2024 — ISSUE 3

# MAGAZINE

of Heinrich Heine University Düsseldorf

## Hunting saves the forests

Between tradition and change

ARTS & HUMANITIES
Just a dispute about words?

ECONOMICS
Consequences of globalisation

MEDICINE
Sudden Infant Death Syndrome

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## Faculties




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The tragic phenomenon of Sudden Infant Death Syndrome (SIDS) has to date been explained primarily from a risk perspective. Researchers now present a new explanatory model.


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Does hunting count as nature conservation? Cruelty to animals? A basic right? The legal expert Professor Dr Johannes Dietlein considers the topic of German hunting law and questions, which have emerged in the context of the interplay between hunting, climate change and nature conservation.

## Title



## Faculties



## Legal notice

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# Editorial

PHOTO LUKAS SCHULZE

Dear Reader,
This is the first issue of the HHU Magazine where, in my new role as Vice President for University Culture and International Relations, I have the privilege of welcoming you. I took over this position about two months ago and I am convinced that the new title of my role will take into account both tradition as well as change. A university's culture frames, and is meant to support, the development of all its members. International initiatives rely on long-lasting relationships, which often become proper friendships, but they also require constant adjustment and an open mind. In that this magazine's title story deals with current legal debates on hunting, it is also about a topic that is strongly shaped by both discussion of reform and tradition.

More research presented in this HHU Magazine comes from the other faculties and covers equally dynamic issues. Globalisation, new insights into the risk of Sudden Infant Death Syndrome, controversies about the meaning and usage of words such as *racist* or *sexist*, or computational methods replacing test tubes in biochemistry – all these topics demonstrate the breadth of the research conducted at HHU as well as its innovative character. Moreover, you will find information on the 10th anniversary of both the Heine Research Academies as well as of the presidency of Professor Anja Steinbeck: She has now been in office at HHU for a decade already. Congratulations!

I wish you momentum for positive change, but also stability, for the new year, which has just started!

With best regards,

Professor Dr Heidrun Dorgeloh
Vice President for University Culture and International Relations

COVER UNSPLASH.COM – DERIC

## The Heine Research Academies are celebrating their tenth birthday

# Happy Birthday HeRA!

**They are ten years old – the Heine Research Academies. And what actually are they? To state the facts, they are an alliance of the Graduate Academies (iGRAD, medRSD, philGRAD) and the Junior Scientist and International Researcher Center (JUNO) at Heinrich Heine University. However, Dr Uta Brunner from JUNO puts it in a much better way: "HeRA is the hub that connects the four institutions supporting the next generation of scientists at HHU."**

PHOTOS HHU/HERA

The idea of making doctoral education more systematic and providing better support for doctoral researchers, who are often left to their own devices, was first considered in the early 2000s. The Faculty of Mathematics and Natural Sciences then launched iGRAD (Interdisciplinary Graduate and Research Academy Düsseldorf) – the first HHU Graduate Academy – in 2008. The foundation of the Graduate Academies of the Medical Faculty (Medical Research School Düsseldorf, medRSD) and the Faculty of Arts and Humanities (philGRAD – the Graduate Academy of the Faculty of Arts and Humanities) then followed in 2010 and 2012. "That was nothing less than a paradigm shift," says Dr Christian Dumpitak, head of iGRAD, on behalf of all three Graduate Schools. "We wanted to disrupt the very individual master/pupil relationship between doctoral researchers and their supervisors, and establish a mentor system." Doctoral researchers and supervisors became obliged to make a greater commitment and sign a supervision agreement, and in addition, a variety of qualification and training opportunities were also established.

## Good Research Practice

"Since then, it has been mandatory for all doctoral researchers at HHU to complete the 'Good Research Practice' seminar, which comprises several hours," says Dumpitak. "The level of acceptance among doctoral researchers is very high." The seminar not only covers simple citation rules, but also addresses issues of academic philosophy. By way of example, Dumpitak asks, "When does sloppy work become academic misconduct, how do I – as a researcher – respond to the demand for strict academic integrity?" He continues: "More than 10,000 researchers have now completed our 'Good Research Practice' seminar." Dumpitak has also established a conflict mediation service for doctoral researchers and supervisors at the Faculty of Mathematics and Natural Sciences over the years.

However, the range of qualification programmes offered by HeRA goes far beyond this: "There has been strong demand for training in scientific writing and presentation in the last few years," says Dumpitak, who also notes great interest in project management and science communication. Doctoral researchers from the Faculty of Business Administration and Economics, and the Faculty of Law – neither of which have their own graduate academy – are also cordially invited to take part in seminars.

In 2017, support for early career researchers at Heinrich Heine University was expanded to include the target group of postdoctoral, international and visiting researchers with the foundation of JUNO. JUNO organises an interdisciplinary qualification and training programme for postdocs, junior research group leaders and assistant professors from all faculties to support the early academic independence of researchers.

(Academic) career development is a particular focus for postdocs – "we often note that the question 'what comes after university?' is one that many cannot or do not

**2014** The Graduate Academies form an alliance/ foundation of the Heine Research Academies

**2015** The first Heine slam was a great success

**2023** At the Urban Walking Tour organised by the JUNO Welcome Center

**2014** Nobel Prize winner Professor Dr Peter Grünberg speaks at the HeRA inauguration event

**2018** Happy winners of the pART of Research calendar competition

**2024** Certificate presentation to Düsseldorf Way of Training participants

want to answer," says Brunner. And professorships are only an option for a few researchers, so it is good for individuals to start considering what other career paths may be options for them during their doctoral research and in the postdoc phase. The Career Days and Research Funding Days events, among others, were established to help doctoral researchers and postdocs with this. In addition, researchers from abroad can obtain help and support from the JUNO Welcome Center. This starts with assistance on arrival in Germany and on the Düsseldorf campus, and helping them get settled in the German academic system. It also includes opportunities for international researchers to network, e.g. during joint excursions such as the "Urban Walking Tour", as networking is just as important as the acquisition of competencies and skills. It is a focus not only at JUNO, but also at all the HeRA Graduate Academies, among other things within the framework of the annual Welcome Days event. Other activities such as the annual "pART of Research" calendar, for which young researchers can submit photos of their research work, and science slams, also contribute to this interdisciplinary exchange. The Heine Research Academies team actively supports researchers in the early phases of their career at Heinrich Heine University Düsseldorf and collaborates in nationwide networks to address current developments, enabling the establishment of extensive support structures and measures for early career researchers over the past ten years. "All these measures show how well HeRA is anchored in graduate education at HHU today," says Vice President for Research and Transfer, as well as early career researchers, Professor Dr Dr Andrea Icks. "And we will not run out of topics in the next ten years either, as the recent development of the postdoc guidelines makes clear."

> "All these measures show how well HeRA is anchored in graduate education at HHU today."
>
> **Professor Andrea Icks — Vice President for Research and Transfer**

## Structures and measures

And what would HeRA like for its tenth birthday? "That doctoral researchers and postdocs continue to make active use of our offers and that we maintain a close exchange with the target group," Brunner and Dumpitak agree. "And that everyone involved is aware of the importance of a solid graduate education for the next generation of researchers." V. M.

