and the brain are very costly organs,” says Niclas Kolm. “Our study indicates that when more resources are required for the brain, a lot less energy is left over for the stomach.”

THE EXPERIMENT has largely been carried out at EBC, where Niclas Kolm has been constantly building and expanding a laboratory since 2006. Here in the basement, a genuine underwater world is hidden away. A tropical heat prevails in the fish laboratory, with its rows upon endless rows of aquariums. Here, around 6,000 guppy specimens swim in nearly 1,100 aquariums.

One of the current focuses of his research is the genetic background of differences in brain size, where Niclas Kolm and his post-doc Alexander Kotrschal work with Judith Mank of the University College of London.

“We have already identified some 50 genes that are expressed differently among specimens with large and small brains.”

THE PRICE OF INTELLIGENCE.

“…”

“What price do we pay for intelligence? In a recently published study, evolution biologist Niclas Kolm and his colleagues found that guppies that developed larger brains have smaller stomachs and give birth to one less fry per clutch. This raises questions pertaining to the cost of evolution in other vertebrates, including human beings.

THE NEWS THAT GUPPIES develop a larger brain at the cost of stomach size and offspring spread quickly in international media at the beginning of the year. Niclas Kolm and his colleagues were behind the study at the Evolutionary Biology Centre, EBC, with the assistance of Swedish and European researchers. Niclas Kolm believes that the news about the brain development of guppies may lead to new insights into our own evolution.

“This is the first test that has been carried out on a species on the topic of the advantages and above all the costs of developing a larger brain. In all vertebrates, both the stomach and the brain are very costly organs,” says Niclas Kolm. “Our study indicates that when more resources are required for the brain, a lot less energy is left over for the stomach.”

THE EXPERIMENT has largely been carried out at EBC, where Niclas Kolm has been constantly building and expanding a laboratory since 2006. Here in the basement, a genuine underwater world is hidden away. A tropical heat prevails in the fish laboratory, with its rows upon endless rows of aquariums. Here, around 6,000 guppy specimens swim in nearly 1,100 aquariums.

One of the current focuses of his research is the genetic background of differences in brain size, where Niclas Kolm and his post-doc Alexander Kotrschal work with Judith Mank of the University College of London.

“We have already identified some 50 genes that are expressed differently among specimens with large and small brains. The hope now is that we can identify the genetic architecture behind differences in brain size, says Niclas Kolm.

Other subprojects include behavioural experiments together with Uppsala mathematician David Sumpter concerning the connection between social behaviour and the evolution of the brain. With the help of advanced data analyses, the researchers can study how the fish interact in groups and document their movements and speed with precise mathematical models.”

“...”
“We see that society is waking up, but too late in the day,” says Otto Cars. He is chair of the international network ReAct, whose work is a wake-up call to the threat from the fast-growing resistance to antibiotics.

THE SITUATION in low income countries is frightening. Figures show that every five minutes a child dies from infectious diseases caused by bacteria that are resistant to antibiotics. In Europe, 25,000 people die every year for the same reason. This is a fast growing public health issue and the World Economic Forum 2013 in Davos focused particularly on these problems and their potential backwash.

“Society is waking up, but too late in the day. For far too long we have taken advantage of a simple solution and the problem doesn’t disappear; we can only handle it with a radical change of attitude. Now we need coordination and a holistic perspective, but no-one is shouldering the global responsibility. WHO, for example, only has two people working on the issue,” says Otto Cars, Professor of Infectious Diseases at Uppsala University and chair of the international network ReAct – Action on Antibiotic Resistance.

The science regarding the dangers of resistance to antibiotics is not new. Back in 1945, Alexander Fleming, the inventor of penicillin, warned of the risks of overuse. However, many preferred to turn a blind eye, which turned a meeting in connection with the Swedish Presidency of the Coun-
Swedish travellers bring home with them certain types of resistant bacteria. “We tested 100 healthy travellers before and after journeys outside of Northern Europe. Of these, 24 became carriers of multi-resistant ESBL-forming E. coli bacteria in the intestinal flora during their journey. From India, seven out of eight brought ESBL-forming bacteria home with them. Sweden is not an isolated island and we need to actively contribute to initiatives in high-risk countries on all latitudes,” says Thomas Tängdén.

**ONE SWEDISH VENTURE** is the network ReAct, which was formed in 2004 at a meeting in Uppsala. The vision is clear; both the people of today and future generations around the world will have access to prevention and effective treatment of bacterial infections, as part of their right to good health. The question is - will it remain a vision, or does it have a place in the foreseeable future?

“It’s realistic to believe we can rectify the situation, but the heat is on. Unfortunately, resistance to antibiotics is hard to sell as a threat to health, so one of ReAct’s most important contributions is the redefining of the problem area, from medical engineering to global public health and development. Today, we’re gathering the breadth of actors required to influence both practical work and the level of knowledge,” Otto Cars explains.

