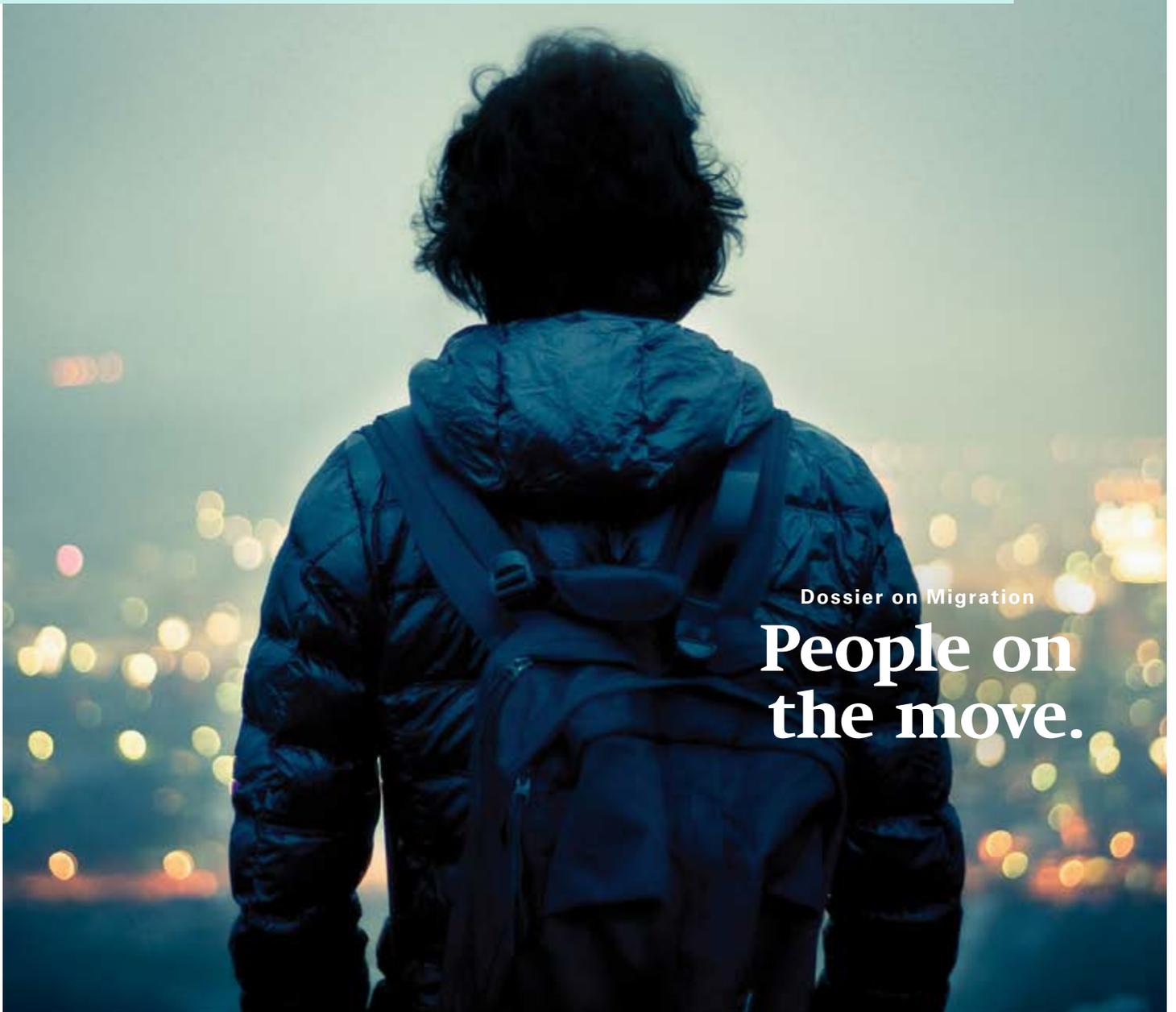




University
of Basel

UNINOVA

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Dossier on Migration

People on the move.

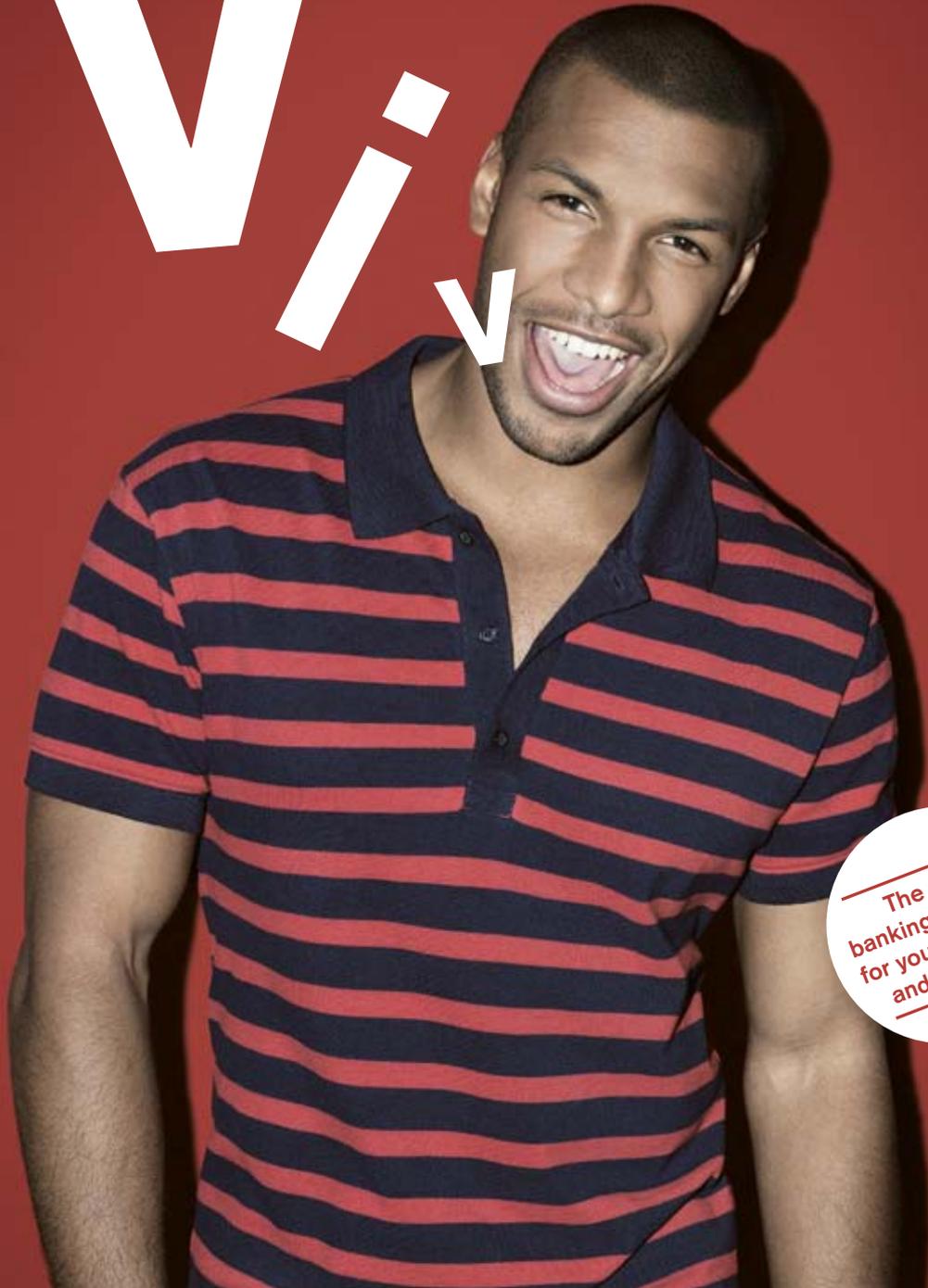
In conversation
Kunstmuseum and
University.

Debate
Gene editing?

Album
Between the
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Research
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this issue



1 Bilgin Ayata is Professor of Political Sociology at the University of Basel. In 2016, she organized a public lecture series on the subject of topographies of displacement and resistance, which is to be continued in 2017. In her current research, she also focuses on migratory flows following the upheavals in the Arab world. [Pages 20–21](#)

2 Jakob Merane established contact with refugees at the University of Basel as one of the initiators of the student project Open Auditorium. Some of these refugees feature in a series of portrait photographs to represent the focus of this magazine. The 23-year-old student is studying for a master’s in law and is a board member of the Swiss section of Amnesty International. [Page 23](#)

3 Thomas Jermann works full time as curator of the Vivarium at Basel Zoo and is also a passionate photographer. The zoologist completed his doctorate at the University of Basel, where he has organized events on biology and marine biology for over 20 years – including excursions to the intertidal zones of northern Brittany. [Pages 38–49](#)

Seeking refuge, emigrating, traveling.

Never before in the history of humankind have so many men, women and children left behind their homeland. They are searching for help and protection, fleeing wars, crises and famines, or looking for work. For many, the decision to go is not easy, as it means leaving their familiar surroundings, their family, their country, and their language. International migration also has consequences for the host countries, raising common questions, such as those about integration.

Migratory movements in times of globalization do create problems, but can also be considered as opportunities. They can bring about progress – and not just for those who are on the move, but also for our societies. For instance, those who have been persecuted can be given humanitarian aid, or a country can gain access to much-needed workers. Many issues can only be overcome with intensive international cooperation. This leads to new forms of economic migration. Some migrants now call themselves expats and are not necessarily even looking for a new homeland. Others travel to expand their horizons and learn new things – much like the students in Medieval Europe did by traveling from university to university, and like today’s Erasmus students.

Indeed, the arts and sciences thrive on international exchange. At the University of Basel there are researchers – some from other countries themselves – who study the various forms of migration. This issue introduces some of these researchers and their work.

We hope you enjoy the read!

Christoph Dieffenbacher,
 Editor, UNI NOVA



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The photographs in the dossier section of this magazine are portraits of refugees and asylum seekers matriculated at the University of Basel as guest auditors. Taken by the photographer Christian Flierl.

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The cover photo for this issue is from bbq/Getty Images.

Forage Fish Put up a Fight

Ganging up on giant worms.



It is rare that the Bobbit worm stretches so far out of the ocean floor in the Indo-Pacific – it usually stays buried up to its head and uses its long tentacles to lure prey fish into its vicinity. If a fish gets too close, the worm snaps its powerful jaws shut at lightning speed. However, fish of the species *Scolopsis affinis* have a way of defending themselves – as biologists at the University of Basel have observed for the first time. If a *Scolopsis*

comes across one of the worms – which can grow up to three meters long – or if it sees the worm catch a fellow *Scolopsis*, it responds by blowing sharp jets of water at the predator. The fish thus marks the hiding place of the worm, which rarely changes location. Other fish that see this happening rush over and blast the giant worm with a battery of water jets until they force it to retreat into its burrow. ■

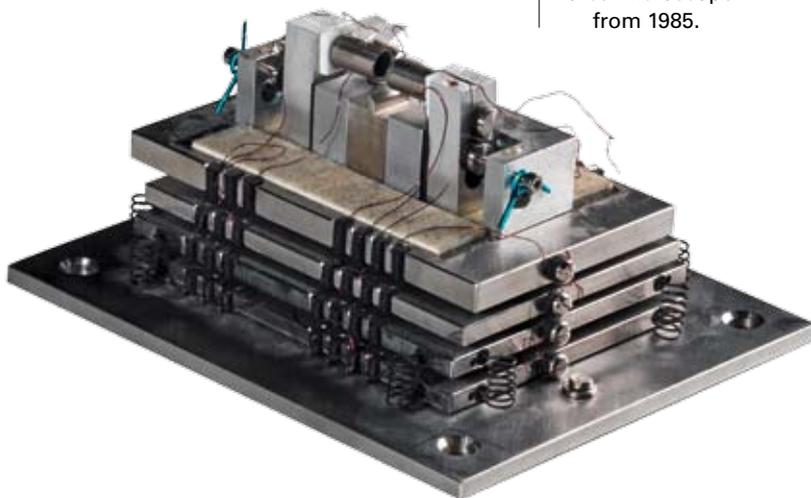
Atomic Force Microscope

Key to the world of the most minute structures.

This prototype of the world's first atomic force microscope is around 30 years old and on display in the Department of Physics. Professor Christoph Gerber, who now works at the Swiss Nanoscience Institute and the Department of Physics at the University of Basel, was one of the scientists who helped develop it. In recognition of their pioneering work, Christoph Gerber, Gerd Binnig and Calvin Quate were awarded the Kavli Prize in Nanoscience, which comes with 1 million US dollars in prize money. By inventing and developing the atomic force microscope, the three scientists ushered in a new era of research into the smallest structures of all. Thanks to their work, we can now produce highly accurate images of individual molecules and atoms – even those in non-conductive materials – and analyze and manipulate them. ■



Flexible tool: prototype of the first atomic force microscope from 1985.



Fossa Nivalis

Roman refrigerator.

When Basel archaeology students uncovered a four-meter-deep shaft in Augusta Raurica three years ago, they soon began to suspect that it might be a fossa nivalis, a structure that was packed with snow and ice each winter. From ancient sources, we know that people in Roman times stored snow and ice so that they could preserve perishable foods like meat, fish and cheese in the warmer months – or to keep things such as live oysters cool during transport. To test their theory, the archaeologists filled the shaft in spring with 10 cubic meters of snow and insulated it with a layer of sackcloth and straw, as described in ancient texts. Temperature and moisture measurements will hopefully now show whether it was theoretically possible to store snow in these types of shafts over the summer. ■

“The university and the Kunstmuseum are both products of this city’s open-mindedness.”

Josef Helfenstein, who became director of the Kunstmuseum Basel in September, hopes to develop links with the university. He is working closely with researchers from numerous disciplines to prepare a major Chagall exhibition, which will open in fall 2017.

Interview: Matthias Geering Photo: Lucian Hunziker

Josef Helfenstein has arrived. Although he has only been in office for just a few weeks when I interviewed him in late September, he spoke as if he had long been at home here in Basel. The art historian, who hails from Lucerne and who earned his doctorate in Bern, has spent a great deal of time getting to know the city, its residents, and the university. He spent eight months as a guest at “Eikones”, the National Center of Competence in Research (NCCR) Iconic Criticism, and clearly enjoyed his time there.

UNI NOVA: Mr. Helfenstein, you officially took office as director of the Kunstmuseum Basel on September 1 – but you’ve been in Basel since the start of the year and spent some time at “Eikones” to prepare for your new position. You seem to like working closely with the university.

JOSEF HELFENSTEIN: I was very privileged to be able to start my time here in Basel with eight months at “Eikones”. It was very moving to work in the university’s oldest building, at this special place in the heart of the city on Rheinsprung where Friedrich Nietzsche once taught. I was in contact with both young and well-established researchers. We’d often spontaneously meet for a coffee or a meal and spend the time discussing joint projects. I made a conscious decision to approach my new role as a Basel museum director via the university because I want to bring the scientific and scholarly expertise of the university and of the Kunstmuseum closer together. I believe that there is enormous potential for synergies there.

UNI NOVA: You once said that your previous institution – the Menil Collection in Houston – had a humanist dimension.

Now you have moved to a city that also claims a humanist tradition. How do you see Basel and the Kunstmuseum?

HELFENSTEIN: I see the city of Basel and the Kunstmuseum as being very much in a similar situation as Houston and the Menil Collection – and that’s ultimately one of the main reasons why I decided to come here. Interestingly, the founders of the Menil Collection were our “neighbors” in a way: Dominique de Menil was born in Alsace into the Schlumberger family, which ranked among France’s intellectual elite at the time. When the Second World War broke out, Dominique and her husband, impoverished aristocrat Jean de Menil, fled to Houston. What they created there is not just a museum – it’s a kind of utopia. The de Menils created a utopian neighborhood, complete with public parks with old trees, spiritual places like the Rothko Chapel, and



“I want to bring the scientific and scholarly expertise of the university and of the Kunstmuseum closer together.”