# Consequences of globalisation

# Who wins – who loses?

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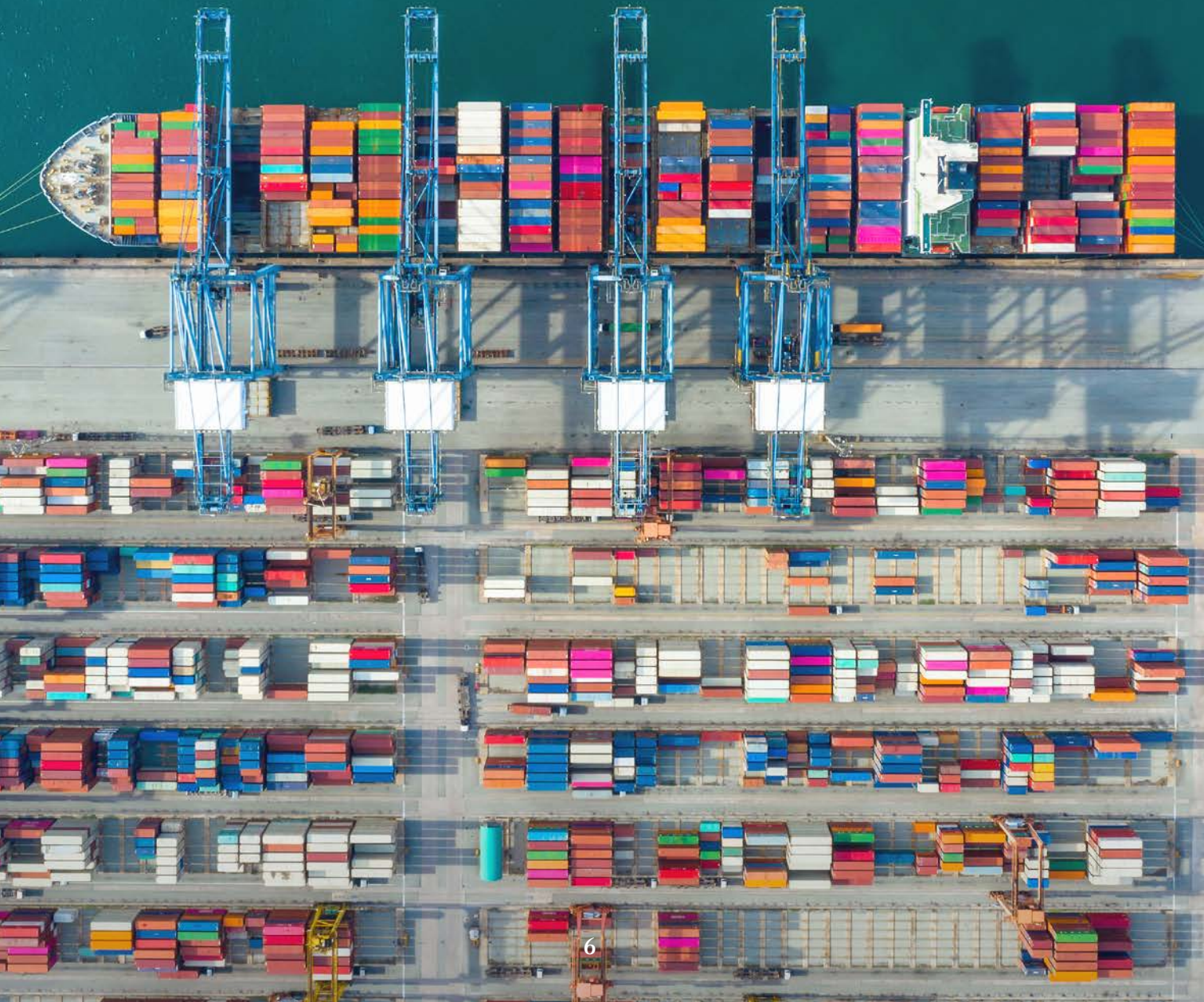


BY CAROLIN GRAPE

At the Düsseldorf Institute for Competition Economics (DICE), trade economist Katharina Erhardt conducts research on globalisation – its determinants, its consequences and the economic policy instruments for managing it. In a current study, she shows that the distributional effects of globalisation on the labour market are more complex than previously thought.

Access to new markets, technological advances and a more efficient allocation of resources – on average, globalisation, i.e. the share of global production traded across borders, has increased prosperity in many countries.

"The value of global trade in goods and services has risen from just over 10% of global production in the 1960s, to more than 20% in the 1990s and even to more than 30% in 2008. The reason: The combination of simplifications in trade policy since the end of the 2nd World War (the General Agreement on Tariffs and Trade (GATT), the foundation of the World Trade Organisation (WTO) and China joining the organisation in 2001) and advances in communications technology," explains the expert. "Money, goods and knowledge are being transferred worldwide to an unprecedented extent."

This growth course ended with the financial crisis in 2008/2009. It recovered somewhat afterwards, but the upward trend lost momentum and international exchange has stagnated since. Economists refer to the reversal of this growth trend, i.e. the noticeable slowdown, as "slowbalisation". The ideal of globalisation has come under pressure: With Brexit and the election of Trump, with his dedicated anti-globalisation agenda, resistance has emerged around the world. The criticism: Globalisation promotes social inequality.

"It can be noted that increases in prosperity apply for the economy as a whole, but that not everyone profits from them to the same extent. Globalisation has consequences for the distribution of wealth within an economy," says the expert.

Findings of studies conducted over the past ten years, which have examined varying regional developments since China joined the WTO, confirm this: While some industries, countries and regions have benefited significantly, others have been left behind. "The consequences depend on which products the companies offer and the extent to which they are affected by domestic import competition in their markets or benefit from opportunities to export abroad," explains Erhardt: "If domestic competition has a negative impact on a company, this also has negative consequences for employees. And conversely: If a company exports many of its goods and generates profits, this is positive for the company's employees – the effects are directly linked."

## Distributional effects for employees

Yet, does globalisation only affect the competitive situation of companies? Or are there further distributional effects for employees as a result of the increasing spread of production processes across national borders?

"It can be noted that increases in prosperity apply for the economy as a whole, but that not everyone profits from them to the same extent. Globalisation has consequences for the distribution of wealth within an economy."

**Katharina Erhardt — economist**

"We must ensure that these well paid jobs not only exist in urban conurbations and major cities, but rather that they are spread as widely as possible."

**Katharina Erhardt — economist**

Katharina Erhardt and her team have examined the distributional effects of globalisation, taking account of this additional aspect. In their study "Heterogeneous Impacts of Trade Shocks on Workers", they utilise detailed and extensive data on the "Franc Shock", the sharp and unexpected appreciation of the Swiss Franc in 2015: "We linked trade data for companies, which are exposed to trade via (both domestic and international) sales markets and imported inputs (characterised by foreign labour content) with data on the labour market biographies of their employees. This enables analysis of the reactions at both company and employee level." The Franc Shock can be understood as a so-called natural experiment. Overnight, Swiss exports to other countries became much more expensive, while imports into Switzerland became cheaper. This abrupt change in trading conditions can be considered in connection with the detailed data on the foreign trade of individual companies in order to understand how various employees are affected by trade shocks.

## Varying consequences of trade shocks

The result: Globalisation has very different effects, not only across various regions and industries, but also within regions and industries. For individual employees, the extent to which their employer exports or imports is critical. The type of imports also plays a key role: Are raw materials or products and product components prefabricated abroad involved? In times of low transport costs and improved communications technology, globalisation enables production processes to be outsourced abroad, meaning that products and product components can be produced at a lower cost abroad and then imported as intermediates. "The impact of imported inputs varies greatly depending on where employees work, e.g. on the production line or in the office. The import of cheaper starting products is undoubtedly positive for the company and thus also for those employees who benefit from these starting products, e.g. in sales. However, it is negative for employees in production, whose labour is no longer required – they may be replaced," explains the researcher.

The natural experiment makes it clear that company success and the consequences for the various employees are potentially separate. Employees in the bottom quarter of the individual companies in terms of wages are particularly affected – "the data clearly show this, the wage gap is significant here," emphasises Erhardt.

## Winners and losers

According to Katharina Erhardt, the findings from the detailed Franc Shock data can be generalised: "On the one hand, we see that globalisation can lead to (potentially very large) gains in prosperity. On the other hand: The positive effects are accompanied by very heterogeneous distributional effects. Globalisation affects different people in different ways – there are winners and losers. The differences can be significant and depend on whether employees lose their jobs, how mobile they are and how quickly/whether they can find a new (well paid) job." As wage levels in companies vary widely, the losses are concentrated among those who lose a well paid job. Those who can stay with their company are spared the negative effects, as the companies generally do not reduce wage levels, even if the market situation changes.

Are there measures that can make globalisation more socially compatible? The expert confirms this: "We must ensure that these well paid jobs not only exist in urban conurbations and major cities, but rather that they are spread as widely as possible. Training and further education programmes, the promotion of regional development and the promotion of innovation in order to attract new industries and economic sectors all contribute to this."