ReAct’s main tasks include gathering and disseminating knowledge. Important target groups are found in high-risk countries with a lack of doctors, where far too rapid changes can increase the population’s vulnerability. Otto Cars gives the example of 30 Iraqis and Pakistanis studying in Sweden who recently received intensive training at Uppsala University and who have now started working on a more sustainable use of antibiotics in their home countries. However, ReAct’s limited capacity means that all resources must be used optimally.

“With external help, we’ve examined our operations in the rear-view mirror. Now we’re ready to formulate a new agenda, where we’ll also look for new leadership for the work. I’m 67 in December, and it’s soon time for me to step to one side, even though I’ll be working with these issues as long as I live. It’s my responsibility to my six grandchildren, as well as all other children throughout the world.”

**Antibiotic resistance**

How you can help to put the brakes on antibiotic resistance:
- Be attentive to poor hygiene
- Stay at home if you are unwell
- Obtain knowledge about and adopt a critical approach to the incorrect use of antibiotics

> **www.reactgroup.org**

**IEE and One Health**

Uppsala University also runs the multidisciplinary Infection Ecology and Epidemiology Network, IEE. IEE comprises the One Health approach, aimed at improving human and animal health. One Health is based on the principle that all animals and people are subjected to the same viruses and bacteria, including those resistant to antibiotics, and that these must be handled in a broad perspective.

> **www.infee.se**

**New light shed on tetrapods**

**BY BOMBARDING A** 360 million year old fossil with high-energy synchrotron radiation, Per Erik Ahlberg at the Department of Organismal Biology, together with an international research team, has for the first time managed to document the complex structure of the backbone of the earliest land vertebrates; tetrapods. The research team has managed to produce high-resolution X-ray images with the use of synchrotron radiation. These images make it possible to reconstruct the backbones of these long-extinct animals, down to the tiniest detail.

**The potential to heal impaired vision**

**MILLIONS OF PEOPLE** across the world are blind due to disease or damage to the retina. One way of repairing the retina, and thereby the individual’s sight, would be to replace damaged or dead cells with the help of the eye’s own immature stem-cell-like cells. At the Department of Neuroscience, Henrik Ring has written a thesis which focuses on finding and characterising factors that regulate cell division and cell specification in immature retina cells, in order to provide knowledge of how the immature cells can be used to repair a damaged retina.

**Reduced emissions with surface technology**

**THE RIGHT CHOICE** of material and coating technique for machines and engines can reduce emissions of both particles and greenhouse gases. Fredrik Gustavsson, doctoral student in applied material sciences, reveals in his thesis how well modern surface technology can work together with new types of engine oil and fuel.
Regulating arms in Chile, monitoring elections in Guatemala, and dealing with conflict in Azerbaijan. Experience with peace work is common among students pursuing the Master Programme in Peace and Conflict Studies. As of last year, the programme is reinforced by Rotary Fellows.

**Future leaders for peace**

TEXT: HELENA EDSTRÖM • PHOTO: MIKAEL WALLERSTEDT
“EVERYONE INTERESTED” in peace and conflict issues knows that it’s good to start your career in Uppsala. I am very happy to be in a place that is such a hub of knowledge,” says Waradas Thiyagaraja from Sri Lanka.

He is one of ten Rotary Peace Fellows in Uppsala – students whose education is funded by Rotary. In stiff international competition, Uppsala University was selected as one of six Rotary Peace Centers.

There are six Rotary Peace Centers:
- Uppsala University, Sweden
- Chulalongkorn University, Thailand
- Duke University and University of North Carolina at Chapel Hill, USA
- International Christian University, Japan
- University of Bradford, England
- University of Queensland, Australia

Rotary selects some 60 fellowship recipients, Rotary Peace Fellows, each year. It’s a time-consuming process, and the competition is keen. The nomination and selection procedure within Rotary takes several months. Fellowship recipients are not guaranteed a place in the Master Programme in Uppsala. They need to apply and compete on equal terms with other applicants.

Uppsala University was a clear choice for Uppsala’s Rotary Peace Fellows. Back row, from left: Bakhtiyar Aslanov, Waradas Thiyagaraja and Sofia Deria. Front row, from left: Paulina Cruz Velásquez and Yasmin Espinoza Goecke.
No one day is like another in the life of a peace observer, according to Corinne Johnson and Agnes Berge. Both are stationed in Colombia on assignment from the Swedish Fellowship of Reconciliation, and have benefited from studies in Uppsala.

WHILST CORINNE JOHNSON works in the capital city of Bogotá, Agnes Berge travels around the countryside in the Chocó region of northwest Colombia. As peace observers, their job is to support local organisations and monitor human rights work. The assignment is two years in length, and they are already half-way in. Both say that the best thing about the job is the variation.