Josef Helfenstein

“Basel’s humanism is built on a history that begins with Erasmus, moves on through Beuys, and continues into the present. Basel is a city of openness and foresight. It’s a Swiss city, but also very much a European city.”

Josef Helfenstein

incredible architecture such as the museum designed by Renzo Piano – and all in a modest area that’s home to students, artists, and people on low and middle incomes. It’s a place of vibrant diversity and tolerance. It has a very special quality of life and a humanist ethos that greatly impressed me from the outset. The de Menils also campaigned against segregation and for education and social justice – often through discrete projects in disadvantaged and primarily non-white neighborhoods.

Basel’s humanism is built on a history that begins with Erasmus, moves on through Beuys, and continues into the present. Basel is a city of openness and foresight. It’s a Swiss city, but also very much a European city. It is no coincidence that Switzerland’s first university was founded here. Important peace talks have been held here, as well as major congresses and councils. For centuries, people in this city have been seeking solutions to complex problems. The university and the Kunstmuseum are both products of this open-mindedness. For me, this incredible history is a kind of compass that I can always check as I manage the museum.

UNI NOVA: The eight months at “Eikones” seem to have inspired you. Did they result in any specific projects?

HELFFENSTEIN: Yes. We quickly realized that the exhibition of Chagall’s early work, which we’ll be showing in fall 2017, would be a good opportunity for working closely with the university. With guidance from Professor Ralph Ubl, we quickly put together an interdisciplinary working group consisting of researchers from art history, history, Jewish studies, Eastern European studies and linguistics. We now meet regularly to think about the exhibition and dis-

cuss new approaches. We keep the members of the group up to date so that they know, for instance, which loan items will be coming to Basel. We discuss the content of the exhibition, as well as the corresponding publication and the program. It’s amazing how many ideas can flow into a project in this way.

UNI NOVA: You’re focusing the exhibition on the years 1911 to 1919, and are describing this period as Chagall’s “breakthrough years.”

HELFFENSTEIN: Yes. I believe these were Chagall’s defining years. First, there was his arrival in Paris in 1911 as a newcomer who had no knowledge of the language, had never been to the West before, and was dreadfully homesick for his Russian-Jewish roots. This was followed by three incredibly productive years in Paris, during which – without realizing it himself – Chagall became one of the most distinctive artists of the avant-garde. In summer 1914, when he was on his way to Russia, he opened a key exhibition of his work in Berlin that would make him famous in Germany and Russia. He then continued on to Russia to marry his fiancée and then return with her to Paris – at least, that was the plan. But then the First World War broke out and Chagall was forced to stay in Russia. He began

focusing his work on the roots from which he had already distanced himself. He painted the poverty of the aniconic Jewish Shtetl world – all from the perspective of an avant-garde artist painting with a new vocabulary. Thanks to Olga Osadtschy, an “Eikones” doctoral student who is writing her thesis on ethnographic photography in Russia during the First World War, we will be able to supplement Chagall’s paintings with photographs taken by a Jewish artist who was unknown in the West but who Chagall himself knew.

UNI NOVA: You completed your doctoral studies in Bern, worked at a university museum in Illinois, and want to foster exchange with the university here. Were you also in contact with universities in Houston?

HELFFENSTEIN: When I started at the Menil Collection, collaborations with universities were almost non-existent. Then we set up a fellowship program with Rice University in Houston. Fellowships were awarded to one graduate student at a time, and allowed the researcher to spend a year working at the museum and on different projects. We also ran a joint lecture series with Rice. And with the University of Houston, we organized a position for talented students, as well

as various joint events. But our closest ties were to the University of Texas in Austin, which has an outstanding art history department. We worked with the head of the department, Professor Richard Shiff, to develop a program for doctoral students. I was responsible for fundraising, and we were able to offer two-year fellowships. As part of these post-graduate fellowships, young researchers used the Menil Collection holdings and then organized a symposium at the end of the two years. It was an incredibly stimulating experience for both the researchers and us as an institution. I believe that, as a museum, we have an obligation to help young, talented researchers launch their careers. When I arrived in Basel, I was delighted to find that “Eikones” functions on a similar principle.

UNI NOVA: At the Harvard Art Museum in Boston, some of the exhibition rooms are curated by young researchers from Harvard University. Could you imagine arranging a similar collaboration between the Kunstmuseum Basel and the art history subject area at the University of Basel?

HELFENSTEIN: I think it would make good sense – and setting up that kind of thing isn’t rocket science! However, it’s important not to underestimate the work involved. The young researchers need close supervision since they will lack practical experience in things like handling the objects properly and dealing with the logistics and transport of loan items based outside of Switzerland. However, this is precisely this kind of experience – seeing how a museum works – that leads to very valuable insights for young researchers. It could encourage them to choose a path that takes them into the world of museums,

or they might develop an entirely new relationship to art or research.

UNI NOVA: The core tasks of a museum include collecting, preserving, documenting, researching, and communicating cultural objects. Until now, Basel has tended to do preservation behind closed doors. Other museums offer their visitors insights into this important task by making restoration studios accessible and thus creating a greater awareness for the process.

HELFENSTEIN: I’m glad you mention that, because we set up something in Houston that we’re very proud of. In collaboration with the Museum of Fine Arts in Houston, we created an assistant professorship in materials science in the chemistry department at Rice University. An outstanding postdoctoral restorer now holds that position and is doing research in the field. If we were to transfer this to Basel, it could mean that Schaulager, the Kunstmuseum Basel, and the University of Basel would join forces to find a sponsor that would allow us to establish materials science firmly as a subject at the university. I’m sure we could do that in Basel.

UNI NOVA: Would the research then also be visible in the museum?

HELFENSTEIN: That would depend on how we incorporated a position like that into our museum work. In Houston, we organized lectures and symposiums that presented the findings. During one of the symposiums, for instance, the assistant professor and a researcher from the natural sciences proved how Magritte cut up some of his canvases and that the various parts are now spread across the world as individual works. We’d never have known that if the works hadn’t been scientifically analyzed.

UNI NOVA: The Harvard Museum in Boston regularly focuses on restoration projects. This was the case with Mark Rothko’s Harvard Murals (2014/15), a research project that used projection to restore the original colors to Rothko’s murals. The Digital Humanities Lab at the University of Basel was involved in the project. Will there be more of these types of collaboration in future?

HELFENSTEIN: I’m in very close contact with the Harvard Art Museums, the Whitney Museum of American Art, and the Menil Collection. For around 15 years now, these three partners have been running the Artists Documentation Program, which asks prominent artists about their working techniques and materials. These interviews are then transcribed, archived, and made available to art historians as oral history. The Kunstmuseum Basel will become part of this network in the future, and I can well imagine that we will incorporate the University of Basel into that. ■

Josef Helfenstein

has been director of the Kunstmuseum Basel since September 2016. In 1991, he earned a doctorate from the University of Bern with a thesis on Meret Oppenheim and Surrealism. From 2004 until 2015, he was head of the Menil Collection and Foundation in Houston (USA).

Topping out, blog, and practical rankings.

English Blog

Welcome to Sci Five.

Sci Five, the new English-language blog by the University of Basel, is a place for young researchers to write about exciting projects, special events in the scientific world, and unusual life paths. New blog articles are to be posted once or twice a month under the guidance of postdocs, doctoral students, and students to provide an interested international audience with deeper insights into the University of Basel. They will be published on the Medium platform. Once readers have registered, they can comment on articles and sign up to receive notifications about new blog posts. ■

medium.com/sci-five-university-of-basel



Biozentrum

Flagship building stands tall.

The new Biozentrum's tower can be seen for miles around. Some two years after the first stone was laid, the structure and façade of the new 73-meter-high building are now complete. Work on the laboratories, lecture halls, and offices is set to be completed within one year, after which the building and technical facilities will be tested.

The new building is the largest construction project to be carried out jointly by the Canton of Basel-Stadt and the Canton of Baselland and reflects the importance of the life sciences industry for the region. In September 2018, the new Biozentrum will become the first component of the university's future life sciences campus. On its 16 upper floors and three basement floors, around 600 employees and 800 students will benefit from working in an environment designed for doing research at the highest level. ■



A bird's eye view of the new Biozentrum:
youtu.be/dHuJ788gqk4

Historical Documents

Five million francs for Basel editorial projects.

The Swiss National Science Foundation is funding seven editorial projects at the University of Basel to the tune of five million Swiss francs. The spectrum of projects ranges from historical source editions to the writings and letters of fascinating historical characters. The complete works of the composer Anton Webern (1883–1945) have received an award of 1.3 million francs, for example. The historical-critical musical scores cover works that Webern himself published (including their unpublished versions), unpublished contemporary scores, compositions from his youth and student days, as well as fragments, sketches and adaptations. A further 1.1 million francs will support the production of the complete works of Basel cultural and art historian Jacob Burckhardt (1818–1897), stretching to 28 editions and already three-quarters finished. This will enable the publication of three volumes covering Burckhardt's lecture notes from collections on the "History of the Middle Ages" and the "History of the Modern Age". ■

Rankings

Ambiguous rankings.

Rankings are useful: They organize universities around the world into easy-to-understand ranking lists, help students choose where to study, and are used by the universities themselves as a practical marketing tool (provided they score well). But rankings also have their weaknesses: They reflect only one part of a complex reality, favor Anglo-Saxon institutions that focus on the natural sciences, and do not adequately reflect teaching experience.

This year's rankings were just as ambiguous for the University of Basel: The university lost ground in two of the three main rankings, but managed to return to the Top 100 in the Times Higher Education ranking – primarily on the basis of its outstanding research achievements. By contrast, its reputation scores, which are based on evaluations by selected academics, were unsatisfactory – indicating a need for better international visibility. ■

Rankings compared: unibas.ch/rankings

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People on the move.

Photos: Chrisitan Flierl

Fleeing from war and persecution, seeking work or simply commuting between countries or continents: Never before were there so many people in transit. Migration is considered to be one of today's greatest challenges.

Page 17

Migration to Europe is no longer an exception, but rather an everyday standard occurrence.

Page 24

Highly skilled Africans and Swiss abroad.

Page 28

Immigration and job security – the economy benefits.

Page 30

Religion is an important moral compass for many migrants.



— **Kargyutsang Tenzin Kunsel** —
Tibet, Economics and Law



Migration holds the key to the future.

Text:
Walter Leimgruber

The idea of society as a stable structure providing those born into it with a clear framework of shared belonging while demarcating them from “others” is a concept which only arose with the modern nation state – and it is already obsolete.

Only a small percentage of the world’s population can be statistically defined as “migrants” – people who leave one country to live in another. However, in wealthy societies such as our own the proportion is significantly higher. Around a quarter of Switzerland’s inhabitants do not hold a Swiss passport; over a third come from migrant families, and around half have at least one foreign-born grandparent. Almost half of all marriages are binational. Accordingly, the idea of the nation as a homogeneous group enjoying citizenship rights based on a common origin is becoming less and less pertinent.

Meanwhile, migration has long ceased to be an exceptional phenomenon, having become a commonplace part of everyday life. However, acceptance of this development – and the fact that Switzerland, along with the rest of Europe, has become an immigration destination – remains lacking among large parts of the country’s society and political class. As a result, there is no coherent migration policy in place to set the course for future developments. Instead, we simply muddle along from one initiative to the next, entangling ourselves in a hopeless web of contradictions while hoping that the problem will eventually go away. Of course, this is not going to happen. On the contrary: migration policy holds the key to the future.

Democracy

The promise of the nation state is the unification of society, politics and territory: bringing the social, political and geographical spheres into alignment. However, recent decades have seen a rapid proliferation of processes that straddle national borders,

resulting in a growing disconnect between the social sphere and its geographical setting. As physical spaces are brought closer together by technology and communication, social spaces are becoming more complex, overlapping so that even the smallest space is home to the most diverse ways of living.

At the same time, social spaces are expanding, with the result that they no longer correspond to continuous geographical units. Distant communities can give rise to a shared social space. However, if social interaction is possible regardless of geography, then a shared place of residence ceases to be a necessary condition for shared political rights. Rather, we need to think about how citizenship models above and beyond the idea of the state as a merely spatial entity might function.

When large numbers of citizens no longer live within a state’s territorial boundaries, but all over the world, the result is a global network which can be leveraged for economic, cultural or political collaboration. From this perspective, the state is no longer an association of people who inhabit a particular territory, but increasingly one of people scattered over the entire world. Accordingly, rather than being characterized in spatial terms, the concept of citizenship must be redefined as membership of a network. This raises the question of whether the channels of democratic participation must also be rethought: In the future, will people exercise their political rights where they live, or in the country they are nationals of? Or must we develop new criteria for co-determination altogether?

Education

The Swiss educational system is praised as exemplary. Nevertheless, fundamental changes are needed across all life phases, from early childhood and school age to professional and adult life. We need systematic early support for the acquisition of cognitive abilities, learning motivation and perseverance, as



Walter Leimgruber is head of Cultural Anthropology and European Ethnology at the University of Basel and President of Switzerland's Federal Commission on Migration.

these are the areas in which children are most likely to fall behind with little chance of subsequent recovery. We need a school system which avoids making premature selections and supports the gifted rather than penalizing the less gifted.

Finally, we need an educational system which, instead of focusing on school-leaving examination and apprenticeship statistics or the proportion of math and language lessons, tackles the problem of imparting up-to-date knowledge in a constantly changing world. This calls for new educational models with a lifelong approach and closer interplay between theoretical and practical knowledge. What is more, it requires a clear focus on creative and innovative thinking.

Even in a highly developed country such as Switzerland, there are over 600,000 adults – including many migrants – with no education beyond compulsory schooling. This highlights how the industrial age has provided (and continues to do so, for now) employment for large numbers of people with no vocational qualifications. However, these people could soon find themselves in need of better qualifications as many of their tasks are outsourced or automated. A broader skillset would give them much better prospects elsewhere.

Values

For some, it goes without saying that migrants have an obligation to accept local values, to assimilate. Others see enforced integration as an obsolete and one-sided imposition. Moreover, the number of people living multi-locally as highly mobile global nomads is on the rise. But what does integration policy mean for those who do not live in a single location which they can call home?

Yet a society without an underlying orientation – not in the sense of a mainstream culture, but of a constitutionally-defined framework – cannot operate. Integration must also mean participation since consensus can only be achieved in collaboration. There will, however, never be a state of equilibrium in which everyone considers the prevailing values to be the right ones. Rather, discussion and debate form a crucial part of this consensus and must be protected as key tenets of our society.

To a large extent, life as we know it in Western societies is only possible thanks to the accomplishments of the Enlightenment. These accomplishments, attained at great cost in the face of extreme adversity and numerous setbacks, must be protected against those who value the will of the people over observance of basic rights and conventions, as well

as against those who claim special rights or special treatment on the grounds of their traditions and religion.

Welfare state and demography

In a seminal 1950 essay, Thomas H. Marshall wrote that since the emergence of the welfare state, civil, political and social rights have formed the three constituent parts of national citizenship. Today, however, the allocation of these rights is more complex. Political rights are granted only to citizens, while civil rights – which are increasingly synonymous with universally protected human rights – are granted to everyone: freedom of expression, of assembly and of opinion are not dependent on a particular legal status. Social rights, meanwhile, are accorded to a group of people who possess a particular residency status. All of these rights were originally created with citizens in mind, but now apply to many other people besides.

This state of affairs has given rise to an intermediate status between that of (national) citizen and citizen of the world: the status of “denizen”, or resident. These terms imply automatic access to social rights after a certain period of residency has elapsed. Meanwhile, the key decisions are made by citizens. Politically, this cannot work in the long term. Social policy in particular is already faced with enormous challenges arising from demographic change.

What is more, concerns at the welfare state level have brought about fundamental changes in political affiliation. Surging migration has caused large parts of the working classes, fearful of losing their own position in society, to abandon the left-wing parties which fought to strengthen the welfare state in favor of anti-migration right-wing populists.

Backwards into the future?