**MORE INFORMATION**

→ **Study: Arni, Patrick, Peter Egger, Katharina Erhardt, Matthias Gubler, and Philip Sauré (2024): Heterogeneous Impacts of Trade Shocks on Workers. CEPR Discussion Paper 19017]**

European research group presents an explanatory model

# What protects infants from Sudden Infant Death Syndrome?

PHOTO: ISTOCKPHOTO.COM – FOTOSTORM

BY SUSANNE DOPHEIDE

Being laid prone to sleep, becoming too warm or smoking by the mother during pregnancy – the tragic phenomenon of Sudden Infant Death Syndrome (SIDS) has to date been explained primarily from a risk perspective. Yet, this on its own is not enough to provide a comprehensive explanation, says a team of authors headed by Professor Dr Freia de Bock and the paediatrician Dr Herbert Renz-Polster. Following a meta-study, they now present a new explanatory model for SIDS.

Of course, the risks count. SIDS cases without at least one of the known risk factors are extremely rare and in most cases, several risks are involved at the same time. "Nevertheless, this is not enough for a comprehensive explanation," says Professor de Bock. For example, it is unclear why the risk of SIDS only increases so significantly after the first three months in the life of a newborn. "A three-month-old baby is more susceptible to the typical SIDS risks than a three-week-old baby," she says. The same applies to the fact that there is a greater risk of SIDS in male babies than female babies. The apparently protective effect of breastfeeding against SIDS has also not yet been conclusively explained. "Over 99% of the infants with these risks do NOT die of SIDS," states paediatrician Dr Herbert Renz-Polster, explaining the situation.

## Interdisciplinary research

In order to address these unanswered questions, the multidisciplinary group analysed previous studies on Sudden Infant Death Syndrome based on interdisciplinary research in SIDS epidemiology, sleep research, anthropology, developmental paediatrics and paediatric public health, with a particular focus on the results of experimental infant research.

According to these findings, infants develop a rich protective repertoire as part of their normal and healthy development. This resilience helps them react "correctly" to adverse influences. The children who die of SIDS were apparently unable to build up their protective repertoire properly. This is supported by the fact that the vast majority of SIDS victims can be shown to have developmental disadvantages – for example due to maternal smoking during pregnancy or severe prematurity.

The team of authors also draw on a work by Barbara Burns and Lewis P. Lipsitt from 1991. Burns and Lipsitt argue that infants become susceptible to SIDS if they cannot realise the transition from (sub-cortical) reflexive behaviour to learned (cortical) behaviour in a timely and appropriate way – whether this is due to a lack of opportunities to learn or due to existing neurodevelopmental problems. In other words, they are protected by innate reflexes in the first three months and then start to learn protective behaviour. If this learning process cannot be completed properly, the risk of SIDS increases.

As – according to the assumptions of evolutionary behavioural research – the protective resources in question are normally established within the framework of infant development, the authors view SIDS as an evolutionary imbalance, i.e. a constellation in which certain modern developmental influences overburden the repertoire of adaptive capabilities of the infant at that point in time. One frequently discussed question relates to the "protective" effect of breastfeeding. In their theory, the authors address this question in detail against the

"A three-month-old baby is more susceptible to the typical SIDS risks than a three-week-old baby."

Professor Freia De Bock — medical expert

PHOTO ISTOCKPHOTO.COM – JOSE LUIS CARRASCOSA

Infants need to develop a rich protective repertoire from day one.

background of the epidemiological and experimental findings from SIDS research, as it remains unanswered and unexplained.

Is the effect conveyed by an immunological advantage? Possibly, but SIDS has not been considered as an immunological disorder to date. However, the protective effect of breastfeeding can also be explained from a developmental perspective. Breastfeeding can be seen either as an indicator that the infant lives in an environment that promotes appropriate development or as an experience that promotes protective developmental skills. Both explanations seem to be compatible with the study results.

## Where does the protective function of breastfeeding come from?

Breastfeeding does at least seem to be a meaningful predictor variable for routine bed sharing and vice versa, meaning that breastfeeding could at least in part be an indicator of a lifestyle that also "promotes development" in other respects. In fact, breastfeeding does seem to be linked with the practice of bed sharing. On the one hand, sleeping in the same bed is connected with a higher probability of the infant being breastfed; on the other hand, breastfed infants are breastfed more frequently when they share their mother's bed than when they sleep alone. Even if they do not sleep in the same bed, it is more likely that breastfed infants sleep in the same room as their parents than in a separate room. It may also be that breastfed infants enjoy greater maternal care due to the typically shorter periods between feeding. This could prove a good fit with a statistical observation made in a study that breastfeeding would appear only to offer protection to infants that sleep alone.

## Fatal imbalance

One interesting developmental explanation relates to the fact that newborn infants seem to practice protective behaviour with regard to airway and breathing control at the breast. According to these observations, the breastfeeding experience could represent an outstanding "learning environment" for the expansion and strengthening of innate reflexes involved in breathing and airway control, which could in turn improve autonomous control and stimulation management in general. The evidently highly effective learning at the breast could explain why all breastfeeding, irrespective of duration, offered roughly the same protection as breastfeeding beyond the second month of life and why some epidemiological studies were unable to identify any difference in the reduction of the SIDS risk between infants who were wholly and only partially breastfed. This could also explain the finding that breastfeeding only resulted in a reduction in risk in infants that sleep alone. Perhaps breastfeeding loses its importance as a developmental marker or developmental enhancer in infants who regularly sleep in the same bed as their parents, as the majority of them are already exposed to multiple components of the evolutionary care package anyway. Alternatively, perhaps infants that sleep alone are even more reliant on a certain level of developmental support in order to overcome the challenges of sleeping alone.

"We conclude that SIDS represents a fatal imbalance between the current physiological challenges and the protective capabilities acquired during the course of development," says Dr Herbert Renz-Polster. All this may explain why it is extremely important and in the vital interest of families to establish SIDS prevention advice that is as specific as possible. "We hope that the theoretical concept we have presented offers a foundation for these efforts," says the team of authors.

# Hunting saves the forests

Hunting law and nature conservation – between tradition and change

PHOTO: ISTOCKPHOTO.COM – TORSTEN IRMER

PHOTO ISTOCKPHOTO.COM – ARTISTGNDPHOTOGRAPHY

BY CAROLIN GRAPE AND VICTORIA MEINSCHÄFER

The system actually works quite well. Nevertheless, it has been a highly controversial topic for many years: German hunting law. Does hunting count as nature conservation? Cruelty to animals? A basic right? And at the latest since the re-introduction of the wolf in Germany, many questions have emerged in the context of the interplay between hunting, climate change and nature conservation.

Following the federalisation of hunting legislation in 2006, the debate surrounding it in society and even in the state parliaments has become increasingly heated," notes Professor Dr Johannes Dietlein. Furthermore, the basis of such legislation has not always been scientifically sound, as hunting legislation has remained largely outside the remit of legal science. The holder of the Chair of Public Law and Theory of Administration is one of the few legal experts in Germany who also considers the topic from an academic point of view.

German hunting law is based on two pillars: "Under constitutional law, it is first and foremost a property right, and property is characterised by its private use," says Dietlein. "The fundamental principle is that the use of game stocks is a component of land ownership." However, that also means – as the second pillar – that hunting is subject to a social obligation. The Basic Law for the Federal Republic of Germany (*Grundgesetz*) states, "Property entails obligations". And hunting law thus also serves the common good: "Hunting is inextricably linked to the conservation of forests and protection of land used for agricultural purposes."