“I get to do so many different things, and no one day is like another. One day I’m an international observer in a workshop with leaders about male violence against women in a small community, and the next I’m in a meeting with Colombian authorities in order to call attention to the vulnerable situation of defenders of human rights and their need for state protection,” Agnes Berge explains.

She gained her education on the Master Programme in Politics and International studies at Uppsala. The plan was always to go abroad.

Corinne Johnson studied political science and languages and went on to take development studies.

“I’ve always been fascinated by how society works. My focus on Latin America and development studies has fuelled my interest, but it has also increased my understanding of aid and public administration, which I come into contact with in my role as a peace observer.”

Taking the leap from university studies to walking the streets of Bogotá has been a valuable learning experience.

“Every week I learn something new about the situation in the country and how human rights defenders are threatened, harassed and sometimes even disappear. I’ve also been to a lot of meetings with different organisations and authorities. Did you benefit from your education?”

“Absolutely! My time in Uppsala helped me
to develop my analytical capacity, which is one of the building blocks of my work here. Not one day goes by that we don’t analyse actors and events and get the latest information on the dynamic of the conflict. My education gave me theoretical tools that I can use now when I’m ‘out in the real world’.

Agnes Berge also appreciates her education at the Department of Political Science, which she feels is good at encouraging students’ international interests. She chose to work abroad as a peace observer in order to gain something other than a desk job.

“I wanted to be challenged and to experience adventure, but I also wanted to work with something concrete, where I feel that I’m contributing to something positive.”

It was about as adventurous as she’d hoped for. She gets to travel to communities in the region together with local human rights defenders. They tend to be away for 4–5 days at a time, sleep in tents and live on fish and plantain, the local populace’s standard diet. A lot of time is also spent on writing reports, going to meetings and performing security analyses.

Both are happy in their jobs, but there’s also a flipside, Corinne Johnson tells us.

“One thing is certain: they will learn a lot about international work before it is time to return to Sweden next year.

“It’s fantastic to get direct feedback that what I’m doing means something to other people,” says Agnes Berge.
Think tank for teachers

EduQuality AB is a new company offering teachers new methods and tools by linking university research and practical teaching experience.

TEXT: THOMAS NORDANBERG
PHOTO: MIKAEL WALLERSTEDT

“WE WANT TO APPLY research-based knowledge in the schools, and create new ways of doing this,” says Leif Östman, Professor at Uppsala University’s Department of Education.

For this purpose Leif Östman, Lena Molin and Viktoria Enmark, have started EduQuality.

Lena Molin, who is the CEO of the company, points out that the Swedish education act in effect since 2011 clearly states that education should be based on research and proven experience.

“The university has the research, the teachers have the experience. The challenge is to find the best way to bring the two together,”

As an expert on web-based solutions and social media, Viktoria Enmark has some useful tools for this.

“Our idea is to use the web and other e-services to create a community for the exchange of knowledge between practicing teachers. We want to use the competence at the university to refine and quality assure methods devised by teachers, and make them available to other teachers,” she explains.

The hub of EduQuality’s activities is the company’s website, which was launched in August. Teachers, all the way from preschool to senior high school, can become members free of charge. They can then enlist in discussion groups, learn about their colleagues’ teaching methods and share their own lesson plans, among other things.

“The working model used in Swedish schools today with teaching teams following the pupils has many advantages, but also some drawbacks,” says Leif. “One is that specialist teachers seldom get the opportunity to discuss their own subject with colleagues. This is one of the things we can help solve.”

Lena, Viktoria and Leif founded EduQuality in early 2012, with UUAB Holding as a part owner. They have also made good use of UU Innovation’s consultancy services and taken part in Uppsala Innovation Centre’s business program Business Lab.
**Algae factory to develop energy**

**IN A NEW PROJECT** with a four million Euro backing, ten partners – two from industry – shall develop new scientific tools and technologies for an energy-producing, solar-powered algae factory.

In project CyanoFactory, the researchers will develop and build upon the latest scientific discoveries in order to genetically modify cyanobacteria (blue-green algae) so that they convert the sun’s energy into a fuel that is secreted directly from the cell. Advanced molecular biology – synthetic biology – together with modern bioinformatics, modelling and an understanding of how the entire cell works – system biology – will be used to design and create cells that produce solar fuel. The aim of the project is to develop and use fundamental scientific tools and technologies to create hydrogen gas-producing cyanobacteria that are cultured and used in specially designed photobioreactors. The actual cyanobacteriaccell can be seen as a sort of factory – CyanoFactory.

“The project covers the entire chain from basic research to the first pre-industrial visualisations,” explains Professor Peter Lindblad, who is leading the project.