Migration – the most visible aspect of globalization – has caused economic and social conditions to evolve at an as yet unprecedented rate. People in Europe perceive this as a threat, both at an individual and collective level. However, the notion that it is possible to turn back the clock, much vaunted by anti-immigration parties and organizations, is doomed to failure. What we need are strategies whereby a hitherto wealthy and successful nation such as Switzerland and a hitherto powerful and influential continent such as Europe can implement their values and realize their potential in a globalized world. The key to such solutions lies in migration policy. ■



— **Mukhtarzada M.** —
Afghanistan, Economics

The fall of the border guards.

Political sociology professor Bilgin Ayata explains the surge in migration toward Europe largely as a consequence of the Arab Spring. In cozying up to Turkey's Erdogan regime over the refugee crisis, the European Union has shown that it learnt nothing from previous events in Libya and the Arab Spring, she argues.

Text: Irène Dietschi



Bilgin Ayata

is assistant professor of political sociology at the University of Basel. Her research focuses on the transformation processes that are influenced by migration, conflict, social movements, and the politics of memory.

Events in Turkey and their implications for the European Union have unfolded at such a pace this summer that it can be hard to keep track: “Attempted coup in Ankara – thousands arrested”, “EU refugee deal with Turkey at risk”, “Erdogan demands visa-free travel”. For Bilgin Ayata, Professor of Political Sociology at the University of Basel, this is hardly a surprising development. A German researcher with Kurdish roots who has been teaching and conducting research in the field of political sociology as an assistant professor since August 2015, Ayata has already made a name for herself with her incisive remarks in the media. She believes that EU relations with Turkey are following a pattern she has seen before: “Europe is making exactly the same mistakes with Erdogan as it did with the Libyan leader Muammar Gaddafi five years ago,” she says. “In an attempt to control migration, it is pandering to an autocrat.”

Fallout from the Arab Spring

Ayata traces many of the current migratory flows toward Europe back to the Arab uprising of 2011. Together with sociologist Sarah Schilliger, she recently organized a hugely popular lecture series on the issue at the university entitled “Topographies of displacement and resistance”. Ayata’s verdict on European migration policy in light of recent events in Turkey is sobering: “The EU has learnt nothing from the Arab Spring.”

Returning to that time five years ago, the political landscape of North Africa and the Middle East was plunged into disarray as millions of people rose up against repression and human rights violations, in defiance of the prevailing despotism and authoritarian power structures. In Egypt, rebels toppled the long-standing ruler Hosni Mubarak; in Tunisia, head of state Zine El Abidine Ben Ali was forced to flee the country, while Libyan dictator Muammar Gaddafi was shot. The unrest spilled over into Syria, where crowds took to the streets in Damascus in protest against president Bashar al-Assad, who suppressed the insurgents with brutal force. Ever since, Syria has been in the throes of a civil war which is reducing the country to rubble and ash, forcing countless thousands to flee their homes.

Elsewhere too, little remains of the initial revolutionary euphoria, and not a single state has succeeded in establishing democratic order in the wake of the turmoil. Nevertheless, the Arab Spring is widely hailed as an historic watershed which brought about lasting change in the Arab world and beyond.

Neighborhood policy against immigration

Ayata sees the watershed in a very different light, with consequences – including for Switzerland – which, while clearly felt, are rarely acknowledged: the Arab Spring brought with it the collapse of the EU border regime in North Africa and the Middle East. “Mubarak, Ben Ali, Gaddafi – besides being na-

tional dictators, were also Europe's border guards," she explains. From 2003, the European Union imposed its new "Neighborhood Policy" on the surrounding countries. While the policy's purported goal was to promote democracy and cooperation between the expanded EU and its neighbors, "Europe's aim was also to block immigration from African countries," says Ayata.

This task was something the EU and its member states were prepared to pay handsomely for: Muammar Gaddafi is thought to have received some 5 billion US dollars in exchange for controlling the EU's Mediterranean borders from Libya, keeping refugees from the Maghreb and the Arab world at bay. "For all these years, Libya served as an off-shore reception facility for people trying to reach Italy and Europe via the Mediterranean," says Ayata. Gaddafi's fall was followed by a stream of refugees passing through Libya and seeking to cross the Mediterranean in boats.

In 2011, Brussels conceded that the EU's Neighborhood Policy might have helped support authoritarian structures in the Arab region. However, the admission did nothing to prevent the EU from reaching a deal with Erdogan similar to the agreement with Gaddafi, in the hope that Turkey would retain as many refugees as possible within its territory. Under the refugee deal celebrated with the EU in March this year, Turkey will eventually receive 6 billion euros to this end. In Ayata's view, the deal with Erdogan is indefensible. "Human rights are being sacrificed for short-term political interests," she says. "The EU is giving the Turkish president free rein to wage a brutal war against the Kurds, while increasingly stifling democratic structures in the country."

Academics seek exile

What is more, as with Libya, the EU is violating its own asylum guidelines, Ayata adds. These guidelines clearly specify the conditions under which refugees can be repatriated to a third country, as they are currently being from Greece to Turkey: The third country must be a signatory to the UN Refugee Convention. "However, Libya never signed the convention, while Turkey only signed the first version of 1951 – which applies only to refugees from Europe – and not the subsequent 1967 protocol." In other words, the almost 3 million Syrians and other refugees from Asia or Africa do not currently have refugee status in Turkey.

“Europe is making exactly the same mistakes with Erdogan as it did with the Libyan leader Muammar Gaddafi five years ago.”

Europe's support for an autocratic leader will once again prove to be a mistake in Turkey's case, Ayata concludes. "Decision-makers are clearly unaware of the boomerang effect their policies will have." The draconian measures taken by Erdogan in the wake of the attempted military coup in mid-July are indicative of a development which Ayata had already predicted back in October 2015: Turkey will soon once again be producing refugees of its own. These will include the roughly 300,000 Kurds which Erdogan drove from their homes and who are presently classified as "internally displaced people", as well as the many academics and critics of the Erdogan regime who are waiting for a chance to leave the country.

Asked how the EU can learn from the past, and what form an honest migration policy might take, Ayata replies: "There is an urgent need to start looking at migration as an opportunity rather than as a problem." She points out that Europe's prosperity is the result of centuries of slavery, colonialism and violent exploitation of resources – something all too easily forgotten. "A migration policy characterized by openness rather than exclusion could go some way towards atoning for this past. Europe must allow much higher levels of legal immigration, and bring its policies into line with reality," she says. This includes a shift in public opinion to do justice to the plurality of migrants – their ideas and struggles, their history, their individual characteristics. The alternative – to wall ourselves off from the outside world and criminalize immigration – is doomed to fail, Ayata believes: "People will fight back, and still come all the same." The belief that migration – and therefore people – can simply be controlled is an illusion, she concludes. ■





Reem Malaiky
Eritrea, Psychology

Refugees at the University

Open Auditorium.

Since early 2016, the student association “Open Auditorium” (Offener Hörsaal) has enabled refugees with an academic background who live in the region to attend lectures and language courses.

The auditor program encompasses almost 500 courses, for which the fees are covered. Volunteers are on hand to help with any questions or problems the guests may have regarding their studies. The project, which currently has around 20 participants, aims to encourage social and cultural exchange with students and lecturers.

60 years ago, the University of Basel assisted refugees during the Hungarian uprising: Students collected clothes, food, medicines, and money, which they transported through Hungary in trucks. Many Hungarians – including students – were taken in by the university and are commemorated on a plaque in the Kollegienhaus. Today, the “Open Auditorium” project aims to draw on this humanitarian tradition and contribute to the integration of academics. ■

offener-hoersaal.ch/indexen

Highly skilled migrants in Senegambia and Switzerland.

Text: Pascal Schmid

Diplomats, academics, scientists and professionals: Many well-educated people live on different continents and experience foreign cultures. The doctoral researcher Khadeeja “Haddy” Sarr is examining life experiences, transnational activities and decision-making of highly skilled migrants from Senegambia living in Switzerland and Swiss migrants living in the Senegambia region.

In today’s contemporary debate on migration, talk is of steps to halt “mass immigration”, while the media runs stories about “border controls, floods of refugees, asylum seekers and low-skilled migrants”. There is little discussion on the role of skilled immigrants from Africa. As Sarr points out, “usually when people here talk about African migration they think about refugees, border controls and incidents of crime. So events such as the Paris attack or New Year’s Eve in Cologne last year come to dominate the debate on African migration.” Through her research work, which looks at the life experiences of highly skilled migrants from Senegambia and Switzerland, Sarr hopes to correct this distorted picture of African migrants which is reduced to stigmatized ideas of low skill levels and high criminal potential.

“In terms of migration research, the issue of migration and Africa is often discussed at a very political level,” Sarr observes. That is why it is important to highlight other areas. More attention is now being paid to highly skilled migrants, but the debate quickly becomes focused on the “brain drain vs. brain gain” – the loss and gain of knowledge and skills caused by the emigration of well-educated people, and its impact on African societies. Sarr, by contrast, is extremely interested in the migrants themselves. She wants to discover how their particular experiences affect their identity and their actions.



Khadeeja Sarr grew up in Sweden as the daughter of migrants and attended university in the USA and England. She is a doctoral researcher at the Institute for Cultural Anthropology at Basel University and the Centre for African Studies in Basel.

Identity and globalization

Sarr has a long connection with the topic of migration, partly because of her own life story. Her parents moved to Sweden from the Gambia in the late 70s. Her father went to university in the USA and settled in Sweden, where he worked as an auditor for a major bank. She herself was born and raised in Sweden, went to university in the USA and England, and later worked in Senegal. “I grew up in Swedish society, but Gambian culture was an important part of my upbringing. As a child, I felt neither fully Swedish nor fully Gambian. It was not until I went to high school that I met children of migrants from all over the world. We had similar experiences and a shared sense of not quite belonging anywhere,” explains Sarr.

The cultural identity of second-generation migrants became the subject of her master’s thesis. And her doctorate also focuses on a similar topic. Sarr came to Basel because the Centre for African Studies provided her a setting within which she could explore Africa’s relationship with the wider world and globalization. Here, she was able to become involved in an SNSF-funded project, run jointly with the Department for Cultural Studies and European Ethnology, on the migration and life stories of highly skilled migrants.

Sarr is working on one of two case studies that make up the project. Her research is not based solely on the life stories of highly skilled migrants from Senegal and Gambia in Switzerland – it also focuses on skilled Swiss people living in the two West African states. “Comparing two groups is interesting from a methodological point of view and offers added value, as it provides an additional perspective on the issues I am researching,” Sarr says. “The number of people moving from north to south is increasing drastically. Yet, there is still lack

of research on professionals moving to Africa for work purposes. In the age of today's globalization, it is likely to become even more significant." In the second case study, her colleague, H el ene Oberl e is writing a doctorate on highly skilled Israeli migrants in Switzerland and Swiss people in Israel.

Narratives of migrants

The life stories on which Sarr's research is based are taken from interviews. "I talk to my interviewees about their experiences and transnational activities. It is important to analyze narratives and the way in which they talk about their lives." This means allowing interviewees to tell their own stories and analyze their own biographies. Sarr gives the example of the term "expat". "Most of the Swiss migrants see themselves as expats, only one Swiss person described himself as a highly skilled migrant. Sarr concludes that he might not have identified himself as an expat due to the fact that he had lived in Senegambia for over 15 years and founded his own business. Most Swiss interviewees were there on temporary contract and lived there for shorter periods". By contrast, only one of the Senegambians Sarr intended to interview described himself as an expat: "A Senegalese diplomat in Geneva insisted on being called an expat and not a migrant – even a highly skilled migrant." Sarr, explains that there seem to be a negative connotation with the word migrant, whereas the term expat is associated with a more privileged and powerful position.

So far, Sarr has conducted interviews with eleven Senegalese and Gambians in Switzerland and nine Swiss people in the two West African states; more interviews are in progress. Sarrs interviewed Senegambians who are diplomats, academics and professionals working in the finance and banking sector; the Swiss are diplomats, employees of NGOs and international organizations, researchers, doctors and entrepreneurs. So far, her study has also revealed a few interesting but non-surprising transnational activities regarding cash flows to families back home.

Cash flows and career planning

Sarr says that it is already clear that some themes are, as expected, more relevant to one group but of little or no relevance to the other. For the African migrants, for example, "remittances" – transferring money back home – are a key issue; this specifically

applies to migrants from Senegambia. This is not only about money – it also symbolizes their identity and moral obligations. "One can hardly speak about African migrants without mentioning remittances, is such a significant part of their lives. Most of her interviewees revealed that they frequently send money home to their families: Perhaps your nieces and nephews need money for school fees, or work is being done on your parents' house, or someone is ill, or there is a wedding or funeral coming up. Whether and how much money is sent, and to whom, tends to be a collective decision based on family strategies."

Another issue that has a higher priority for migrants from Senegal and Gambia with good jobs is residency status. "Generally, their aim is to secure long-term residency status or even citizenship. Often they envisage staying in Switzerland or Europe throughout their professional career." Equally, this is also often a collective decision: "Remittances are also an important factor here, together with the possibility of helping relatives to access education in Europe." For Swiss people in Senegal and Gambia, by contrast, residency status is not a big issue – they are more "on the move". For them, it is more about having the opportunity to further their careers and the opportunity to work in different countries, while their stay in the host country is temporary. "Most of them already know when they will move on to another country or back home."

However, Sarr has also identified some similarities between highly skilled migrants from Switzerland and Senegambia. Although both groups are relatively small in their host countries, they stand out in their host society due to their skin color and often their religion – the majority of Senegambians are Muslims. Interestingly, both groups have explained that they face hostility and at times feel discriminated against, although in very different ways: "Some of my Swiss interviewees were confronted with the stereotype that portrays Europeans in Africa as powerful and successful. The positive image of the successful European worked against them. Senegambians in Switzerland felt that they had to put in twice the effort – but this time it was in order to rid themselves of a negative image of African migrants. By highlighting these issues, Sarr hopes to correct this negative image but the issue remains a significant aspect of her research. ■

Hadi Soroush
Afghanistan, Computer Science



Careers on the move.

Increasingly, highly qualified professionals live and work in different locations. Cultural studies expert Katrin Sontag has examined mobility among business founders, and believes it is time to revise our concept of migration.

Text: Samuel Schlaefli

Bernd, in his mid-forties, runs a major IT firm based in Switzerland. Over the last few years he has founded several companies and lived in five different countries. Every Friday evening, he boards a plane to Scandinavia to spend the weekend with his family. Early Monday morning he heads back to Switzerland. In between, he often flies to the US or Asia on business. Around a third of Bernd's working time is spent on the move. He is one of a growing number of highly qualified, highly mobile entrepreneurs whose work and private life span various countries – or even continents. The geographical focus of their lives is merely temporary, shifting to meet the requirements of their current situation.

Freedom-loving risk takers

Katrin Sontag's own career as a cultural studies expert has also taken her far and wide. She studied in Berlin, Reykjavik and Bangalore, and worked as a management consultant in Beijing before beginning her doctoral thesis in Basel, for which she has researched the life stories of highly mobile business founders in Switzerland – a country whose legal framework, infrastructure, central location within Europe and supply of skilled professionals and investors have given rise to a vibrant start-up scene. Today, almost a third of the country's business founders are nationals of another country, and many cater to the global market, often with subsidiaries and staff abroad.

Sontag interviewed 14 highly qualified entrepreneurs in the fields of IT, biotech, medical technology, event management, education, and environmental consulting. She also spoke to start-up consultants, underwent coaching, conducted fieldwork in business incubators and attended specialist workshops and trade fairs. In the process, she encountered motivated professionals between the ages of 25 and 60 for whom the boundary between private and work life has become blurred. They all share a strong desire for freedom and the autonomy to define their own work structures – even if this

means taking certain risks. They also tend to be devoted to lifelong learning and personal development. For these individuals, income is just one factor among many, says Sontag: "Many of them realize that they could earn a great deal more as employees. However, their freedom is more important to them."

Constantly connected

The entrepreneurs interviewed by Sontag have learnt to harness the dynamic nature of the modern working world: internet and broadband connections are rendering the fixed workplace obsolete, while the costs of communication and mobility have plummeted, making Skype, WhatsApp and EasyJet a part of everyday life. Cross-border work patterns also imply changes in social relationships: business and private networks are not tied to a particular location and can be accessed from wherever the user happens to be. As a result, nationalities and borders lose their significance. "For many people, migration is no longer a one-time event," explains Sontag, "but a biographical constant, occurring in a number of directions."