Hunting as a "service" for agriculture? Hunting to conserve forests? "Both statements are accurate," says Dietlein, "because it is evident that forests have no future without hunting." The damage caused by game species, particularly to young trees, is significant. In Germany, an estimated area of 500,000 hectares is currently in need of reforestation due to environmental damage. The phenomenon is naturally associated with climate change, but it is also frequently a consequence of the fact that traditional land management practices are no longer in line with contemporary requirements. "We have known since the twenties of the last century that spruce forests are lucrative, but also highly susceptible to drought and storms," says the legal expert. "It has essentially been clear for a long time that spruce monocultures established according to the old model cannot withstand severe storms." And game species are now disrupting reforestation efforts involving more climate-resilient tree species such as pine, beech, oak or sycamore. "Deer are particularly fond of eating the buds of these types of trees and at the moment this selective browsing is a major problem, which must be solved – not exclusively, but certainly also – through hunting."

## Damage caused by wild boar

Farmers face a similar problem: The large-scale planting of maize for energy generation has attracted wild boar. "In some cases, large herds live in the fields and spend all summer eating the maize," says Dietlein. "This can cause immense financial damage." Amounts in the high five-figure and, in isolated cases, even six-figure range have been recorded. Farmers regularly invoice

PHOTO ISTOCKPHOTO.COM – DAMIANKUZDAK

hunt leaseholders for damage caused by game species, as it is their responsibility to keep game levels in their hunting districts manageable in order to prevent damage as far as possible. And naturally, the farmers hope that the leaseholder is sufficiently solvent to cover the damage. This hope is however not always fulfilled, notes Dietlein, having once observed deposit seals on a raised hide. "The hunt leaseholders had obviously incurred so much debt that bailiffs had entered the forest and seized the hide." According to applicable law, all the landowners in a hunting district must cover the costs of damage caused by game species between them if the hunt leaseholder is unable to do so. Dietlein considers this an outdated provision, which presents significant risks for farmers: "Hunting law was defined at a time when there were dozens of farms in a village to cultivate the fields, i.e. when game damage suffered by one could be shared between many. Nowadays, a village has maybe two or three farms, which cultivate huge tracts of land. The damage can be calculated economically and included in the price of the lease. The idea of a solidarity surcharge to distribute the financial burden has become obsolete and is no longer appropriate."

## How should we deal with the wolf in the future?

One very successful hunter – alongside humans – is the wolf. And, as the old Russian proverb has it: "Where there are wolves, the forest thrives." This is because wolves can help regulate game levels. Fewer roe and red deer eat fewer young buds, allowing the forest to rejuvenate. Since the opening of the inner German border and other borders within Europe, the wolf has returned. This is good news for conservationists, but it has also resulted in heated debate in such a densely populated country as Germany. The protection of an endangered species is set against the fears of the population and above all the risks involved in free-range farming and the economic impact for owners of grazing livestock.

"The question we must address is how we intend to deal with the wolf in Germany in the future," says Dietlein. The wolf currently enjoys strict protection on the basis of the Bern Convention as well as the EU Habitats Directive and, in concrete terms, the often-quoted Annex 4. According to this, a strict ban on hunting will remain in place until the wolf population is no longer endangered and a favourable level, i.e. an appropriate level to ensure the preservation of a healthy population, has been reached. However, in exceptional cases, the law already permits the "removal" of so-called problem wolves, i.e. animals, which repeatedly attack livestock and thus represent a danger. Nature conservation authorities in the federal states are responsible for approving such exceptions in accordance with strict criteria.

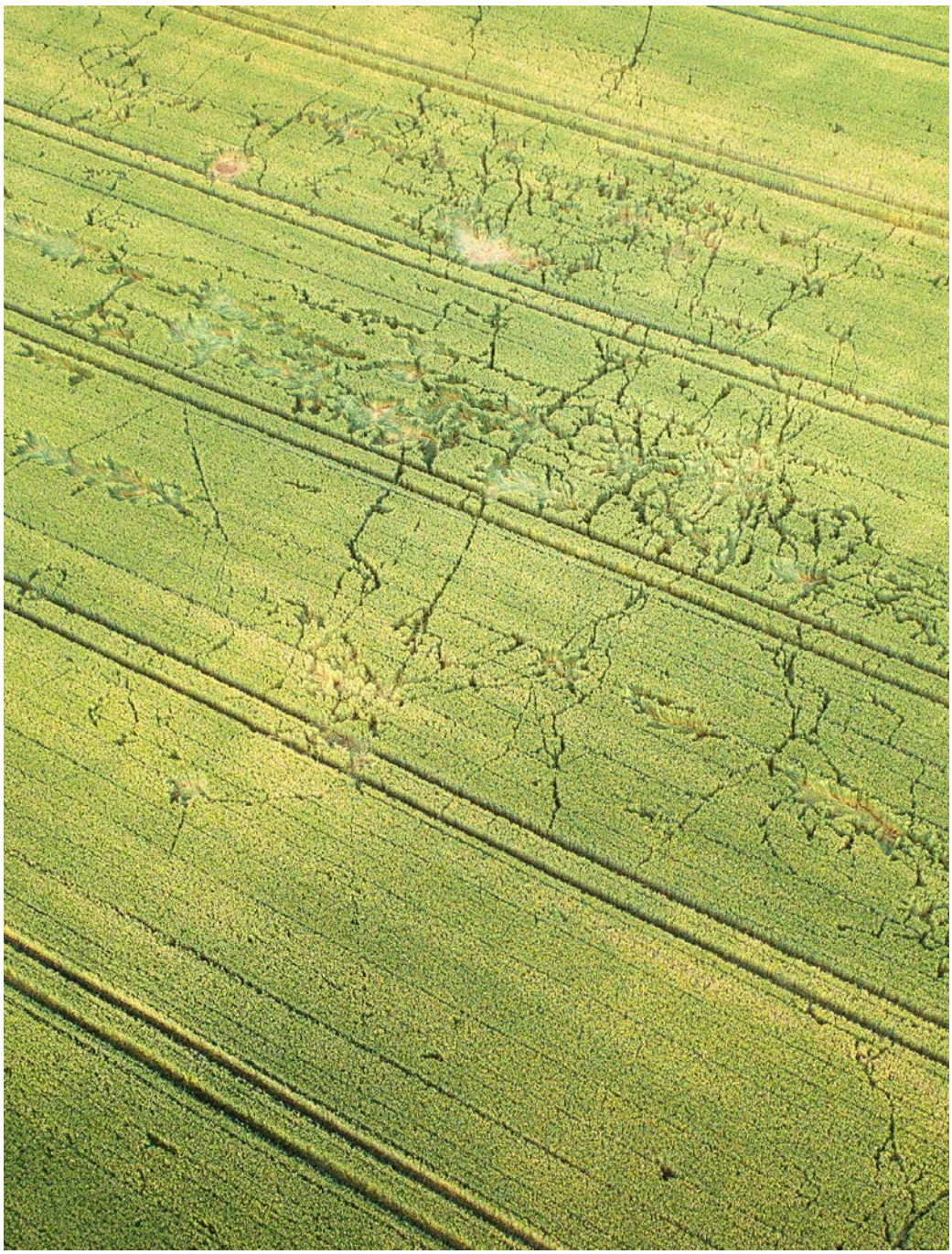
## Enabling the sustainable regulation of wolf numbers

But who actually determines when a healthy wolf population level has been reached? "The Federal Agency for Nature Conservation publishes official wolf numbers reported by the state authorities on an annual basis." Currently (2022/23 monitoring report), there are 184 packs (comprising five to ten animals), plus 47 wolf pairs and 22 settled lone wolves listed nationwide, which corresponds to around 1,400 – 1,500 animals in total.

PHOTO ISTOCKPHOTO.COM – BETYARLACA

"Unchecked multiplication of the wolf in Germany is not a realistic option."

**Professor Johannes Dietlein — legal expert**



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Large fields full of maize or grain are an attractive location for wild boar in summer. In some cases, the large herds living in the fields can cause financial damage in the five-figure and sometimes even six-figure range.

However, Dietlein is sceptical about these official figures: "This is a tough situation. What is certain is that the annual monitoring only includes those wolves identified by the Senckenberg Institute by means of DNA samples; it is not an extrapolation of the actual population. Consequently, the annual monitoring report only provides limited information on the actual wolf population." Dietlein expects the numbers to be much higher: "The population growth is incredibly dynamic and surprising even to experts."