**New facility for smart windows**

**WITH ‘SMART WINDOWS’,** energy consumption in buildings can be radically reduced. Now spin-off company Chromo-Genics is taking the technology one step closer to industrial application via the establishment of a reference facility. The Swedish Energy Agency has contributed with a conditional loan of close to SEk 65 million. Most ‘smart windows’ are based on an electrochromic coating that darkens when a weak electrical current is passed through it. ChromoGenics has developed a unique process which means that an electrochromic material is used to coat plastic sheeting instead of glass. Knowledge of processes, materials and methods has been built up via more than 20 years of materials research at the Ångström Laboratory.

**Aerospace given the Hjärnäpple**

**THE ‘HJÄRNÄPPLET’** [Brain Apple] prize is awarded by UU Innovation at Uppsala University in order to acknowledge a person who has managed to take their idea all the way to market and thereby inspire other researchers. This year’s prize went to researcher Fredrik Bruhn for the founding and development of the aerospace company ÅAC Microtec. The company develops miniaturised and robust electronics for e.g., flight and aerospace applications. ÅAC Microtec was founded in 2005, as a spin-off of research at the Department of Engineering Sciences at the Ångström Laboratory. Today, it is one of Sweden’s most promising high-tech companies with some thirty employees and numerous important clients within both the armed forces and industry.

**The saviour of our times**

**INNOVATION.** Have you heard of it? Not surprising, really. We live in a time when everything will be solved by innovation. Just 150 years ago the innovator was a troublemaker who upset the order. Now innovators will save the world. Politicians have been given the perfect answer to all tough problems: “We’ll invest in innovation!” And this is not only the case in Sweden. It is the same in South Africa which I recently visited, as I was invited to lecture about support for innovation at universities.

Society and humanity is faced with big challenges; climate, energy, multicultural society, large-scale migration, demographic shifts and threatening pandemics, to name but a few. We are forced to realise that today we have far from all of the answers we will need in the future. Continued research is therefore important, but it must not stop there. If research is to be of use, it must be translated into something that is of use to the user.

This is exactly what innovation is about; to turn the knowledge which is created daily in universities into something that is used and benefits society.

Even in terms of innovations, Uppsala University is well ahead. Over the past fifteen years, the university’s holding company UUAB has created over 70 new research-based companies. None of them can solve the big challenges alone, but together with thousands upon thousands of other similar companies the world over, they give hope for the future.

Because even if we sometimes tire of all this talk about innovations, we do not have a lot of alternatives. “Innovation is not negotiable”, as the Deputy Vice Chancellor of Cape Peninsula University of Technology Chris Nhlapo said at our meeting.
Sharing new technology

An electron microscope is currently at the disposal of the university, hospitals and companies. BioVis at the Rudbeck Laboratory in Uppsala offers advanced technology for the examination of tissues and cells. Shared usage leads to lower costs.

TEXT: HELENA EDSTRÖM
PHOTO: MIKAEL WALLERSTEDT

TO ANYONE NEEDING to examine a cell’s structure or the placement of proteins in a cell or tissue sample, a visit to the cellar of the Rudbeck Laboratory in Uppsala is recommended.

“Depending on the preparation technique we use, we can look at the structure of cells and tissues or look at the placement of proteins in cell organelles and tissues,” says Anders Ahlander, research engineer at the Department of Immunology, Genetics and Pathology.

He is responsible for the electron microscope at BioVis – one of several technology platforms at the research venture SciLifeLab at Uppsala University.

BioVis offers a number of advanced technologies and expertise in tissue, cell and protein studies, and according to Anders Ahlander the platform is an economical workhorse for Swedish research.

Research and healthcare run a lot more smoothly when you can share the electron microscope, according to Anders Ahlander and Anca Dragomir.
Osteogenesis imperfecta is a hereditary disease that causes lifelong suffering. Today we have no effective way of treating it. Now, Uppsala University is opening a fund for research into the disease – everything from basic research to clinical studies.

“Further research is required”

TEXT: ANNICA HULTH
PHOTO: MIKAEL WALLERSTEDT

WITH THE DISEASE osteogenesis imperfecta, the connective tissue is mutated, which means that the patient is extremely vulnerable to bone fractures. The disease has several forms and results in different degrees of disability. In addition to fractures, the disease can lead to unstable joints, dental problems and hearing impairment. “It’s a chronic disease and we don’t currently have a good way of treating it. We have medicine for older people with brittle bones, but they don’t work as well for this patient group,” explains Professor Östen Ljunggren, who is leading the research in Uppsala.

A research fund is now being started at Uppsala University, thanks to a donation from an individual who also suffers from the disease. The fund is administered by the Uppsala University Board (Konsistör) and is open for public contributions. The funds are allocated to research into the disease.

A panel of experts, headed by Osten Ljunggren, shall distribute grants to various research projects.