Sontag is convinced that our current understanding of migration, with its focus on national origins, has little relevance to cases like these. "Is the distinction between migrants and non-migrants a meaningful one? Or should we be paying more attention to the roles people play in different places and at different times?" she asks rhetorically. Rather than migration, Sontag prefers to speak of mobility and flows, drawing on the concept of "scapes" coined by the ethnologist Arjun Appadurai to describe the interconnectedness of finance, technology, ideas and people in trans-local, global and highly dynamic flows. This interconnectedness also includes virtual mobility, which allows ideas and inventions to be disseminated at an ever faster rate. "Our understanding of the different forms of mobility, as they are currently experienced, is still very limited," she concludes. ■



Katrin Sontag studied in Berlin, Reykjavik and Bangalore. She worked in Peking as a management consultant before coming to Basel to begin her doctoral dissertation.

The economy benefits from immigration.

Text: Christoph Dieffenbacher

Immigration from the European Union is especially beneficial to highly qualified Swiss nationals, while low-skilled foreigners are among those hardest hit. Economist Ensar Can from Basel has investigated the relationship between immigration and job security.



Ensar Can

is an assistant at the Research Unit for Labor Economics and Industrial Organization at the University of Basel and a research associate at *economiesuisse*.

Ensar Can, 30-year-old, has experienced migration first-hand: His grandfather came to Switzerland from Turkey in the sixties as a migrant worker, his mother grew up here, and his father first came to the country when he married. Can, now a Turkish-Swiss dual national, was born in Basel and grew up in the “Längi” neighborhood of the suburb of Pratteln, inhabited almost exclusively by foreign families: “There were times when my brother and I had no Swiss classmates at school,” he tells me. Later, while studying at university, he gave tuition to schoolchildren with foreign parents.

Can’s story is a common one. Foreign workers have become an inseparable part of the economy: almost one in three employees in Switzerland holds a foreign passport. At the same time, the country boasts one of the most innovative economies in the world. Even so, the agreement on free movement of persons entered into with the EU in 2002 was met with widespread suspicion and apprehension among the population, triggering talk of “mass immigration” – culminating in the hugely popular initiative of the same name launched by the Swiss People’s Party (SVP) – and fears of an excessive drain on state coffers fueled by the assumption that immigrants would cost more in public services than they contrib-

uted. The job security of Swiss nationals was also under threat, it was claimed, with increased competition in the labor market driving down wages.

Jobs at risk?

Can immigration from the EU since 2002 really be blamed for forcing native Swiss workers out of their jobs? An answer to this common complaint can be found in Ensar Can’s recently completed dissertation, submitted to the University of Basel’s Faculty of Business and Economics.

In an interview, Can pointed out that the terms “immigration” and “net migration” (immigration minus emigration) are often confused in the debate. For instance, net migration from the EU has risen to an average of over 40,000 people per year since 2002 – but far from being a consequence of surging immigration numbers, the increase is due mainly to lower emigration rates: “Fewer and fewer immigrants from the EU are returning to their home country, choosing instead to stay in Switzerland for longer.” A contributing factor here is the agreement on the free movement of persons, which increased the time EU nationals are entitled to remain in Switzerland from one to five years.

Meanwhile, “very few significant links” can be observed between immigration from the EU since 2002 and job security in Switzerland, says Can. He has charted the relationship between the risk of being made redundant and the proportion of EU immigrants in particular segments of the economy using statistical models. What he found was that highly qualified Swiss workers are actually less likely to lose their job if a large number of immigrants from the EU are employed in their segment of the labor market, while for low skilled foreigners the risk is higher.

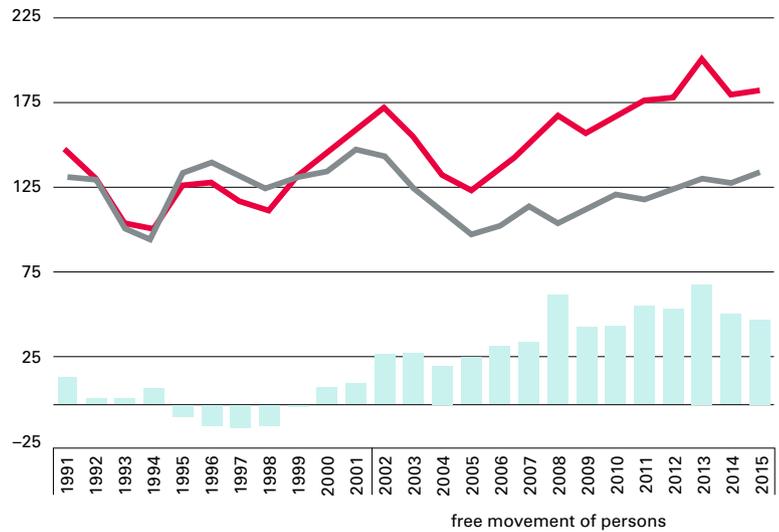
Winners and losers

In Switzerland – as in other Western countries – there is a shortage of skilled labor in certain sectors of the economy. As a result, specialists in various fields have to be recruited from abroad, e.g. the EU or overseas. Among other reasons, Can attributes Switzerland’s lack of skilled professionals in technical and scientific professions to a slow-down in the number of university graduates and the relatively low proportion of women in these areas. Meanwhile, technical progress in fields requiring high levels of education has caused an explosion in demand for skilled professionals. “Highly qualified immigrants can help address this imbalance in the labor market,” says Can. This relieves the pressure on companies, enabling them to continue operating and, in many cases, create new jobs – a good thing for the economy as a whole, Can explains.

By contrast, the opposite effect can be observed among less qualified workers. What is more, demand for unskilled labor is in decline, with technical knowledge becoming an essential prerequisite in many professions, says Can: “Jobs which consist simply of pressing a button on a machine are on the way out.” Accordingly, when additional low skilled workers immigrate, they are in competition with those already in the country, causing the latter to lose their jobs – or forcing them out of the labor market altogether – sooner than would otherwise have been the case. Nonetheless, the relatively low number of unqualified immigrants means that this effect is not very pronounced.

Highly qualified workers from abroad tend to stay in Switzerland for shorter periods, Can writes in a study on the effects of the free movement of persons within the EU co-authored with Professor George Sheldon and Dr. Nathalie Ramel. Skilled professionals can often choose from positions all

Numbers stable for ten years.



Net migration from EU-27/EFTA since 1991 in 1000s: net migration (lower columns) is immigration (red line) minus emigration (gray line).

over Europe, affording them greater flexibility in their choice of where to work. This is not the case for low skilled workers, whose options are limited not least by a lack of language skills. The authors conclude that labor market conditions for native workers are barely affected by immigration in terms of either wages or employability.

Windfall for state coffers

Another of the study’s findings is that besides the economy, the Swiss state also has a great deal to gain from immigration from EU countries. It currently receives an estimated 15,000 Swiss francs for each immigrant household originating from the EU, as migrant workers tend to pay more in taxes and social security contributions than they cost in benefits. However, the economists in Basel warn that this will not always be the case. If conditions remain unchanged, the net contribution of these households will gradually sink to zero over the next 40 years as immigrant workers grow older and choose to remain in the country. Even so, during that period their contributions to the state treasury will have added up to a healthy 300,000 Swiss francs per family. ■

A diverse religious heritage.

Text: Urs Hafner
Photo: Robert Pichler



Among south-eastern European states, Albania is most strongly affected by migration. Since the downfall of the Communist dictatorship in 1991, the boat has come to epitomize the idea of fleeing to the West. Fieri (Albania), 2008.

Like other immigrants, many migrants from the former Yugoslavia look to religion – both Islam and Christianity – for a sense of direction. Maurus Reinkowski is an academic specializing in Islamic studies. He stresses the need to take a historically informed view on the role of religion in shaping identity.

In Belp, near Bern, there is a Serbian Orthodox church. Its exterior is strikingly reminiscent of Byzantine architecture; inside, unlike home-grown Christian churches, it is completely covered in paintings. When people enter the building for the first time, they are dazzled by these exotic, icon-like images. You do not need to be a prophet to work out that, had this place of worship – completed in 2013 – been a mosque rather than a Christian church, its construction would probably have been blocked.

Not all Serbs living in Switzerland are religious, but a number of them have banded together in diaspora groups with a pronounced religious character. These Orthodox communities provide a focal point for migrants, offering them not only “spiritual goods”, but also advice, books and cultural activities. They themselves state that their main aim is to improve the negative image of Serbs.

Diaspora groups

It is true that Serbs in Switzerland are often regarded with suspicion – as are Croats, for instance. They, too, are Balkan migrants who often band together in religious groups in the diaspora. If you surveyed passers-by on the street, many of them would probably state that Croats and Serbs are Christians, but they would still class them – like migrants from south-eastern European countries generally – as part of a “Balkan” culture that they associate vaguely with “Islam”.

Only a quarter of a century ago, outsiders in the West regarded all of these south-eastern European peoples simply as Yugoslavs. They were contained within Josip Broz Tito’s multinational state, based on socialism and integration, in

which religion played no official role. After Tito’s death in 1980 – and especially during the wars that accompanied the disintegration of Yugoslavia from 1991 onwards – different groups sought to affirm their identity by stressing ethnic and religious differentiations. We can see a similar dynamic at work among ex-Yugoslav migrants. When forced to address the question of who they really are, increasingly they seek their identity in religious and ethnic labels.

Whereas among Christians this process of self-affirmation has gone largely unnoticed – as the example of the church in Belp shows – the Islamic faith of Balkan migrants has attracted a great deal of attention. Since 9/11, Muslims in general, including those from south-eastern Europe, have been suspected of harboring Islamist sympathies. This suspicion manifests itself in measures such as the “minaret ban” imposed by the Swiss electorate in 2009. Often migrants are reduced to their (Islamic) religion.

Self-affirmation through religion

Maurus Reinkowski, a professor of Islamic studies at Basel University, thinks that we need to take the religious views of south-eastern European migrants seriously. He argues that “it is in the diaspora that religion often becomes an important source of values and norms.” However, the process of self-affirmation through religion among Albanian migrants, who come mainly from Kosovo and Macedonia, and among Bosnians is much more complex than the Islamism thesis would suggest. If you want to understand migrants, you must also understand their religion.

Reinkowski notes that the religious identity of Albanians, for example, is shaky. This is apparent even in how they view themselves. They often argue that they lived on the fault line between the eastern and western Roman empires for centuries and have experienced constant religious change. After World War II, the state-sponsored atheism of Albania under Enver Hoxha invoked this historical experience. The successful Kosovar Alba-

nian independence movement managed to get by without appealing to religion. According to Reinkowski, “The Kosovo Albanians define themselves with reference to ethnicity and language, rather than religion. They derive their identity from their claim to be modern, which goes like this: ‘We are fundamentally compatible with Europe. We are the better migrants, as religion isn’t important to us.’”

Against the “homogenization of Islam”

It is a different story with the Albanian population of Macedonia. There, “folk Islam”, a traditional form of piety, has given way to various forms of Islamic orthodoxy. This can be explained in part by the fact that, in their conflict with the majority of Macedonians, Albanians see religion as a way of setting themselves apart. A similar process is at work among Bosnians. Lacking their “own” language to differentiate them from Croats and Serbs, they have increasingly found their identity in Islam, Reinkowski says.

Switzerland’s response to the establishment of Islam here has been to set up chairs in Islamic theology, including at the Swiss Center for Islam and Society in Fribourg. Reinkowski sees this as a positive development, as it will allow western Europe to develop its own, independent Islamic theology, instead of importing one from abroad – mainly from Turkey. However, he warns against a “homogenization of Islam”. “We shouldn’t see the interpretation of Islam professed by Islamic theologians as the only one available. There is a rich tradition – not least, a vibrant popular piety.”

Reinkowski hopes that Islamic theology in Switzerland and other countries will be able to bring out the differences and shades of opinion within the religion’s traditions and discourses. Part of this reality – whether we like it or not – is orthodox Islam, which is popular at the moment and contrasts with the distinctly “soft” Islam that was once prevalent in south-eastern Europe. ■

Vote influences where people choose to live.

Text: Christoph Dieffenbacher



Alois Stutzer

has been Professor of Political Economy at the University of Basel since 2009.



Michaela Slotwinski

focuses her research at the University of Basel on issues at the interface of politics and economics.

Negative attitudes towards foreigners can influence where they decide to live in Switzerland. This is the conclusion reached by the economists Michaela Slotwinski and Alois Stutzer from Basel University, based on an analysis of the minaret vote and data on where foreigners in Switzerland choose to live.

It was a memorable vote. The point at issue may have been an architectural feature, but it was one with symbolic importance. In November 2009, the anti-minaret initiative was approved by the Swiss electorate, with over 57 percent of the votes, resulting in a ban on the construction of new minarets on mosques across the country. The popular vote was preceded by an emotionally charged campaign featuring crude slogans and posters on which minarets were portrayed as missiles. Almost all parties had opposed the popular initiative of the Swiss People's Party, but predictions and polls proved wrong. Following the vote, Switzerland came in for a fair amount of criticism internationally.

The young researcher Michaela Slotwinski, together with Alois Stutzer, Professor of Political Economy at the Faculty of Business and Economics at Basel University, has examined one consequence of the minaret vote. The measure they used as an indicator of negative attitudes towards migrants at municipal level was support for the initiative, combined with the results of comparable votes in the past. The striking aspect of the minaret vote was that in certain municipalities there was very clear and surprising shift away from the pattern in previous referendums, with voters expressing greater reservations about foreigners.

Sixty percent fall

As part of a "natural experiment", the researchers link the surprising results in some municipalities to statistical material on the moving behavior of foreign households before and after the vote. Their study

shows that the referendum had an impact on decisions about where to move. Initially, the likelihood of immigrants moving to a municipality that had adopted a more hostile stance towards foreigners in the vote fell by about 60 percent. The number of arrivals returned to previous levels only about five months after polling day. The researchers infer that many of those planning to move had evidently chosen another, more tolerant municipality. Furthermore, Slotwinski explains, the change in moving behavior after the minaret vote was evident not just among immigrants from predominantly Muslim countries, but among immigrants in general – people in no way affected by a minaret ban. Highly skilled people, in particular, seemed to react most sensitively to the presence of negative attitudes.