One indicator of this: The number of wolf attacks on production and grazing livestock, which rises as the wolf population spreads. National statistics on livestock losses published by the Federal Documentation and Consultation Centre on Wolves (DBBW) shows: "The number of verified grazing livestock attacks has exploded in recent years from just over 1,000 injured or killed animals in 2016 to well over 4,000 documented cases in 2022," says the legal expert. "And here again, the real figures are

# “It is very clear to see that the hunting community is changing – increasing numbers of women now also hunt.”

**Professor Johannes Dietlein — legal expert**

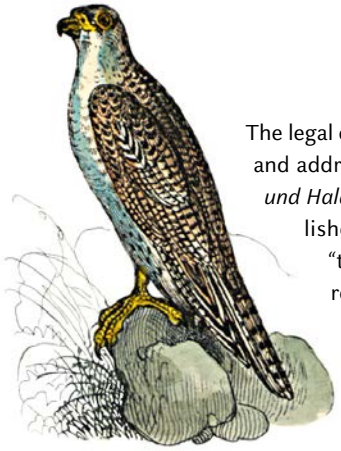
PHOTO ADOBESTOCK.COM – KARRASTOCK

likely to be much higher.” The resultant economic impact is huge. Although state compensation payments are available, the workload and cost of protective measures are high and place a further burden on farms.

Dietlein is however convinced that the wolf has and must continue to have a legitimate place in Germany. “However, not as an untouchable super-animal, but rather as a part of our fauna. Unchecked multiplication of the wolf in Germany is not a realistic option.”

The expert fully expects that a sustainable way of regulating wolf numbers will ultimately be found: “Much depends on realistic population numbers finally being determined. The attacks clearly show that we are no longer dealing with just lone wolves here. This must therefore also prompt a re-evaluation of its conservation status in Germany and open up the possibility of controlled regulation within a strict legal framework.” The decision taken by the European Council of Ministers at the end of September 2024 to downgrade the conservation status of the wolf under the Bern Convention seems to confirm his view.

So, if the cooperation between farmers and hunters is such a well-established system, where is the problem?



The legal expert has also asked himself this question and addressed the topic in his book *"Jagd vorbei – und Halali"* ("Hunting is over – and farewell") published in autumn 2024. He is convinced that "there is actually no need for fundamental reform and we do not really need to have such a heated debate." However, many things are converging here: an – in part – very old hunting law and – in part – very new ideas about nature conservation and the rights of nature, perhaps even "basic rights" for animals, for which calls are increasing. In this respect, Dietlein has a very clear opinion: "Yes to animal welfare, but our Basic Law formulates a categorical difference between people and animals, and we should not call this into question. Ultimately, it is about human uniqueness and dignity, which the Basic Law enshrines as the foundation of basic rights – and that should remain inviolable."

The (often-outdated) image that the public has of hunters is a factor in this. "For many, 'the hunter' is still the 'old, white, rich man' from the city. And the many photos of slain animals posted on the Internet do little to improve the image of hunting." Dietlein, who has known the practical side of hunting for more than three decades, does however also see changes here: "It is very clear to see that the hunting community is changing – increasing numbers of women now also hunt." 25 years ago, only 1% of hunters were women. By 2015, this figure had already risen to 7%, and 25% of the participants in hunting seminars are now women. "This will result in further significant change in the public image of hunting and is definitely positive," Dietlein believes.

## Is hunting law a Nazi law?

However, hunting legislation also offers fuel to fire a completely different debate: On the one hand, there is the allegation that the hunting system incorporates National Socialist ideology and, on the other hand, there is the criticism that the introduction of the hunting district system after the German Revolution in 1848 constituted a betrayal of smallholder landowners and farmers. Dietlein believes these accusations are unjustified: "It is of course correct that the revolution of 1848/49 gave all landowners the right to hunt on their own land. However, the subsequent forced consolidation of land into larger hunting districts was already set out in the revolution documents, so it was not a betrayal!"

And the "Nazi law" accusation? "It has a real background, but it overlooks the current liberal context," says Dietlein. In his book, he provides a detailed history of the Federal Hunting Act and views some of the opinions of the hunting community critically, stating: "Even now, the hunting community struggles to recognise that – of all things – the highly praised codification of the principles of German hunting ethics set out in the hunting law passed in 1934 was not simply a case of unfortunate

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historical timing, but rather – or in any case also – an instrument of National Socialist power and persecution politics. That is to say, the neutral hunting ethics formula offered the National Socialists an absolutely ideal instrument for forcing through their power politics and dedicated anti-Semitic agenda," says the legal expert. "The hunting community has been detrimental to its own cause by placing a greater emphasis on defending the 'greenwashing' of the highly toxic National Socialist hunting law for decades than updating the provisions of the Federal Hunting Act to ensure their continued relevance. Then it would have become unmistakably clear that, although the Federal Hunting Act draws – not just to a limited extent – on earlier terms and legal figures, it is certainly not a 'Nazi law'."

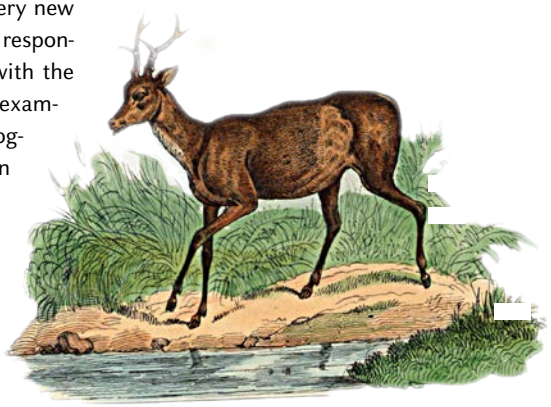
PHOTO PRIVATE, KOSMOS VERLAG


**Johannes Dietlein: *"Jagd vorbei – und Halali, Das deutsche Waidwerk – ein Auslaufmodell?"*, Kosmos Verlag, Stuttgart 2024, ISBN 978-3-440-18157-7 2024**

## Hunting laws vary widely from state to state

The upheaval surrounding hunting legislation that can currently be observed is also due to the fact that, since 2006, hunting law has no longer been the primary responsibility of federal lawmakers. Instead, each state has the option of passing laws that vary from the Federal Hunting Act. And the newest law then always applies, resulting in a kind of ping-pong. However, Dietlein believes that this will lead to state laws taking precedence in the long term. "In principle, it is clear how it will end: The Federal Government cannot respond to every new state law with a new federal law, meaning that responsibility for legislation will ultimately remain with the states." The state laws vary in part widely, for example: North Rhine-Westphalia adopted the "Ecological Hunting Law" (*Ökologisches Jagdgesetz*) in 2015 under the SPD/Green Party state government, which led to massive protests by hunters. It was then replaced by the CDU/Green Party state government in 2018. "However, the draft reforms recently published in Brandenburg or Rhineland-Palatinate go far beyond what was passed into law in NRW back then," says Dietlein. "It's crunch time here."

Dietlein was involved in virtually all legal reforms at federal level and in the various states as an expert and his opinion is highly sought-after. He attempts to communicate calmly that a functioning system exists and that, while some points would undoubtedly benefit from modification, it is definitely not necessary to tear the law up and start again from scratch. With his book, he is also attempting to bring the debate back onto a more fact-based footing.



"Hunting is inextricably linked to the conservation of forests and protection of land used for agricultural purposes."