“It can be anything from basic research into genes and cells to clinical research on medicine and therapies. We can also support projects in the fields of physiotherapy and rehabilitation,” says Osten Ljunggren.

Osteogenesis imperfecta affects around one in 10,000 people in Sweden. There are many degrees between the most severe variant and the milder forms. Those suffering from the most severe form die at birth and others have serious disabilities, whilst those with the mildest cases can live a completely normal life, with somewhat more bone fractures than others.

At Uppsala University Hospital there is a medical clinic for adult patients, whilst the children come to the Astrid Lindgren Children’s Hospital in Stockholm. There is a close cooperation between the clinics, and now the researchers wish to analyse the genes of 130 families that carry the disease.

“We want to analyse the mutations with clinical studies here at the clinic and see if the medicine works differently depending on the mutation. This also facilitates gene therapy, where you can go in and ‘turn off’ certain genes,” Östen Ljunggren explains.

Still a long way from finding an effective treatment.

“We alleviate suffering with the medicine we have, but we can’t cure it. We still see children being born into great suffering. A lot more research is required,” says Östen Ljunggren.

Support Uppsala University
To bolster its position as an outstanding research university in Sweden and in the world, Uppsala University needs new sources of funding.

Technoical support at SciLifeLab
SciLifeLab = national centre for research in the field of bioscience, medicine and the environment. Run by Karolinska Institutet, KTH Royal Institute of Technology, Stockholm University and Uppsala University. Read more about technology platforms at SciLifeLab:

› www.sclilab.uu.se/technologyplatforms

OFFERING COMPLICATED and expensive analysis techniques at a reduced price, and thus facilitating research advances, is one of the fundamental ideas behind SciLifeLab.

“It all actors were to purchase their own equipment, it would be really expensive. An electron microscope, for example, sets you back around four million kronor. Now the money can be used to drive the research forward instead,” says Anders Ahlander.

BioVis is also responsible for upgrading the technology. In spring 2013, the electron microscope was updated in order to facilitate the production of three-dimensional images of tissues and cells.

Anca Dragomir, researcher at the Department of Immunology, Genetics and Pathology and doctor at the University Hospital’s clinical pathology department, is a regular and happy customer.

“During the week I examine patient samples and make diagnoses. In many cases, we’re entirely dependent on the electron microscope,” she tells us.

Hundreds of times every year, cell and tissue samples from patients must be examined under the electron microscope in order to facilitate a correct diagnosis.

“The faster we can make the right diagnosis, the faster the patients can receive the right treatment,” says Anca Dragomir.

Universities and other higher education institutions are among the clientele. Companies and organisations can also benefit from the services.

“Thanks to the shared usage, the customer cost is minimised.”

It costs SEK 450 or 700 per hour to use the electron microscope, depending on whether the customer is from a university, another higher education institute or an external actor. The customer can also have their sample prepared and analysed for an additional charge.
Rowing draws in a lot of academics

A COW GRAZING IN THE FIELD beside Fyrisån lazily lifts its head when the rowers glide by in their boats, narrow as spearheads. Tufts of grass and willows are reflected on the water’s perfectly still surface.

“Few things beat going out for a row on a morning when it’s cold and raw outside. Being in the water when the sun comes up and everything is calm and still – it’s just fantastic,” says Ida Andersson, long-term member of Uppsala Academic Rowing Society and project manager for the club’s women’s initiative.

To be a good rower requires a good level of fitness and a refined technique, things which can only be acquired through training and more training.

“Rowing is probably the toughest sport I’ve ever taken part in. You have every opportunity to get exhausted,” Ida Andersson explains.

THE CLUB is currently training for the Academic Rowing Competition, which is the rowing club’s way of gaining visibility and recruiting new members. The competition is open to beginners, and teachers, students and postgraduate students alike are all welcome to take part. But first, they have to come to the clubhouse in Ultuna to learn the basics.

“Rowing is very difficult technique-wise; something that many people are unprepared for,” says Ida Andersson.

The competition sees the meeting of the Swedish University of Agricultural Sciences (SLU) and Uppsala University. Akademiska Hus and Campus 1477 usually also compete with their own teams.

“The competition is partly a bit of fun and there are usually a lot of teams,” says Ida Andersson.

Many associate academic rowing primarily with universities such as Cambridge and Oxford, as both institutions have a long tradition of competing with one another.

“I think it’s a contributing factor to the sport’s academic label,” says Anders Backéus, Uppsala Academic Rowing Society’s head coach.

Rowing came to Uppsala at the end of the 1800s, to then lie dormant for a while during the 1960s and 1970s.

But now the activities are blooming again; the club celebrated its 20th anniversary in the autumn. And many are interested
in starting to row. The number of members varies between 100 and 130. In addition, the club’s women’s initiative has led to a more even gender distribution in the club.