Information flows

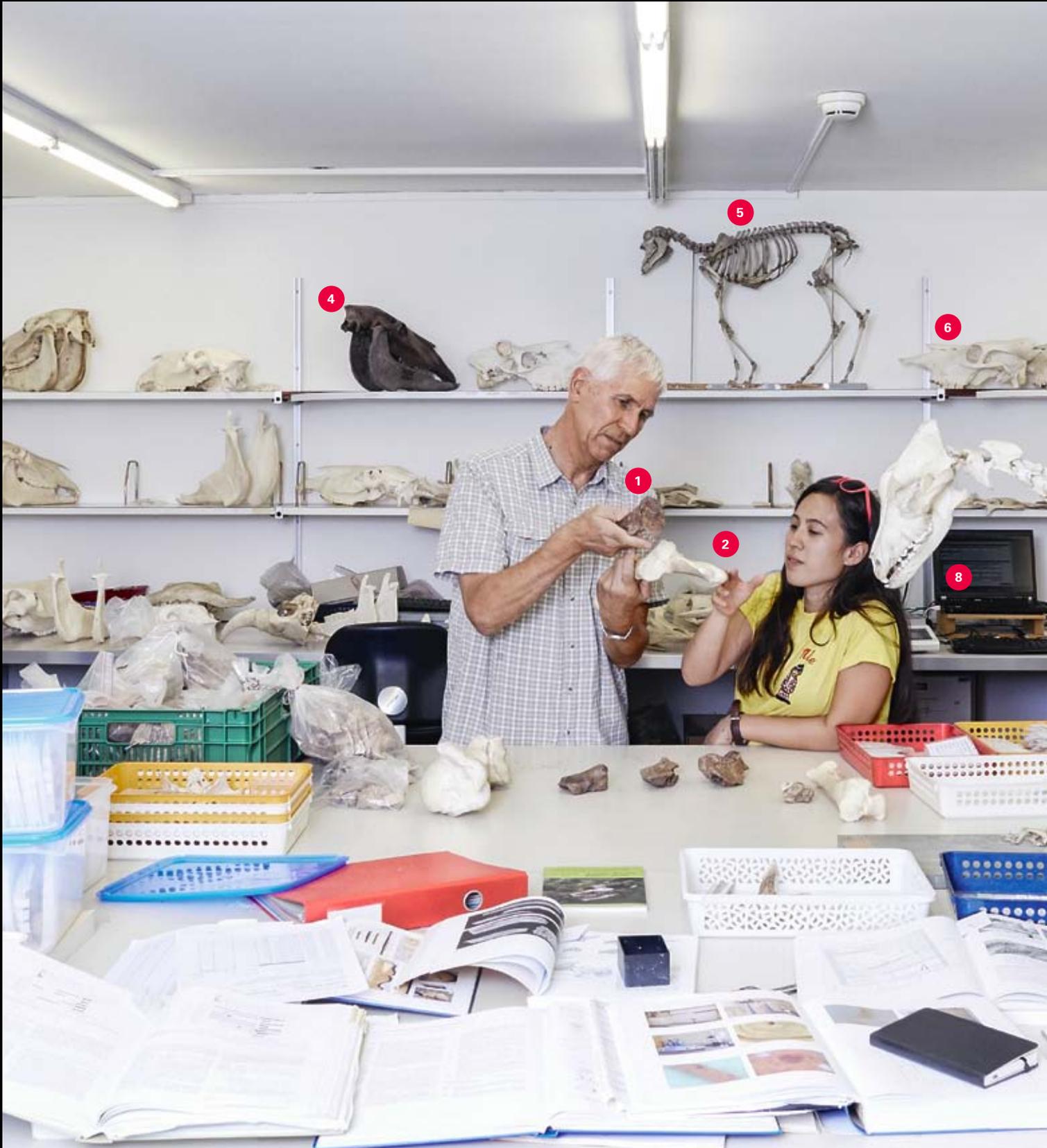
"To explain this behavior, we have to assume that there is good networking within migrant communities," Professor Alois Stutzer comments. "Apparently, they have good social contacts and well-functioning information flows, so news about which municipalities took a negative stance towards foreigners in the vote gets around quickly." There was also more media coverage of those municipalities where the vote came as surprise.

Slotwinski and Stutzer say that one can only speculate as to the reasons why this change in moving behavior was followed by a return to the previous figures. The statistics show that there was more vacant accommodation in the municipalities in question after the vote, which may have brought down rents. In turn, this may have prompted more foreigners to move in again, based on the principle, "They may not like us here, but the rents are cheap." This stabilization in moving behavior may also be linked to new arrivals having got used to the Swiss people's negative attitudes or to a reduction in media coverage of the subject. ■



— **Mahmoud Al Hariri** —
Syria, Economics and Computer Science

My workspace





Animal bones make cultural history.

Bones are among the objects most often found in archaeological excavations. In cultural history, identifying which animal a bone belonged to is most invaluable. Animal bones can reveal how our ancestors lived and bear witness to how closely the history of mankind is linked to domestic and wild animals.

Photo:
Basile Bornand

Jörg Schibler is Professor of Prehistory and Osteoarchaeology at the University of Basel, where he heads the Department of Archaeozoology.

Aimee Miles is a doctoral researcher at Istanbul's Koç University. She is currently in Basel to improve her skills in identifying bone finds.

- 1** Researchers identify a bone from a Neolithic settlement on the shore of Burgäschisee in the Canton of Solothurn. The bone is approx. 5,800 years old and is part of the ulna from a European aurochs.
- 2** Since the aurochs became extinct in the 17th century, the fragment is compared against a complete ulna from a large modern breed of cattle.
- 3** The University of Basel's archaeozoological collection contains around 70,000 specimens. Some are from excavations whereas others come from present-day animals, such as this skeleton of a wolf from Basel Zoo.
- 4** The dark coloration indicates that this horse's skull was dug out of the ground.
- 5** Mounted skeletons such as this saiga antelope's faithfully reproduce anatomical details and are, among other things, important teaching tools.
- 6** Many early breeds were smaller than today's. This Highland cattle skull serves as a reference for comparison with archaeological finds because Highland cattle are a relatively small breed.
- 7** An animal's teeth make it possible to infer its age, provided that entire jaws and rows of teeth are available. Pictured is the lower jaw of a deer.
- 8** Specimens are weighed on electronic scales and measured using digital calipers. The results are recorded in a dedicated database.

CRISPR/Cas9 – Opportunity or Risk?

Discovered just a few years ago, the CRISPR/Cas9 method promises new possibilities for editing the genome of living creatures. While some see this as an opportunity, others focus on the risks of this efficient technology.

CRISPR/Cas9 technology enables the germline of plants and animals, including humans, to be modified simply and with great precision without leaving traces in the genome. This system was discovered in bacteria, which use it to cut up the DNA of invading viruses. When studying this defense mechanism, the researchers working under Emmanuelle Charpentier and Jennifer Doudna discovered that the method is universal and can be used to cut DNA strands at specific points. The CRISPR/Cas9 complex consists of “guide” RNA, which defines the interface, and the Cas9 enzyme, which cuts the DNA. This method also works on the basis that eucaryotic cells (fungi, plants, and animals) quickly repair cut DNA strands. To specifically edit a gene, a piece of synthetic DNA is introduced into the cells, along with the CRISPR/Cas9, that overlaps with the interface and codes the desired genetic change. This sequence serves as a template for the DNA repair and leads to the desired change being incorporated into the genome – so-called “genome editing”.

One advantage the CRISPR/Cas9 system has over traditional transgenic methods is that no foreign DNA is incorporated into the genome. The US authorities have therefore decided that if the genome of a cultivated mushroom is edited with CRISPR/Cas9, it does not need to be labelled as genetically modified. Plant biology uses CRISPR/Cas9 technology to modify cultivated plants much more specifically than in traditional cross-breeding. Many cultivated plants lost their natural resistance gene during yield optimization and no longer grow in barren soil; one goal is therefore to repair or replace defective or missing genes. CRISPR/Cas9 has quickly become the preferred method

for genetic studies in the life sciences too. Cell- and animal-based models for analyzing underlying processes and diseases can now be generated much more quickly and in an unprecedented variety of species.

CRISPR/Cas9 is also expected to finally make the longed-for breakthrough in gene therapy. In the most promising strategy, (stem) cells from the patient’s own body are isolated and genome editing is used to correct their genetic defects. Repaired cells can only be transplanted back into patients following molecular testing, so the hope is to minimize the risk of unwanted side effects. This strategy has already been successfully tested in animal models for various, sometimes fatal genetic diseases. Clinical studies on this subject are to start in the near future. An initial study of germline editing in non-viable human embryos was published in 2015. This showed that CRISPR/Cas9 is too inefficient for germline manipulation and can lead to potentially dangerous side effects, particularly if the CRISPR/Cas9 cuts the DNA in the wrong place. These rare effects could lead to the activation of cancer genes; intensive work is therefore underway to minimize these effects through improved enzymes.

The use of genome editing for human embryos has prompted a global debate about intervening in the human

germline. The manipulation of human embryos is prohibited in Switzerland, while other countries permit its application for research purposes. We must be open about both the many opportunities and the risks of using CRISPR/Cas9 in plants, animals, and humans. As with all therapeutic applications, there is a residual risk that must be weighed against the anticipated benefits. ■



Rolf Zeller

is Professor of Anatomy and Embryology in the Department of Biomedicine at the University of Basel. An evolutionary biologist, his research focuses on the signal interactions and gene networks that control organ development in vertebrates.

Technology shapes our lives. And each new technology that emerges prompts heated debates. Both sides take up extreme positions and often hold staunch opinions that prohibit an open and inclusive dialogue. This is particularly true if the technology in question has a direct impact on our lives. These debates might well be fascinating, but in my opinion they can be misleading. They rob us of an opportunity to reflect on and question our goals and exclude certain stakeholders, including the general public. This results in a waste of valuable resources. To demonstrate my point, I'd like to take the example of CRISPR/Cas9, a method to edit human germline – known as “genome editing”. My aim is not to debate whether this method can fulfil its potential but rather to reflect on two main points: What do we want to use this technology for? And once this question has been answered, how do we want to regulate its use?

Genome editing evokes strong hopes and expectations due to its potential impact on human life. It also provokes discussions on our responsibility to protect human genetic heritage, and causes fear and discomfort about its potential misuse in genetic or racial selection. Although several technologies could, in principle, facilitate genome editing, CRISPR/Cas9 makes it more specific, quick, effective and affordable. The technology has not yet reached the stage of refinement required for use in humans. However, with ongoing research, the time will likely come when it can precisely and accurately edit problematic base pairs that cause single gene mutations responsible for diseases.

To make a conscious and well-informed decision on whether to continue research on non-human germlines to refine the technology, we need to clarify what it is we hope to achieve by using this technology in the upcoming decades. The task here is not merely to define our goal but also to question and reflect

on why we strive for this goal. Who benefits and who is excluded in our pursuit? Why do we choose this particular goal and not some other? Does our goal allow us to address the health needs of a large majority of our society or just those of the powerful and wealthy? Which stakeholders get to define the goal? Is the process democratic and does it take into account all perspectives including the cautious and skeptical ones? In short, the debate should not be about what a technology can do but rather about what we want to use this technology for

and why. This brings me to my next point regarding the regulation of CRISPR/Cas9: Technology without a regulatory framework is much like an unguided missile. I believe that the regulatory framework for any technology has to be dynamic, proactive, and should evolve simultaneously with the technology. It should also be based on prudent precaution and be guided by available scientific evidence. Regulation needs to be flexible to accommodate new evidence and should bring all stakeholders on board throughout its formulation and implementation. Importantly, it should also include those who will eventually use the technology and be affected by it. It is extremely challenging to bring diverse stakeholders together and provide them with an open space for discussion. It is critical to ensure transparency in their exchanges, to address their fears and reservations, and to account for the differing interests and incentives of these

various stakeholders. Nonetheless, to truly exploit the potential of CRISPR/Cas9 for human health and well-being, we must accept this challenge. It is essential to engage with the general public and to help them understand the technology. Their concerns need to be addressed and open dialogue established. Without consistent efforts toward meaningful public engagement, I do not see how we can develop an effective regulatory framework for any technology – let alone CRISPR/Cas9. ■



Priya Satakar

is a postdoc at the Institute for Biomedical Ethics at the University of Basel. Her research focuses on the intersection of new medical technology and its sociocultural context in society.

No comfort is spared for these budding marine researchers roaming the sandy beach or clambering along densely vegetated cliffs to examine the soil laid bare by the tide. Sporting rubber boots and armed with nets, buckets and magnifying glasses, they manage to remain completely dry. Each year, in late summer, a group of zoology students descends on the intertidal zone of Erquy, on the north coast of Brittany, to conduct applied research in marine biology. They are led by Dr Thomas Jermann, curator of the Basel Zoo aquarium, who took over the course from Professor David Senn. The project is remarkable for its continuity: young researchers have been going over this section of coastline with a fine-toothed comb every year since the mid-1980s. Especially in fall and spring, the tidal range here is enormous. At full and new moon, daily sea level fluctuations can exceed twelve meters, making it a harsh environment for sea creatures to survive in. Dehydration, oxygen deprivation, extreme heat or cold, pounding surf, submersion, downpours and changing acidity levels are all regular hazards for the organisms that live here. Even so, evolution has given rise to a staggering range of plant and animal life: A single kilometer of coastline is home to up to 500 animal species and 600 species of algae. Over the years, the students from Basel have amassed a wealth of findings and research ideas at Erquy, with some choosing to return later on to write their final thesis.



Between the tides.

Photos: Thomas Jermann
Text: Thomas Jermann/Christoph Dieffenbacher

Surprise finds

Dog whelks attach egg capsules to the rocky substrata.

Each capsule contains around 500 eggs of which only 25 will develop – the remaining eggs function as ‘nurse eggs’ to feed the hatchlings (left).

Right: What look like eyes on the underside of the thornback ray are actually gill slits (right).







Puckered lips?

Around 7 centimetres in length, the cockle lives just under the surface in sandy sediment. It creates a permanent flow of water in order to filter plankton. What resembles a pair of puckered lips is the so-called 'mantle crest'. It creates the two calcium carbonate shell halves and seals them together completely. When viewed from the end, the cockle has a perfect heart shape.





Carnivorous offspring

The individual zooids of the star ascidian form star-shaped colonies that are often very varied in color. They grow directly on rocks or large pieces of red or brown algae (left).

Algae provide both a surface and nutrition for young sea snails: the young animals eat their way right into the surfaces they attach to (right).



Sticky tentacles

Colorful sea anemones live in shallow residual water pools. Snakelocks anemones are underwater animals that look like flowers. The anemone extends its sticky stinging tentacles to catch as much plankton as possible.

Its brownish to bright green coloring comes from plant symbionts: internal photosynthesizing unicellular algae produce glucose which provides the majority of the anemone's nutrition.

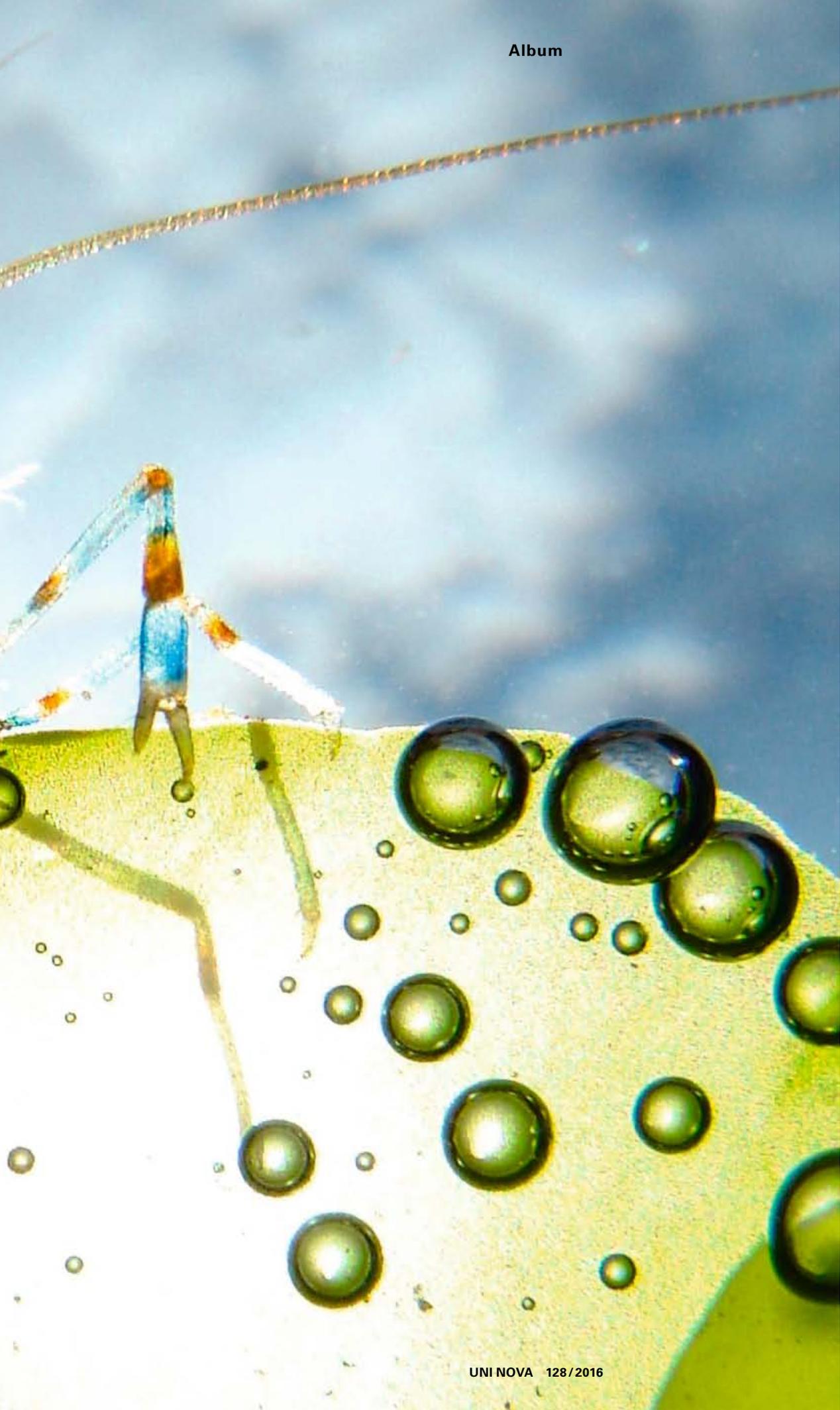




Tough types

Common prawns are undoubtedly the most robust species of shrimp found at the coast. When there is a lack of oxygen in the residual pools at night, the prawns hang below the surface of the water on their stomachs. Here, they benefit from the slightly elevated oxygen concentration. They can survive on only a tenth of the oxygen required by fish. During the day, these omnivores graze on algae or eat dead plants and animals.