**Professor Johannes Dietlein — legal expert**

Lecture series on “contested concepts”

# Just a dispute about words?

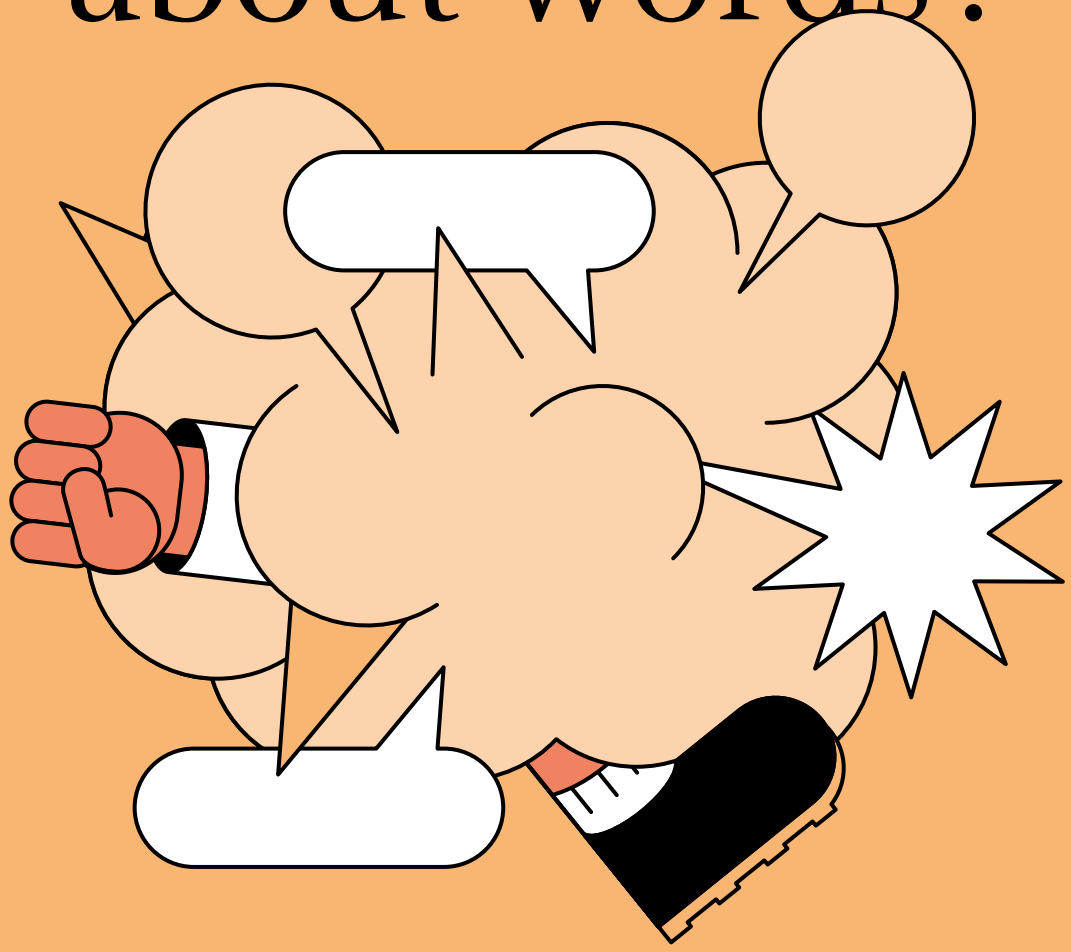


ILLUSTRATION IELI ALAIMO DI LORO

BY VICTORIA MEINSCHÄFER

**Who is racist? Who is anti-Semitic? What actually are racism, anti-Semitism, sexism, transphobia? Professor Dr Markus Schrenk and Professor Dr Anna Schriefl (both from the Department of Philosophy at Heinrich Heine University) held a lecture series on such “contested concepts” in the summer semester in collaboration with the Berlin-based philosopher Professor Dr Geert Keil from the Humboldt University. The special feature: Thanks to the hybrid format, students in Düsseldorf and Berlin could all take part, while interested individuals at other locations were also cordially invited.**

It was important to the organisers that the focus was not on moral or political classifications, but rather on explanations of the concepts: "Forms of discrimination such as racism, sexism or anti-Semitism, i.e. all types of hate directed at specific groups of people, are offensive. However, without exception, these concepts are contested. In public debates, the situation often occurs that a person or remark is classified as 'anti-Semitic' or 'racist', yet there is dissent about this classification," says Geert Keil in the introduction. "We would like to contribute something specific to the debate as philosophers, namely analysis of concepts," adds Schrenk. "In this way, we can provide tools – a toolbox – for those who are involved such topics at political level or those who campaign on an anti-racist or feminist agenda."

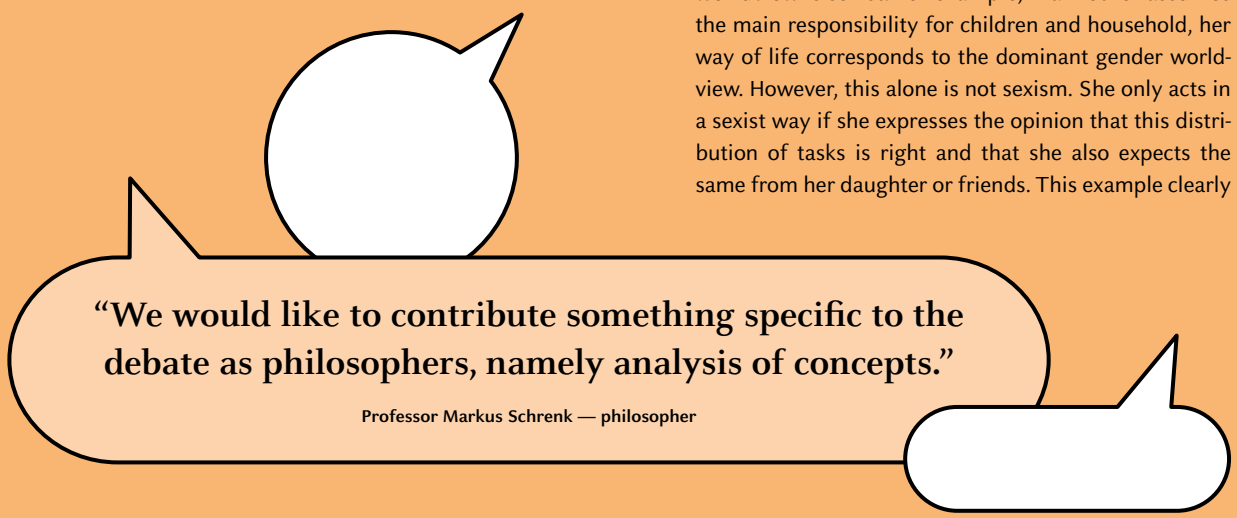
Of course, it is not possible to cover the entire lecture series here, so in the following, three concepts will be considered by way of example to indicate where the problems lie and to what extent a precise definition can contribute to bringing debates onto a more fact-based footing. In the case of concepts used to define "group-specific hostility", it must first be determined whether they are attitude-related or structural. "If an individual acts in a discriminatory way towards a specific group of people or talks about these people in derogatory terms, it is probably due to the ideological attitude of that person, who does not see these other people as equals," explains Schrenk. "By contrast, structural forms exist where laws, traditions, access to education/culture or e.g. construction measures result in discrimination."

## Attitude-related or structural?

A thought experiment on attitude-related versus structural racism often discussed in the seminar accompanying the lecture series shows that the two forms can diverge: Let us assume that all members of a city council, who have non-racist attitudes, want to save money in order to be able to finance integrative school projects. So, they approve the low-cost construction of a road without bridges or pedestrian crossings, which splits the city into two parts and thus contributes (unintentionally!) to ghettoisation. Structurally, the act of building the road is racist, but not in terms of attitude. "And this makes it clear that definitions are not just playing with words, but rather enable important differentiations. Accordingly, care should also be taken with attributions such as 'that is racist! You are anti-Semitic!' not least because a distinction must be made between the structural and attitude-related forms," says Schrenk.