"I think it’s partly the tradition that attracts people to the sport. But it’s also the best exercise for people that spend a lot of their time sitting. In addition, rowing requires total concentration, so it’s also a much needed break for the mind," says Ida Andersson.

Anders Backéus explains that Uppsala Academic Rowing Society is very much an active club, one which has also had a great many successes in major competitions. In 2012, for example, the club won two gold medals and three bronze medals in the Swedish Championship.

“We’re a relatively young club, so it’s particularly gratifying that it’s gone so well," he says.

www.uars.se

Rowing is tough but fantastic, according to Ida Andersson.

The meeting of art and chemistry

What happens when the artist works in the laboratory and gains access to modern analytical instruments? This is investigated in a collaboration between artist Jeanette Schäring and Jonas Bergquist, Professor of Analytical Chemistry and Neurochemistry.

IN THE PROJECT, which is backed by Konstnärsnämnden – the Swedish Arts Grants Committee, they have investigated water, natural pigments, nature’s ecosystems and the chemistry of the brain. The results were recently presented at Museum Gustavianum under the title 'The Interconnectedness of Life'.

“It’s incredibly exciting. We’ve found a unique collaboration," says Jeanette Schäring. She has spent a lot of time in the lab at BMC during the course of the project, where she has had access to hi-tech analytical equipment. She was inspired by this environment.

“I probably would have been a researcher if I hadn’t chosen to have the freedom of an artist. I’m interested by the artistic, experimental process and visualisation. Jonas and I approach creativity and research in different ways and when we work together we can open doors to new ways of seeing, experiencing and interpreting the world around us.”

The exhibition explains the chemistry behind small, subtle changes in the experiments, whilst intending to arouse a curiosity to explore the field further. For Jonas Bergquist, it has been an opportunity to visualise his research.

“It’s very stimulating to try to think outside of the normal boundaries. How do you visualise environmental analysis, analytical chemistry and our neurochemical research on the brain?”

Together, they have analysed water samples from different lakes and tap water. Results are also shown from an analysis of ‘brain water’, that is, the fluid that surrounds the brain. In this way, a connection in made between nature’s fragile ecosystems and the brain’s delicate chemical balance.

“It’s incredibly rewarding to look at our research from a different angle and gain other perspectives on what we do, but it’s not so easy; it requires a good deal of thinking. You have to be good at listening and be open to one another," Jonas Bergquist explains.

The project Matter in Motion and the Mysticism of Nature’s Colour is an artistic, experimental and multidisciplinary collaboration backed by Konstnärsnämnden. Following the exhibition in Uppsala, the work with water projects, exhibitions and performance in Västra Götaland will continue.
“No problem is too big to solve”

TEXT: ANNICA HULTH
PHOTO: MIKAEL WALLERSTEDT

THE QUEUE to the lecture hall at Ekonomikum is long and winding. Many have come to hear Niklas Zennström speak about his experiences – both as an entrepreneur and as a previous student of Uppsala.

And the interest is also mutual; Niklas Zennström smiles gladly when he ascends to the podium. He now lives in London where he runs two companies with completely different profiles: Atomico, which invests in IT companies across the world, and Zennström Philanthropies, which invests in world-improving projects in the fields of the environment and human rights.

Visiting universities is something he tries to squeeze into his agenda here and there, between business trips and meetings.

“About ten times a year I visit universities around the world, from Sao Paolo, Stanford and Shanghai to Tokyo and Istanbul. It’s really important to inspire students and share your experience, so that they consider entrepreneurship as a career path.”

Niklas Zennström has two degrees from Uppsala University. In parallel with an engineering programme, he took a Bachelor of Science in Business Administration. For it was here, in the borderland between engineering and economics, that he felt at home.

“I’ve perhaps not made so much use of quantum mechanics or solid state physics, but basic accounting really helped! Above all, I learned that no problem is too big to solve if you have a methodology to attack it with. This is as true for engineering as it is for economics and politics.”

What subjects should you study to become an entrepreneur?

“It’s a matter of trying different combinations, without preconceptions. This is where Uppsala University has great possibilities, with its many different faculties. You spend time at the nations and meet students with different backgrounds.”

His advice to students is to ensure they make the most of their study period. He wishes that he himself had done more outside of his studies.

“Don’t just achieve, try other things; start a company together with others or be the host for Saturday coffee at a student nation. Get to know people studying other subjects; travel abroad and study.”

“The dream to start his own company was there from an early stage, but as a student he lacked the confidence to take the plunge. Instead, he applied for a job at Kinnevik as ‘budding talent’.

“I got a job at the subsidiary Tele2; at that time just 20 people worked there. It was a fantastic opportunity to take part in starting up a company that challenged the status quo and competed with Televerket.”

The longer he worked there and the higher up he came in the organisation, the more he could have his own input, presenting ideas to management and trying to push matters through to fruition.