Thomas Jermann works full time as curator of the Vivarium at Basel Zoo and is also a passionate photographer. The zoologist completed his doctorate at the University of Basel, where he has organized events on biology and marine biology for over 20 years – including excursions to the intertidal zones of northern Brittany.

New treatment concepts for recurrent lymphoma.

Text: Yvonne Vahlensieck

Cancer recurrence is not always what it seems, at least not in lymphoma, or cancer of the lymphatic system. A study conducted at the Institute of Pathology of the University of Basel has revealed how the genetic profiles of tumors could, in the future, help identify the appropriate therapy for each patient with lymphoma relapse.

What is the probability of a person developing two separate cases of the same type of cancer? Significantly higher than you would think. In some types of cancer, the phenomenon has been known for years. For instance, high exposure to UV radiation during a person's childhood especially can cause them to develop melanoma more than once in their lifetime.

By contrast, the possibility of two tumors of the lymphatic system (lymphoma) originating independently in the same patient has been rarely taken into account. If a patient develops a second lymphoma, oncologists will often assume that it is directly derived from the first one. The standard treatment for recurrent lymphoma – a combination of aggressive chemotherapy and an autologous stem cell transplantation – is both burdensome for the patient and risky. The chance of surviving a recurrence is only 25 percent.

Understanding recurrence

There is hardly any research on whether recurrent lymphoma necessarily originates from the primary tumor and, particularly, whether aggressive treatment is always the best option. Yet, the need for such research is growing: In the past decades a dramatic increase in lymphoma incidence has been noticed. At approximately 1,700 new cases per year, it is currently the sixth most common type of cancer in Switzerland.

Against this backdrop, Basel University's and University Hospital's Institute of Pathology recently investigated the genetic landscape of recurrence of the most common subtype of lymphoma. Professor Alexandar Tzankov and his team analyzed tumor tissue samples from 20 patients with recurrent diffuse large B-cell lymphoma. This type of cancer is considered particularly aggressive. Nowadays, thanks to advances in therapy, 70 percent of patients survive, whereas

30 years ago the survival rate was as low as 20 to 30 percent. "In the past, the majority of patients died before there was any chance of recurrence," Tzankov explains. In fact, one reason why there is so little research on recurrences of diffuse large B-cell lymphoma is that pathologists could not find enough patients to work with. Which is why Tzankov counts himself lucky that the University Hospital's archives contained 20 suitable pairs of specimens: tissue samples from patients' primary and recurrent tumors.

Tracing tumor ancestry

As part of the study, the researchers performed several kinds of genetic analysis to determine the relationship between the respective first and second samples. The team started by identifying genomic regions where genetic material had been lost, duplicated or rearranged. Such irregularities occur in all tumor cells, giving each tumor a genetic profile that

is as unique as a fingerprint. In a second step, they sequenced specific sections of DNA that are often mutated in lymphoma and documented subtler alterations.

Analysis of the data yielded insight into the tumor ancestry. It was found that a tumor appearing after primary cancer treatment can have at least three different origins: the two tumors can be directly related, indirectly related or unrelated. Eleven of the 20 sample pairs were directly related, meaning that the second tumor clearly originated from the first one as a kind of “linear progression”, as had been expected. When that is the case, the conventional aggressive treatment approach seems sensible, as the recurrent tumor is likely to consist of cells that have become resistant to the original chemotherapy.

However, three sample pairs showed virtually no shared genetic alterations. In other words, the corresponding patients had not suffered a true recurrence, but rather had developed a new case of lymphoma (“clonally unrelated second

tumor”). How this is possible is unclear, since little is known about what triggers the disease. Potential risk factors include certain herbicides, genetic predisposition, immunodeficiency and old age – most sufferers are between 60 and 80 years old. The remaining six sample pairs were found to be only indirectly related. While the samples shared some characteristics, there were also significant differences. The most likely explanation is that the primary and secondary tumors originated in the same cell but diverged at a later stage as a kind of “branching tumor evolution”.

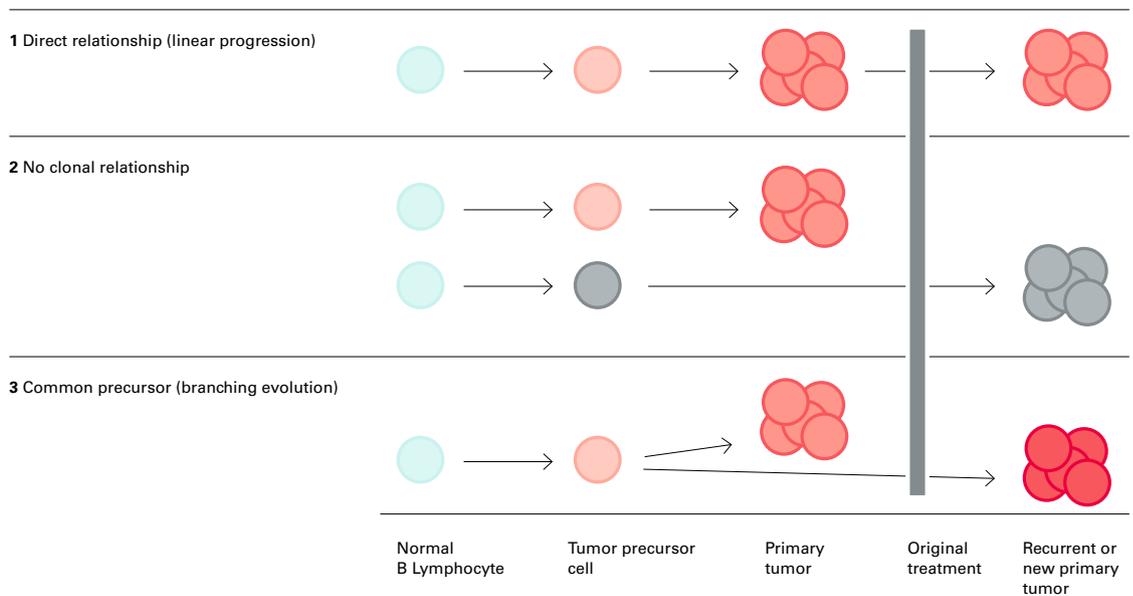
New treatment concepts

“Between a fifth and a third of sample pairs show no clonal relationship,” is how Tzankov summarizes the findings. “And in such cases, I can expect to reconsider treatment options.” This could mean that, in the future, some lymphoma patients would not have to undergo treatment that is both grueling and risky. However, Tzankov stresses that

findings from such a small case series are not a sufficient basis for changing proven treatment approaches: “All new therapies need to be tested in properly designed large-scale studies. What we do hope is that our findings have sparked the interest of other researchers and that the question we’ve raised will feed into the design of upcoming prospective studies.”

Nonetheless, pathologists at Basel now routinely determine the precise genetic profiles of recurrent lymphomas for diagnostic purposes, and this has already benefited a number of individual patients. Tzankov cites the case of a colleague’s terminal patient for whose recurrent lymphoma all conventional treatment options had been exhausted over the course of two years: “Since the potential recurrence was demonstrably unrelated to the first tumor, she was considered eligible for a completely different type of therapy. The patient seized the opportunity and survived. Three years on, she’s still doing well.” ■

Origins of Tumors Occuring after Primary Cancer Treatment.



Treatment options differ depending on the relationship between primary and recurrent tumor.



An almost forgotten pioneer.

Text: Martin Hicklin
Photo: Teichmann

Collin Ewald, a 35-year-old SNSF research professor at ETH Zurich, is following a hot lead. Ewald, who is from Basel, trained at Basel University's Biozentrum, gained his master's at the Friedrich Miescher Institute and then completed a PhD in Alzheimer's research in New York. After that, he moved to Harvard Medical School's Joslin Diabetes Center, where he turned his attention to the question of which factors support health aging and longevity.

While working on this topic, Ewald made a discovery: He found solid evidence that the seemingly unstoppable breakdown of supporting tissues and their functions outside the cells (the so-called extracellular matrix) that happens during aging can be halted or even reversed. The growth factor known as insulin/IGF-1 and its signaling pathway play a key role in this process. If IGF-1 is inhibited, this has the effect, at the other end, of reversing shrinkage in the network between the cells. At the same time, the matrix, which thins out more with every passing year, is filled up with new collagens, the elastic supportive and fibrous proteins present throughout the body.

Collagens and the aging process

This seemed to have been overlooked previously. "At first, I thought it couldn't be right," Ewald says, "but then we compared the data for all the models dealing with longevity and saw that longevity is always accompanied by an increase in collagen production." Collagens, which make up a third of all proteins, must therefore be linked in a very direct way to aging. Ewald was rightly proud of this work, which was published in "Nature". "I thought we were the first," he says today. But then, in the course of his research, he suddenly came across the name of a man who, more than 50 years earlier in Basel, had postulated that collagens are indicators of aging and begun to study them in depth.

That researcher's name was Fritz Verzár, and his name is certainly worth remembering – not least because by the time he died in 1979, aged 93, as a citizen of Arlesheim, you could say that he had lived three different lives: First in Hungary, where he studied medicine, like his father, and earned an excellent reputation as a hospital organizer. Although he could probably have made a career for himself at home, in 1930 he accepted the offer of a position at the University of Basel and moved to the West, seen as a "paradise" for researchers like him. There, he took up the chair of physiology at the Vesalianum – a venerable building, although one with a rather unsuitable setup at the time, that had been constructed under Friedrich Miescher,

the man who discovered DNA. Verzár was 44 years old when he began his second life in Basel.

Research into nutrition

In Basel, Verzár continued his work on the neurophysiology of vitamins and hormones, conducted some skillful and successful experiments on the absorption of sugars in the gut, and collaborated with Tadeus Reichstein, later a Nobel prizewinner, in the field of corticosteroids. In St Moritz, where he regularly went on holiday with his wife, son and daughter, he started studying high-altitude physiology and counting condensation nuclei. Widely regarded as a leading nutrition scientist, in 1942 he was charged with planning a nutrition program for the post-war years. In addition, from 1949 he did a study of the “coca problem” in Peru and Bolivia for the UN Food and Agriculture Organization.

In 1956, when he was already moving toward retirement, the Swiss Federal Council commissioned him to perform a study of the nutritional and health status of the Alpine population, which was seen as a cause for concern. But what is meant by retirement? Verzár saw it as an opportunity to embark on a third life, dedicated primarily to “experimental gerontology”, which at the time was still a rather exotic science. His aim was not to get younger, but to find out exactly what happens in molecular terms during aging. His enthusiasm for the subject had been kindled by Vladimir Korenchevsky, known as the “father of gerontology”, on a visit by the latter to Basel in 1952. Such was his interest that, with the support of his friend Karl Miescher, then the director of research at the pharmaceutical company Ciba, he set up a rat colony to study aging.

Rat tail tendons as a model

At first, there were around 1,000 animals, a figure that would later more than double. In a small laboratory at the Anatomy Institute, Verzár embarked on a painstaking investigation of one phenomenon associated with aging – the modification and breakdown of collagens. His rats’ tail tendons provided him with a model and source. To create more space, he rented a fourth-floor apartment at Klingelbergstrasse 11, where researchers crowded into the kitchen and main room from time to time. When the American Muscular Dystrophy offered him funding and industry started to show an interest in his research, Verzár realized that it was time to do things properly.

The fact that Verzár, now in his 70s, was able to set up a foundation for experimental gerontology with a top-class board, including prominent figures

Healthy aging is an aspiration for many and a hot topic in research.

The Basel physiologist Fritz Verzár (1886–1979) is regarded as a trailblazer for modern gerontology. Although largely forgotten today, his ideas are now being taken up once again.

from politics, industry and the university, is testimony to his captivating manner. However, the real proof of his powers of persuasion came with the purchase, using money from chemical companies, of a house in Nonnenweg 7. Here a bustling “Institute for Experimental Gerontology” now set to work – with colonies of rats and clawed frogs. The institute quickly became a hub for gerontologists. Even today, the physician Daniela Schlettwein-Gsell, who was involved in the Alpine population project as a young doctor, talks enthusiastically about the stimulating atmosphere and Verzár’s tireless work as a researcher. The biologist Marco Ermini, who was a doctoral student in the building at the time, praises Verzár for his supportive attitude toward younger colleagues, noting that he was always ready to listen to what anyone had to say.

Verzár’s work on collagen attracted widespread interest, and rat tendons remained a popular model in gerontology. The institute did not close its doors until the 1970s, following the sale of the building to cover running costs. Verzár retired in 1976 and died peacefully in his sleep in Dornach three years later. He would have celebrated his 130th birthday on September 18 this year. ■

A cultural history of Switzerland's dams.

Nature tamed at Lake Grimsel:
Structural barricades are celebrated
as monumental sculptures
and architectural masterpieces.

Photo: Ernst Brunner,
© Schweizerische Gesellschaft
für Volkskunde.

Dams are more than just pioneering technical feats.

For the valley dwellers who had to move when they were built, they are often associated with life-changing upheavals and the loss of home. The website verschwendene-taeler.ch that has been started up in Basel relates for the first time the cultural history of the construction of Switzerland's dams.

Text: Samuel Schlaefli

A rust-colored millwheel, carefully prepared dry-stone walls, broken roof beams from derelict cowsheds: all of these came to light when the Lago di Lei, an artificial lake on the border between Italy and Graubünden, was drained for maintenance work in winter 2012. Fifty years earlier, more than a dozen mountain pastures had been flooded to make way for a reservoir and storage power station designed to produce Switzerland's future electricity. Such remnants of a lost civilization can be found in many places around the country. They remind us of a life that existed prior to the construction of the dam – and that much more than concrete and steel went into creating these structures.

“I would find it extremely traumatic if someone told me that I had to leave my home village to make way for an industrial project,” says Sabine Eggmann, an assistant lecturer and research associate at the Department for Cultural Studies and European Ethnology at Basel University. In recent years, she and her team have been making a detailed study of the building of hydroelectric power stations in Switzerland. The researchers chose to approach the subject from an actor-centered perspective. “Our main interest was not in the structures themselves, but in the people affected by their construction.”

The research project has given rise to a website, verschwendene-taeler.ch, which has been online since February this year. In nine chapters, it describes and compares 10 dam projects com-

pleted between 1920 and 1965, focusing particularly on the decision-makers at the time and the impacts on the people affected by the structures.

Inspired by photographs

It all started with the photographs of Ernst Brunner in the archives of the Swiss Society for Folk Traditions (SGV) in Basel. In the 1940s and 1950s, Brunner traveled around rural and Alpine Switzerland taking photographs of local people and the trades they were engaged in. Among them were the dam construction workers of Cleuson, in the Valais, and Grimsel, in Bern. The cultural studies specialist Pierrine Saini came across Brunner's photographs when she was carrying out an in-depth study of the SGV's picture and film archive for her dissertation. She had already photographed many dam walls and reservoirs herself and was fascinated by Brunner's pictures. As a research associate for the web project, she embarked on a comprehensive trawl through the archives. Over four years, she put together a collection of radio reports, audiovisual documents, eye-witness reports, lists of compensation payments for those resettled, miners' song lyrics, and photos of dam construction in Switzerland. Many of her discoveries are now available to a wider public for the first time via the website.