## What is sexist?

In the case of sexism, some analyses also emphasise unjust structures, while other analyses bring conscious or unconscious prejudices to the fore. Professor Dr Christine Bratu presented a definition of sexism, which delineates the structural and attitude-related aspects. Something, "which matches the dominant gender worldview" and – as an important addition – endorses this worldview is sexist. For example, if a mother assumes the main responsibility for children and household, her way of life corresponds to the dominant gender worldview. However, this alone is not sexism. She only acts in a sexist way if she expresses the opinion that this distribution of tasks is right and that she also expects the same from her daughter or friends. This example clearly



> **"If an individual acts in a discriminatory way towards a specific group of people or talks about these people in derogatory terms, it is probably due to the ideological attitude of that person, who does not see these other people as equals."**
>
> **Professor Markus Schrenk — philosopher**

shows that, according to Bratu, women can also perpetuate sexism. Nevertheless, Bratu emphasises that sexism primarily discriminates against women. However, she believes others also experience such discrimination, namely those who do not fit in with the dominant gender worldview such as homosexual men, men with unconventional interests or non-binary and transgender individuals. According to Bratu, transphobic actions or structures support the dominant gender worldview and are sexist. According to Bratu, feminism – when understood as resistance against the dominant gender worldview – is thus definitely trans-inclusive.

According to Schriefl, transphobia is a sensitive issue, also because the group of people affected represents a small minority. Here, Schriefl also sees "surprising overlaps with anti-Semitism. Completely bizarre conspiracy theories exist, which imply that Jewish or transgender individuals are so influential that they can manipulate the press and legislation. The idea being that the few control the entire world." In the case of anti-Semitism, this is often accompanied by a fear of "Jewish globalists", who endanger national interests, and in the case of transphobia, by the concern that the "good old father/mother/child family" will be toppled.

## Asymmetry?

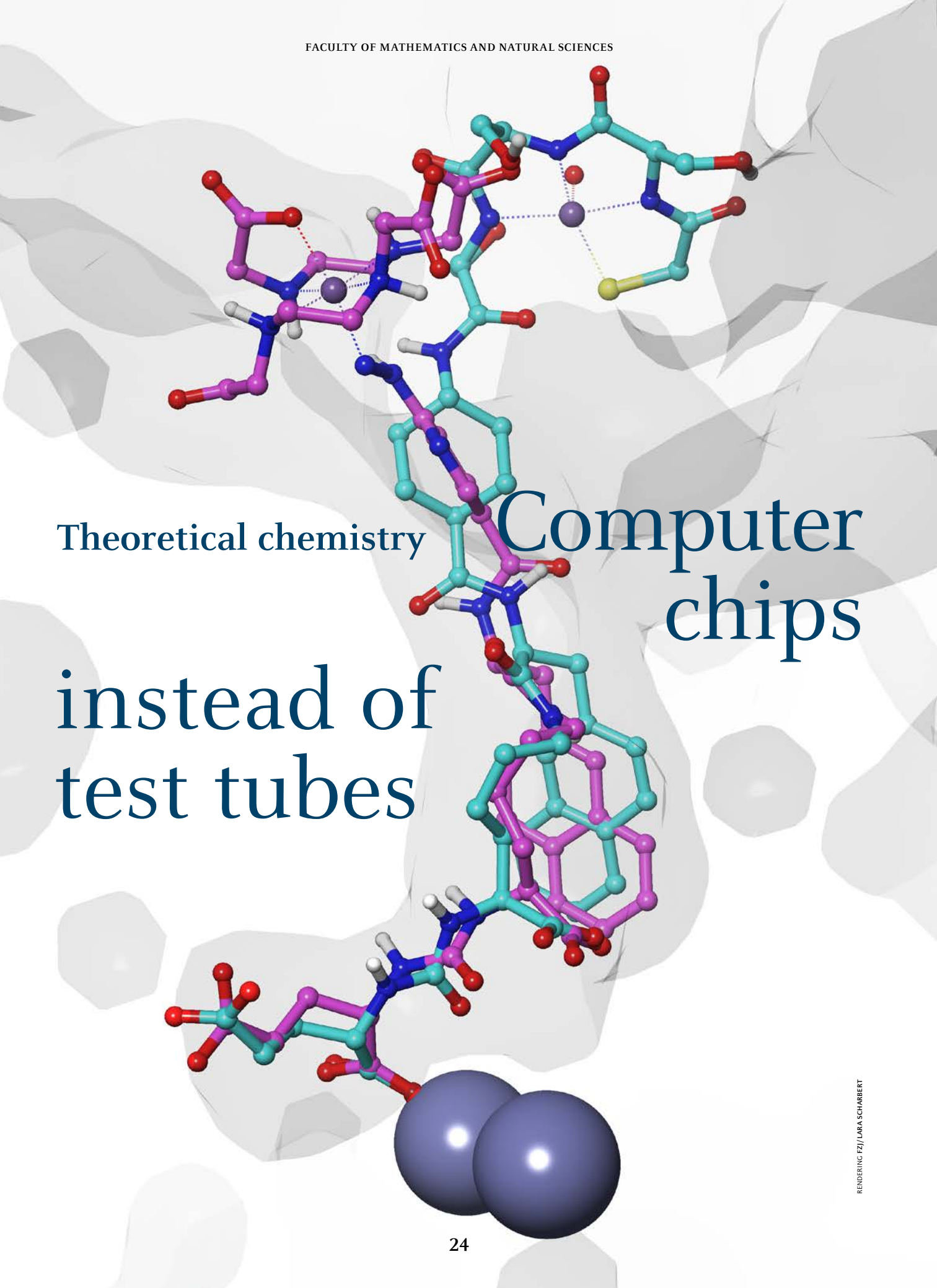
Daniel Johnen, a participant in the seminar and lecture, proposes that structural transphobia could be manifested e.g. in the differing practices in cosmetic and gender-affirming surgery, and intends to examine this in his master's thesis. In some countries, certain cosmetic surgery procedures are even permitted for minors with parental consent where they reinforce the assigned biological gender (for example the so-called "boob job" or other cosmetic "improvements"). Yet, when a transgender individual wishes to undergo such a change, there are higher barriers to overcome. The intention of legislators here is to protect patients, but the asymmetry vis-à-vis cosmetic surgery could express structural transphobia: significantly lower legal hurdles here than there, permission granted extremely quickly on the one hand, while excessive caution is displayed on the other hand.

## Space for discussions

There has been great interest in the lecture series and the stream, which can still be accessed via the website of the German Society for Analytic Philosophy (*Gesellschaft für analytische Philosophie e.V., GAP*). The seminar in Düsseldorf accompanying the event was also well attended. However, as the organisers self-critically admitted, the stream not only had advantages. "Some participants understandably found it challenging to ask questions or express criticism when taking part in a live stream and being recorded, in particular when addressing such difficult, controversial topics. That was a hurdle we underestimated somewhat. On the other hand, the discussions in the safe space of the accompanying seminar were also extremely stimulating and beneficial for us as teaching staff."

**MORE INFORMATION**

→ **The lecture series can be accessed via: youtube.com/gap-philosophie (German only) and on the HHU YouTube channel.**



## Theoretical chemistry

# Computer chips instead of test tubes

RENDERING FZJ/LARA SCHARBERT

Optimisation of medication for radiotherapy. A linker connects the radioactive element (top) with a ligand (bottom), which should in turn bind to a tumour cell (binding area marked in dark grey). To ensure the ligand only seeks out cancer cells, Strodel's team is optimising its structure in collaboration with Professor Giesel's team at University Hospital Düsseldorf.

BY ARNE CLAUSSEN

Professor Dr Birgit Strodel is a chemist. She heads the "Computational Biochemistry" group at Heinrich Heine University Düsseldorf and conducts research at the Institute of Biological Information Processing (IBI-7) at Jülich Research Center (FZJ). She uses computers to research topics such as the chemical processes behind Alzheimer's disease.

You will not find any test tubes, Erlenmeyer flasks or flickering Bunsen burners in Birgit Strodel's chemistry laboratory. The only flickering comes from the monitors, as she performs chemistry on the computer. Her research equipment includes the supercomputers at FZJ and the HILBERT high-performance computing cluster at HHU.