“I thought to myself, ‘I can manage that on my own, I want to test my wings.’ During the IT boom of the 90s I thought that I’d missed my big chance. But as it turned out, the technological development opened up more and more opportunities each day.”

Together with partner Janus Friis, he founded the file-sharing program Kazaa in 2001, and two years later the IP telephony company Skype, which made it possible to make telephone calls via the internet. The technology quickly spread across the globe and in 2005, the company was sold to Ebay for 2.6 billion dollars.

Zennström started his next company Atomico, which invests in IT companies across the world.

“I have a competitive advantage over conventional investors as entrepreneurs prefer support from other entrepreneurs. I want to help companies that don’t come from Silicon Valley but rather from countries like Brazil and Russia.”

The Uppsala-Stockholm region is particularly interesting.

“This region is home to more really strong companies in relation to the population than elsewhere in the world, if you remove Silicon Valley from the equation. It’s not just Stockholm though; Uppsala is also a great environment for companies. Just look at companies like Klarna, MySQL and Ongame, which all have global ambitions.”

Student life in Uppsala is an excellent breeding ground for entrepreneurship. This is the opinion of Niklas Zennström, founder of Skype and IT entrepreneur. He studied both engineering and economics in Uppsala in the 1990s. Even then beckoned the dream of his own company.
Age: 46.
Family: Wife Catherine.
Education: Master of Science in Engineering and Bachelor of Science in Business Administration.
Hobbies: Sailing
Hidden talent: Used to play basketball in Uppsala, winning the youth league and the national championship.
Favourite place in Uppsala: The area around S:t Larsgatan with the student nations of V-dala, Upland and Småland, the Gustavianum is beautiful.
Favourite student nation: Uplands nation.

What makes him happy: When you’ve worked hard and put your all into something, and finally reach your goal.
What makes him angry: When people ignore bigger problems because we only think about what is closest to us. We’re destroying our planet, both our parents’ generation and ourselves, but we focus on short-term economic problems instead of global issues.
Meetingpoint for alumni in London

UPPSALA UNIVERSITY Alumni Network now also has a London base. The new British alumni association – The Uppsala University Alumni Chapter for the British Isles – was inaugurated in March at a reception in the Swedish Ambassador’s residence in London. Nearly 100 people came to the reception, around half of which are alumni of Uppsala University. Among those at the reception were the Uppsala University Management and the Swedish Ambassador in London, Nicola Clase.

From Strindberg to Global Health

LAST YEAR was the “Strindberg Year” and this year marks one hundred years since Kierkegaard’s birth. These two thinkers have been very important to Bishop Emeritus Lennart Koskinen, not least during his studies in Uppsala. As second speaker in the Alumni lectures, he shared interesting thoughts on existentialism and comparisons between Søren Kierkegaard and August Strindberg. The next alumni lecture took place in May when Stefan Swartling Petersson, Professor of Global Health and 2012 Alumnus of the Year, spoke about his professional life in and outside Sweden.

Stay in touch with your nation

AS OF ONE MONTH AGO, all of Uppsala’s student nations are part of the alumni network. Kuratorskonventet invests in alumni and since the turn of the year has an Alumni Coordinator who works to support and develop the student associations’ alumni work. The alumni that have previously stated their involvement in a student nation or nation association in their alumni network profile are now automatically members of their nation’s group in the alumni network. For everyone else, it is easy to join.

› Visit uu.se/alumn to find your nation.

Studenterradion creates networks

The interest in radio is a common denominator among members of: Uppsala student radio alumni associations. Journalism student Niklas Norén is one of the minds behind the initiative.

TEXT: ANNICA HULTH • PHOTO: JIM ELFSTRÖM

Why are you forming this association?

“Studentradion 98.9 is an association which really engages its members. There are a lot of emotions and so much love surrounding Studenterradion. For many people it’s where you have your friends and get to know people during your studies. We want to provide the opportunity to meet, have fun together and create networks.

What are your alumni doing now?

“It differs a lot. Many work in media and journalism, others have gone on to become project managers or work in public relations. The common denominator is ambition; so many of them have ended up in really exciting positions.

“At Studenterradion, you don’t just learn how to broadcast radio. You also learn about working on a board, working in a team and leadership. You can get something out of this irrespective of what you go on to do with your life.”

What has Studenterradion meant to you?

“It meant an awful lot during my studies. It’s where I had my friends and where I realised I wanted to work with radio.

“I was station manager for a year and it was a great advantage to become secretary-general for Ung Media [Youth Media]. As a journalism student, I’ve benefited immeasurably from my experiences with Studenterradion.”

What does the future have in store?

“In the initial phase, we’ll make it possible to become a member and assemble a list of all alumni from 1984 and onwards. We’re also working on a book about Studentradion’s history, which will be finished just in time for the 30th anniversary in April 2014.