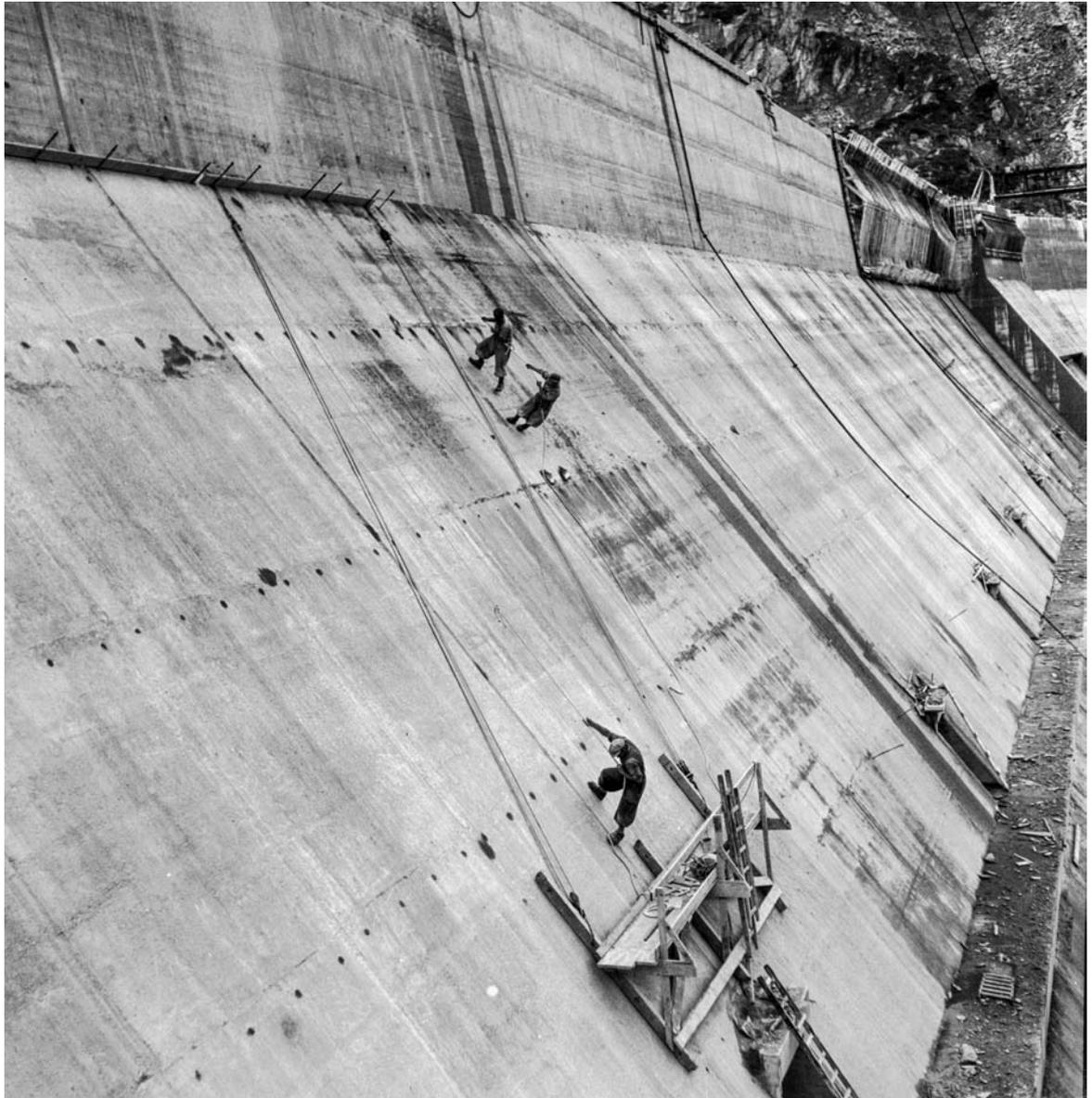
To seek out additional material, Saini also carried out her own fieldwork. For example, at Salanfe in the Valais – at nearly 2,000 meters above sea level – she took pictures of the reservoir, the dam, and the ruins of the flooded village, which

are still visible. Via the local inn, she made contact with Nicolas Mettan, an authority on the history of the dam, who over the years has built up his own collection of historical documents and photographs on the subject. Mettan's mother was one of the locals who used to spend every Alpine summer in the village that later had to make way for the artificial lake needed to generate electricity. Saini was able to ask her about her experiences. “She had painful memories of having to leave her old home. She talked about the years before the move in a nostalgic and slightly idealized way – even though life on the mountainside was difficult and impoverished.”

Rebellion in Andermatt

The people who had to give up their mountain pastures to make way for the dams were often poor farmers. Sometimes there were long negotiations about suitable replacement locations and the level of compensation payments. In these poor and indebted communities, there was generally little resistance to the planned dams. Many social scientists put this down to the fact that the social, cultural and economic capital needed for resistance was simply not present. The demands of the time were also a factor: “During the war, the major construction projects were an important contribution to the ‘spiritual defense of the nation’. They became part of a strong Swiss identity and a guarantor of a secure energy supply and autonomy,” Saini explains. Many farmers even welcomed the new start. For them, the reservoirs and im-

The photos of the huge building site show Switzerland's transition into the modern age and the era of technological progress: construction of a dam wall in Grimsel. Photo: Ernst Brunner, © Schweizerische Gesellschaft für Volkskunde.



proved infrastructure opened up new sources of income, especially in tourism.

While most resettlements went ahead peacefully, there was a clear exception, which has gone down in history as the “Andermatt riot”. The 2,000 inhabitants of Andermatt, in the Ursener valley in Uri, were to be resettled to make way for a lake six times larger than Lake Hallwil. On 19 February 1946, 300 locals chased the engineer working on the project, Karl Fetz, out of the village and smashed up the office of the architect in charge. After 30 years in the planning, the scheme was finally abandoned at the start of the 1950s.

Discourses of modernity

“The thing I find most fascinating about the subject is the interplay between subjective experiences and personal life stories, on the one hand, and the dominant social discourses of the time, on the other hand,” explains Eggmann. She is convinced that the program of dam construction after the turn of the century would have been unthinkable without the craze for technology that accompanied the dawn of the modern age. The sacrifices made by the resettled population were required as a contribution to the electrification of the country, to progress, and to national unity – all

the more so because dam construction formed part of a nationalist discourse, fueled by business, in support of an innovative, modern Switzerland with strong links to the outside world.

The website on Swiss dam construction remains a “work in progress”. New archival material and eye-witness reports are continually being added. Saini is also currently trying to organize funding for an app to enable people visiting the dams to relive their stories interactively, via their smartphones, at the same time – cultural studies 2.0 in place of “Pokémon Go”, as it were.

[verschundene-taeler.ch](http://www.verschundene-taeler.ch)

History of Mathematics

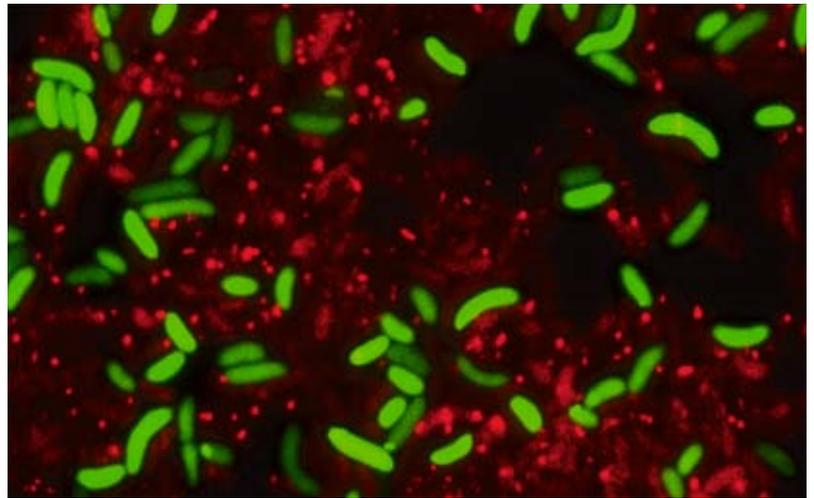
Euler and the Bernoullis to go online soon.

Over the next few years, the great Basel mathematicians of the 17th and 18th centuries – eight members of the Bernoulli dynasty and Leonhard Euler – will be given a joint internet platform. “Bernoulli-Euler online” (BEOL) will present their complete works, manuscripts and correspondence in digital form, with content ranging from facsimiles through critical editions and translations, to the latest research findings. In the first phase, the Basel edition of the Bernoullis’ correspondence and parts of Leonhard Euler’s “Opera Omnia” will be brought together on the platform, along with a complete, genuinely digital edition of the “Meditationes” by Jacob I Bernoulli (1654–1705). This scientific diary, only parts of which have been published before, contains important studies on differential geometry and the systematic foundations of probability theory.

The BEOL project is designed as a flexible research tool that makes full use of the capabilities of a modern digital edition, with powerful search facilities, cumulative indexes of persons and subjects, external links, and much more. An open-access platform is being developed, which will document the lives and works of these important scholars and allow other sources on early modern mathematics and science to be made available, providing a basis for research, teaching, and outreach work that can be used in a variety of ways. The project is run by the Bernoulli-Euler Center together with the Digital Humanities Lab at Basel University and is supported by the Swiss National Science Foundation. ■



Jacob I Bernoulli:
Digital edition of *Meditationes* planned.



Basel Biozentrum

Bacteria in munitions recycling.

Many bacteria use molecular spear-guns to fight their enemies and competitors, but they can also hit close relatives in the process. However, these sister cells benefit from coming under fire. According to Professor Marek Basler and Andrea Vettiger, infection biologists at Basel University’s Biozentrum, they recycle the protein components of the spear-gun and use them to build their own munitions. The researchers were able to demonstrate this for the first time with reference to the cholera pathogen, *Vibrio cholerae*. The special thing about this bacterium is that it continually produces spear-guns and fires them off aimlessly when attacking (shown in red in the picture). The tips of these tiny projectiles are equipped with molecules that are poisonous to their enemies and cause them to die. It is different with their own relatives, which, after being hit, are able to reuse certain proteins to put together their own spear-guns (shown in green). During the recycling process, the bacteria disassemble the harpoons into their protein components and use them to build their own weapons (light-green structure). The attacked sister cells can also reuse the toxins transmitted by the tip of the spear. Even bacteria that no longer produce any proteins are capable of making themselves a spear-gun if they receive a munitions delivery from relatives nearby. The researchers also established that related bacteria co-operate in other ways, by joining forces to fend off troublesome competitors. Thus they help one another to expand their weapons arsenals and fight their enemies. ■



[youtu.be/
Nik14dfbYaM](https://youtu.be/NIk14dfbYaM)



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Half-truths and Lies Beautiful Deceptions.

In “Beautiful Deceptions” Philipp Schweighauser interprets motifs of deception and illusion in early American fiction and visual art. The art of the early republic abounds in representations of deception: the villains of Gothic novels deceive their victims with visual and acoustic tricks; the ordinary citizens of picaresque novels are hoodwinked by quacks and illiterate but shrewd adventurers; and innocent sentimental heroines fall for their seducers’ eloquently voiced half-truths and lies. Yet, as Schweighauser points out, deception happens not only within

these novels but also through them. “Beautiful Deceptions” examines how artists of the era at times acknowledge art’s dues to other social realms but at other times insist on artists’ right to deceive their audiences. Schweighauser, Professor of American and General Literatures at the University of Basel, argues that deception in and through early American art constitutes a comment on eighteenth-century debates concerning the nature and function of art as much as it responds to shifts in social and political organization. ■



Philipp Schweighauser: Beautiful Deceptions. European Aesthetics, the Early American Novel, and Illusionist Art. The University of Virginia Press, 2016, 264 pages, USD 45.00

Neolithic Europe The History of Crops.

This study by Ferran Antolín argues that early farming life may have been more multifaceted than previously thought, and puts forward a reinterpretation of the traditional views on farming, wild plant gathering and social relationships during the Neolithic in the North East of the Iberian Peninsula.

Antolín, investigator at the Institute for Integrative Prehistory and Archaeological Science at the University of Basel, presents the archaeological data from 17 archaeological sites.

The detailed investigations performed at the site of La Draga particularly stand out, as this is the only Neolithic site with waterlogged conditions of preservation in the Iberian Peninsula. The study reveals innovative data on the history of crops like tetraploid naked wheat, two-row barley, naked barley and opium poppy as well as on the role of wild fruits in the economy, thus completing an important piece in the puzzle of the investigations concerning the Neolithic in Europe. ■



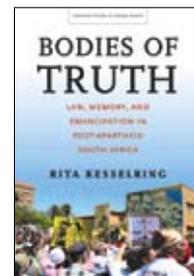
Ferran Antolín: Local, intensive and diverse? Early farmers and plant economy in the North-East of the Iberian Peninsula (5500-2300 cal BC) Barkhuis Publishing, 2016, 511 pages, EUR 55.00

Victims of Violence The Struggle for Justice.

The book “Bodies of Truth” offers an intimate account of how apartheid victims deal with the long-term effects of violence, focusing on the intertwined themes of embodiment, injury, victimhood and memory. In 2002, victims of apartheid-era violence filed suit against multinational corporations, accusing them of aiding and abetting the security forces of the apartheid regime. While the litigation made its way through the U.S. courts, thousands of victims of gross human rights violations have had to cope with painful memories of violence. They have also confronted an official discourse claiming that the Truth and Reconciliation Commission of the 1990s sufficiently addressed past injuries. This book shows victims’ attempts to emancipate from their experiences by participating in legal actions, but also by creating new forms of sociality among themselves and in relation to broader South African society. The author Rita Kesselring reveals that even when much is achieved legally in the struggle for transitional

justice, bodily experiences of victimhood continue to haunt the victims, and endemic, systematic violence continues to shape the political sphere long after it has ended.

In her innovative ethnography, Rita Kesselring – a Senior Lecturer at the Institute for Social Anthropology at the University of Basel – draws on long-term research with members of the victim support group Khulumani and critical analysis of legal proceedings related to apartheid-era injury. Her study is the result of almost two years of ethnographic research in South Africa between 2009 and 2013. Using juridical intervention as an entry point into the question of subjectivity, Kesselring asks how victimhood is experienced in the everyday for the women and men living on the periphery of Cape Town and in other parts of the country. She argues that the everyday practices of the survivors must be taken up by the state and broader society to allow for inclusive social change in a post-conflict setting. ■



Rita Kesselring: Bodies of Truth: Law, Memory, and Emancipation in Post-Apartheid South Africa. Stanford University Press, 2016 288 pages, USD 27.95

Animal-human embryos: monster or marvel?

Hybrid embryos are created by the addition of human stem cells to animal embryos. What ethical issues are involved?

Text:
David Shaw

In September 2015 the National Institutes of Health in the United States (NIH) suspended all funding for research involving hybrid embryos. The reason given was that the NIH wanted to consider the ethical issues raised by such research. Now, the NIH has opened a consultation on their plan to again fund research using so-called “chimaera embryos”. The type of embryos in question are early-stage animal embryos, normally up to two weeks old. The type of animal can vary, but normally research is conducted on mice, sheep and pigs; only rarely are great apes used. The human stem cells can be obtained either from spare embryos created for reproductive purposes (embryonic stem cells) or directly from humans (induced pluripotent stem cells). These human cells can then be inserted into the animal embryo, affecting its subsequent development.

Why is this research necessary? The NIH has two types of research in mind: adding human cells to animal embryos to affect the growth of particular organs, and also the addition of human stem

cells to the brains of more advanced animal fetuses. The latter type of study could be useful for research into neurodegenerative diseases. Hybrid embryo research is important because it allows scientists to study how stem cells change into different cell types, which is fundamental to understanding the development of our bodies and how they interact with disease. Such research could lead to treatments for many types of disease, such as cancer and Alzheimer’s disease. The NIH proposes to permit both these types of research, subject to extra ethical review by an expert panel.