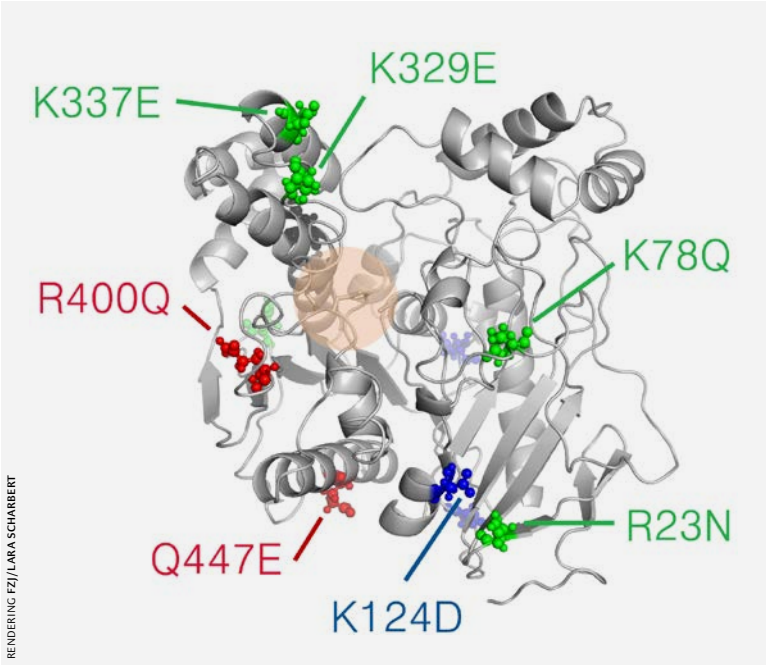
"Chemistry examines how substances combine with each other, which structures then form and what properties the products have. We analyse these processes on the computer using simulation programmes as our tools," says Professor Strodel, explaining the work of her group. "We use these programmes to calculate – with the help of the fundamental physical laws of mechanics and on the basis of force fields determined by means of quantum mechanics – how atoms move in molecules and the effect of the forces between them, which ultimately leads to the formation of compounds."

## Why do peptides form neurotoxic molecules?

One focus of her research: What happens when proteins or peptides clump together to form larger units and why does this happen? In particular, Strodel's team aims to understand the molecules, which play a role in Alzheimer's disease. These are the critical amyloid peptides (for short: A-Beta), which can clump together to form larger oligomers and then fibrils. Oligomers in particular are suspected of being neurotoxic: They contribute to the destruction of brain cells and thus play a role in the development of dementia. Strodel: "We are examining the processes behind this: How do the A-Beta peptides clump together to form oligomers and what causes this to happen? What do they look like? But above all: How do they destroy the cell membrane of the neurons?" The computer models depict each individual atom of a peptide and its environment, and calculate the timeline of the processes. For example, the dynamics in the environment of extracellular structures such as cell membranes and the cell matrix can be simulated.

PHOTO FZJ/RALF-UWE LINBACH

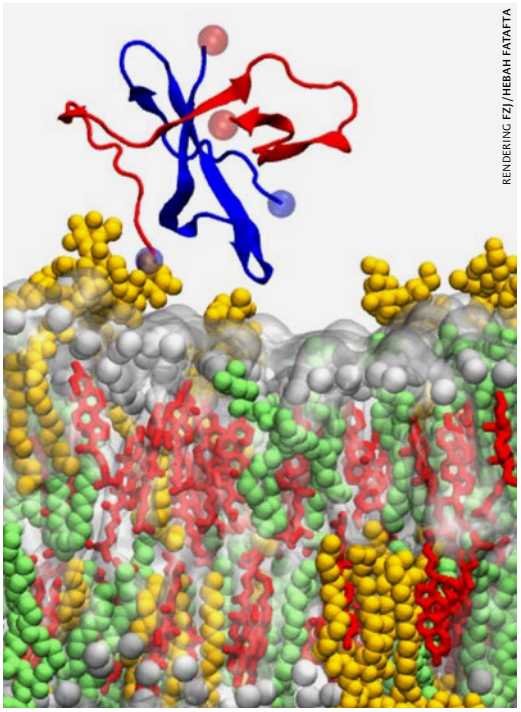
Professor Birgit Strodel with two of the high-performance computers at Jülich Research Center – in the foreground: JURECA, in the background: JUWELS.




RENDERING FZJ/LARA SCHARBERT

Together with the research group headed by Professor Dr Karl-Erich Jaeger, Strodel and Scharbert are examining how the design of enzymes can be improved so that they can function in organic solvents. Strodel: "These are often needed for chemical reactions in order to bring the substances involved in the reaction into solution." The image shows the examined enzyme; the actual catalytic reaction occurs in its active centre (orange circle). The marked areas are improvement suggestions resulting from the computer modelling.

How do A-Beta oligomers (top) destroy the cell membrane of neurons? The team headed by Professor Strodel is examining this interaction with their computer models.



RENDERING FZJ/HEBAH FATAFTA

"The limiting factors for our work are the size of the simulated area and the timescale of the biological processes. The larger and longer the simulations become, the more computing time we need – and that is limited!" On the current high-performance computers in Jülich – which are among the most advanced in Europe – it is realistically possible to calculate timescales of several to several tens of microseconds for structures comprising roughly 100,000 atoms. Strodel: "Around one to two weeks of computing time is needed for every simulated microsecond. However, it is important to look at significantly longer periods, as the natural processes that interest us often take longer. In this regard, we are pinning our hopes on the next generation of mainframe computers in Jülich and on methodological developments involving AI, which we want to tackle in collaboration with researchers from Jülich, Berlin and Oxford."

## Simulations are limited by capacity and time

> "The limiting factors for our work are the size of the simulated area and the timescale of the biological processes. The larger and longer the simulations become, the more computing time we need – and that is limited!"
>
> **Professor Birgit Strodel — chemist**

> "We want to use our tools to optimise the ligands in a way that permits better binding to – and ideally only to – the cancer cells. This can improve the search for and treatment of tumour cells throughout the body, while causing fewer side effects."
>
> **Professor Birgit Strodel — chemist**

Strodel's research is not only relevant for understanding Alzheimer's, but also other diseases caused in part by protein clumps, such as Type 2 diabetes or Parkinson's.

## Cooperation with University Hospital Düsseldorf

She is also working closely with other research groups at HHU and University Hospital Düsseldorf. In collaboration with Professor Dr Frederik L. Giesel from the Department of Nuclear Medicine, the computer chemists are seeking to optimise medication for radiotherapy. Radioactive medication already used successfully in tumour diagnostics and therapy forms the background to this. Special so-called ligands are an important component of such medication. These molecules have a very specific structure via which they can bind to surface structures, which are prevalent in cancer cells and rare in healthy cells. The radioactive element is then usually connected with the ligand via a so-called linker and thus localised to the tumour. The medication is usually administered as an intravenous injection.

Professor Strodel: "When the connected radioactive element decays, it emits characteristic radiation, which can be localised very precisely by means of special cameras. This enables even small metastases in the body to be detected." Depending on the type of radioactive element selected, the emitted radiation can also directly destroy tumour cells and can therefore be used for targeted therapy – striking right at the heart of the tumour, so to speak.

## Precisely tailored radiotherapy agents for tumour medicine

Strodel is optimising the design of the ligands for various types of cancer such as prostate or breast cancer. On the computer, she develops the appropriate chemical structure, which makes the ligand a perfect fit for the selected characteristic surface feature of the cancer cell. This ensures the medication precisely identifies and binds to the tumour cell.

"We want to use our tools to optimise the ligands in a way that permits better binding to – and ideally only to – the cancer cells. This can improve the search for and treatment of tumour cells throughout the body, while causing fewer side effects."

PHOTO FZJ/BERND NÖRIG

The research group of Professor Strodel (centre) based at Jülich Research Center and HHU.

Heinrich Heine University Düsseldorf


# *Haus der Universität*

The *Haus der Universität* is a place of dialogue and exchange between science and society – in the heart of Düsseldorf. After extensive renovations, the van Meeteren Foundation kindly allowed Heinrich Heine University to use the building at Schadowplatz 14 as an event centre and, since 2013, as a venue for scientific conferences and for presenting university research and teaching as well as academic culture. The *Haus der Universität* takes on a central function for Heinrich Heine University at the interface between science and the public. It is part of the higher-level public engagement strategy being pursued by the university, which actively furthers the exchange between the city of Düsseldorf, its citizens as well as society as a whole.

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