“All the old members will be invited to the anniversary, so they can join in the celebrations. Over the last six-seven years, the association has grown and developed considerably. Today we have 160 active members who are all doing their part.”

Become a member!

You can read more about becoming a member at: www.studentradion.com
The chemistry of murder by poison

Murder by poison is a classic device in literature, but what poisons are used and how do they act? This is the theme of Olle Matsson’s new book “En dos stryknin” [A Dose of Strychnine], which came about parallel to his work as Professor of Organic Chemistry at BMC.

IT HAS BEEN A GREAT advantage working at a university with expertise near at hand, Olle Matsson explains:

“I’m a chemist, but I’ve had to go into pharmacology, pharmacognosy, medicine and physiology. Even linguistic matters, such as finding out the name of plants in Latin and Greek.”

He has gone through a total of around 200 books in the work on his book. One of the authors is Agatha Christie, who was active in the ‘golden era’ of crime novels.

“She was very ingenious when it came to the matter of how the poisons were administered, and had a great deal of knowledge on dosages, having worked in a pharmacy.”

If you go further back in time, there is a lot of good material to be had from the very first crime novels and from writers like Shakespeare and Hjalmar Söderberg. But poisons or murder by poison also come up in modern crime novels by Stieg Larsson, Anna Jansson, Mari Jungstedt and several others.

The book contains chemical formulas and models but also more popular descriptions of how poisons work.

“I want to appeal to different types of readers, both fans of crime novels and those with a more scientific interest,” says Olle Matsson.

Democracy takes time

MANY WHO DOUBT the possibility of global democracy are too hasty. Democratisation takes time. In his new book 2119. The Year Global Democracy Will Be Realized, political scientist Leif Lewin discusses the time perspective.

It took two hundred years for democracy to develop in the nation state – from the ideas of the Age of Enlightenment to the introduction of the public right to vote at the time of the First World War. With the same time perspective on international politics and with the Treaty of Versailles as a base for the calculation, we arrive at 2119.

“The title is an intellectual experiment and provocation. No-one can know what the world will be like in a hundred years. The point is the long-term perspective,” Leif Lewin says.

Brick art in the spirit of Linnaeus

ARTIST ULLA VIOTTI has received attention both nationally and internationally for her architectural installations in brick. She has an exhibition planned for the summer in the Orangery of Uppsala Botanical Gardens.

For her exhibition in Linneanum, ‘Tegel – Trädgård’ [Brick – Garden], Ulla Viotti will create installations in the spirit of the famous botanists Carl Linnaeus and Elias Fries, scenographically constructed with elements of living vegetation.

The Botanical Gardens are a unique environment in which plants from the time of Carl Linnaeus (the 1700s) are still preserved today. Elias Fries was active in the gardens in the 1800s and is known for his research on mushrooms.

The exhibition runs from 15/6 to 15/9.

From ancient literature to today’s crime novels and thrillers, the themes of poisons and murder by poison have been popular. Olle Matsson has performed an in-depth study.

TEXT: ANNICA HULTH
PHOTO: MIKAEL WALLERSTEDT
PROFESSIONALISM is something that has come to have extremely positive connotations in our society. We see this especially in how the adjective “professional” is used. It is distinguished to be a pro. It has a value in itself. The opposite is also true. “That’s unprofessional”, we often say when we are dissatisfied with how people act in the business world.

I think that what we often mean when we speak about professional behaviour is occupational competence. People with an in-depth knowledge of what they work with, whether finance systems or science, are considered professional. Another common meaning behind what we see as professionalism in everyday speech is when people are able to make a distinction between the private individual and their professional role. When the case handler at the Swedish Social Insurance Agency (Försäkringskassan) is friendly but objective, the train inspector treats all passengers equally and remains calm despite the train standing still, I think (and perhaps you do too): How professional he/she is! And by this we mean that we feel we have been treated fairly, impartially and in accordance with the applicable rules.

The question is whether professionalism will have all of these positive associations in the future. Today, what most of us see as the essence of professionalism is being challenged. Professionalism can mean both all of the above and something that is almost the opposite. Being someone that is a master of only certain technologies and who has a very narrow specialisation can be professional. Being professional can also be a matter of being flexible and "service-minded", a professional concept which is associated with demand and market rather than knowledge and integrity. To not have a fixed viewpoint based on the individual’s knowledge within a field, that is "professional".

I feel that we need to save the term professionalism from becoming completely void of all meaning. Not least because we need a tool for differentiating knowledge-based conduct from other motives such as economics, politics or religion. Having a profession is and remains something more than being able to refer to the quality assurance system.

... WE NEED TO SAVE THE TERM PROFESSIONALISM FROM BECOMING COMPLETELY VOID OF ALL MEANING.