The first ethical issue actually concerns the human stem cells. Some people object to the use of cells obtained from human embryos in research, because they believe that each embryo is a human life that should be respected. However, very few countries actually allow the creation of embryos for this specific purpose; the UK also permits the addition of rabbit mitochondria to human eggs to facilitate fertilization. Most embryonic stem cells used in research are actually derived from existing cell lines, and no



David Shaw is Senior Researcher at the Institute for Biomedical Ethics at the University of Basel. He was previously Lecturer in Ethics in the School of Medicine of the University of Glasgow and Research Fellow in Ethics, Philosophy and Public Affairs at the University of St Andrews. He is interested in all areas of bioethics, but particularly in research ethics and the ethics of organ donation.

(more) embryos need to be destroyed to produce these cells. For many non-religious people, the use of human embryos in research is justified by the potential benefits for people who are affected by disease, both now and in the future. In any case, most hybrid embryos are now created using induced pluripotent cells rather than those derived from embryos.

Some people also object to the use of animals and animal embryos in research. They argue that humans have no right to instrumentalize animals in this way, when doing so causes them pain and suffering. Again, however, most people agree that using animals for research is justified if it yields benefit for humans. Another ethical issue concerns the possibility of creating an animal with human features, such as a pig with a human face, for example, or producing animals that might be intelligent like humans. However, this is a misunderstanding of what is going on in this research: it does not aim to produce actual living animals that are carried to term, but only to conduct research on embryos and sometimes fetuses. There is no prospect of human-looking animals being produced.

One notable exception to this rule is research into using hybrid embryos to produce animals whose organs can be used for transplantation. Scientists in Japan and the United States have succeeded in using stem cells from rats to grow rat organs inside mice embryos. More recently, human organs were grown inside pigs. The next step will be to actually transplant one such organ into a human before beginning clinical trials. The advantage of this approach is that the organ can be grown using a patient's stem cells so that it will be compatible when transplanted, and the patient will therefore not have to take immunosuppressant drugs. Of course, there is a shortage of organs for transplantation, so any new source of organs is useful. One quirk of the Swiss law on embryonic stem cells is that it does not cover induced pluripotent stem cells derived from humans, meaning that the creation of human organs for transplant inside pigs is accidentally legal, even if no-one is actually doing such research in Switzerland.

The example of growing human organs inside pigs using stem cells brings us on to the last major ethical issue: the so-called "slippery slope". This argument is used in many contexts, including assisted suicide and privatization of healthcare, but in bio-

technology it is used to argue that a particular advance is just the first step towards "Frankenstein science" or "playing God". The implication is that if we permit the creation of chimaera embryos, we will soon be allowing everyone to create designer babies and engage in eugenics. Although Switzerland is a very progressive country with regard to assisted dying, its citizens generally seem to have a more conservative attitude with regard to biotechnological advances. At the Institute we recently asked patients about how they perceive synthetic biology, and many were very skeptical about genetic modification until the actual science and potential benefits were explained. Once they understood that many of their fears were misplaced, and that such treatments could be beneficial, their attitudes became more positive. We should not forget that developing treatments to treat sick patients is a fundamentally ethical endeavor.

Fears about chimaera embryos tend to be exaggerated. Scientists who are working with chimaera embryos do not seek to play God, but to help people; each new technology and innovation poses ethical issues, but the answer is to deal with each case as it arises, not to prevent a potentially helpful development because it might at some point lead to a development that might be ethically problematic. The NIH consultation suggests that scientists in the United States will soon be able to seek funding for this important research again. Hopefully some European countries will follow this example. ■

Fears about chimaera embryos tend to be exaggerated.

Likes for the lab.

Text: Olivia Poisson Photo: Florian Moritz

Martina Hesticová has turned scientific research into a spectator sport, with daily posts from the lab that have made the young Slovakia-born scientist something of a social media star in her field. However, anyone looking for selfies and self-promotion will be disappointed: the goal of Hesticová's posts is to fuel interest in the natural sciences. And it's working – her Instagram channel has almost 10,000 followers and counting.

Family website

Hesticová's enthusiasm for science seems to run in the family. When her grandfather retired after 40 years spent teaching mathematics and physics, her father set up a website to keep him busy. The site became an online repository for the former teacher's vast collection of math and physics exercises and explanations, intended as a resource for students.

Since her grandfather's passing, Hesticová has taken over, adding chemistry to the list of featured subjects. Today, "prikklady.eu" is a hugely popular online portal in Slovakia and the Czech Republic with around 5 million visitors a year. Since Hesticová's sister began translating the texts from Slovak into English, users from as far away as the US or India have also started using the portal. "I'm currently trying to persuade my husband to contribute with an organic chemistry section, but with no luck so far," says Hesticová, who is married to another

doctoral student at the University of Basel's chemistry department. Hesticová did not stop there, however. Around two years ago, seeking to promote the site to an even wider audience using social media, she began experimenting with various channels. "At first I didn't have a clue what I was doing, and kept having to look up terms like hashtag," she recalls. Still, she learnt quickly, and now posts photos and short videos from her chemistry lab every day. She has enjoyed the greatest success on Instagram, under the handle "@prikklady.eu".

The beauty of science

What started out as a way of promoting the website has evolved into a project of its own. While the website is designed to help students with homework or exam preparation, Hesticová uses Instagram for another purpose: "I see Instagram as an autonomous channel for science communication. As a researcher, I can use it to communicate directly with young people I would never reach using other channels."

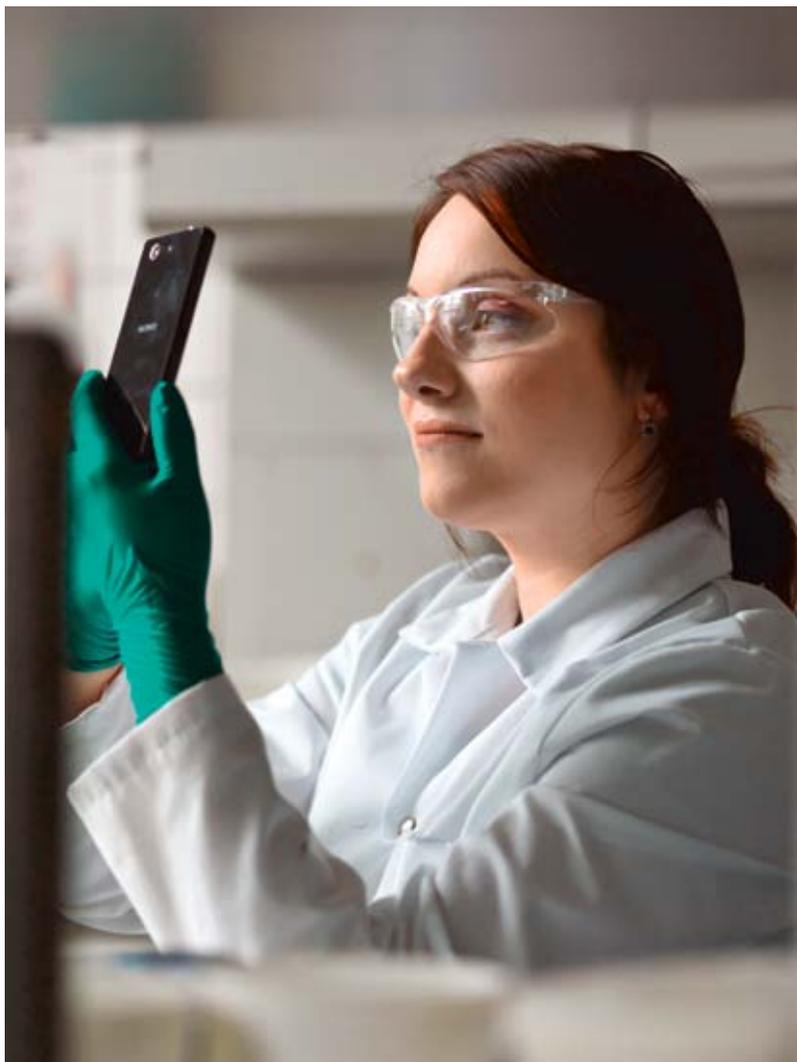
More than any other social media platform, Instagram relies on images – beautiful ones, to be precise. There is no shortage of inspiring subjects in Hesticová's lab: steaming chemical apparatus, sparkling laboratory glassware or fluorescent liquids – her photos showcase chemistry's aesthetic side. At the same time, Hesticová is well aware of the importance of finding the right balance between eye-catching images

and factual information, explaining the content of her photos and videos in comprehensive captions. Of course, she makes sure never to forget the two most important ingredients of social media success: humanity and humor.

Stories from the lab

In keeping with social media tradition, interaction with the community is another key aspect of Hesticová's Instagram presence. In the comments section, users often ask for advice about what subjects to study or information about the doctoral process and lab work. Whenever she can, she tries to provide direct help, or refers the question to a colleague. "If we want to inspire more young people to study scientific subjects, social media is the place to do it – this is where the target audience is to be found and where we can get through to them," she explains.

Although Hesticová uses her online presence to communicate with the public in an individual capacity, she has become something of an ambassador for the University of Basel, and a role model for women in research in general: "Helping more women to have the confidence to pursue a career in chemistry is something I both enjoy and believe in." She is by no means alone in her mission; social media abounds with female researchers posting about their work under hashtags like "#WomenInScience" or "#WomenInStem" in a bid to attract other young women to the field.



Doing a doctorate can be a lonely business. Not so for Martina Hesticová, a chemist with a passion for making science more accessible on social media.

Instagram: [priklady.eu](#)
 Twitter: [twitter.com/prikladyeu](#)
 Facebook: [facebook.com/priklady.eu](#)
 Website: [priklady.eu](#)

Martina Hesticová

was born in 1990 in Slovakia and studied biochemistry and bioorganic chemistry at the Comenius University in Bratislava. Since September 2013, she has been a doctoral student in the research group led by Professor Thomas Ward in the University of Basel's Chemistry Department, where she conducts research on the development and optimization of artificial metalloenzymes.

A passion for sharing

In science communication, Hesticová believes she has found her true calling. "I would like to turn my hobby into a career. My dream job after finishing my PhD is to work in science communication," she says. It all began with the website a few years ago, but her teaching duties as a doctoral candidate and work with students also helped convince her that conveying knowledge to others is what she enjoys the most.

However, the real turning point came last year, during a workshop held as part of the Antelope career program, aimed specifically at female doctoral students and postdocs at the University of Basel. "We were told to think about what sets us apart from other PhD students. That was when I realized how much I enjoy explaining science to other people," she says.

Hesticová's passion is not limited to the virtual world; she also regularly writes articles for the science page of a Slovak daily newspaper "The Daily N", and represents her department at events such as the Long Night of Science, Kids@Science or the Festival of Molecules, where she invariably fascinates children and adults alike with chemistry experiments. "I just think it's great when I get people excited about science – I'm always amazed at how many people take an interest." ■



Alumna at Work

Derya Tokay-Sahin, criminal court judge.

Text:
Bettina Huber

Photo:
Niels Fisch

This summer, aged just 27, the Basel University alumna Derya Tokay-Sahin overcame fierce competition to be re-elected as a judge on Basel's criminal court. Doggedness, discipline and determination have been her hallmarks ever since she was a child.

Derya Tokay-Sahin was born to Turkish parents in Basel. She spent the first five years of her life in Turkey, but returned to Basel for her schooling. At the same time, she had to learn German, as her main home language was Turkish. The sport of karate plays an important role within her family. Her father runs five karate clubs, and her older brother is a world and European champion. As a child, Derya Tokay-Sahin also became fascinated by karate, which she has been doing since she was seven years old. She attributes some of her determination to her training in this martial art.

While studying law at Basel university, Derya Tokay-Sahin served as a student representative on several university committees and – as you would expect – worked to promote her favorite sport, karate. After finishing her degree – in record time and with top marks – she trained as a private detective and did a number of internships to gain experience. One was at the forensics department of Basel University Psychiatric Hospital, as she

wanted to understand how reports on murderers and rapists are put together. She now finds that this helps her with her decision-making as a public prosecutor.

Derya Tokay-Sahin has already achieved a great deal. How does she do it? Well, she always dreamt of working as a judge. She loves going through trial documents, which read to her like a detective novel – except that everything in them is real. She does not mind working into the evening for the court, as she gets enjoyment from learning while she works. The key point for her, as someone interested in politics and a member of the Social Democrats, is that criminal law is about social issues. The focus is on people, not money.

As a Swiss person with Turkish roots, she is used to criticism. She sees her migrant background as helpful when assessing the credibility of offenders from a similar environment. She has already been criticized for that, but it does not bother her. She observes, “I don't base my decisions on the nationality of the accused. Swiss judges also pass judgment on Swiss offenders, don't they?” This committed young woman still has plenty of goals to achieve. She will sit her Bar exam in the spring; then she would like to get stuck into her doctorate. ■

Seminar with the Benefit Foundation

How do I start a business?

AlumniBasel's long-standing partner organization, the Benefit Foundation, is now offering a seminar for students and researchers at the university interested in starting a business. The first was held in August 2016 at the Advanced Studies Centre. Participants were introduced to a range of topics: stages of starting a business, coming up with a business concept, intellectual property, vision, producing a business plan, choosing a legal form, corporate finance and valuation, accounting, VAT, taxes, risk management, insurance and pensions, and cash and debtor management. The University of Basel is supporting the offer as part of a pilot project. Further seminars are planned. ■

For information, see the AlumniBasel newsletter and alumnibasel.ch

Workshop with René Egloff

Creative problem-solving.

The Basel ethnologist Dr René Egloff will share his knowledge and experiences at a one-day workshop on creative problem-solving. His theoretical approach is based on the creative problem-solving method (CPS), which was established and developed in the 1950s and 1960 by Alex Osborn, the inventor of the famous brainstorming technique, and Sidney J. Parnes. Participants in the workshop will also be introduced to different creativity techniques. Egloff can draw on expertise in a variety of fields. After majoring in economics at high school, he studied ethnology under Professor Till Förster in Basel and worked as an assistant lecturer at the university. He also has considerable practical experience from his work on a range of projects in Europe and West Africa.

The course is aimed at academics who want to develop their creativity in their academic work, as well as all those who rely on creativity at work or for leisure or who do not want to do without it: employers, managers, employees and freelancers. The workshop will take place on April 5, 2017 at the university's Advanced Studies Centre, Steinen-graben 22. The closing date for registration is March 23, 2017. ■

For information and to register, go to: advancedstudies.unibas.ch

AlumniBasel Hiking Weekend

Alpine botany on the Furka.

This year's alumni hiking trip – which again took place under the aegis of Basel University's Academic Alpine Club – was to the top of the Furka pass, where the Botanic Institute runs a famous research station.

Participants were able to test their fitness in an Alpine environment in the company of two very experienced mountaineers, Carsten Kroll and Katharina Ihde, who are active members of the Academic Alpine Club as well as of AlumniBasel. The walk started in Andermatt, where Rahel Wunderli, who has just completed a dissertation on the settlement history of the Urseren valley, gave them an introduction to the valley's past. Thanks to large-scale investment by Samih Sawiris from Egypt, Andermatt is experiencing an exciting new chapter in its history, which has seen many ups and downs.

The group's next stop, following a meandering climb, was the research and training station Alpfor, at the top of the Furka pass, where Professor Christian Körner and his students are examining the flora of the Alpine region. Their research is producing some extremely interesting findings – for example, in relation to climate. Armed with laser thermometers, participants were able to see for themselves the amazing climatic conditions that exist within these plain-looking plants and the vast array of weapons that nature has at its disposal to sustain life, even in this challenging environment.

In the evening, members of the group had a chance to get better acquainted over dinner and to continue conversations struck up on the train journey. As was the case last year, the group was made up of people from different disciplines and generations. Nearly all subjects and age groups were represented. Participants ranged from a 20-year-old economics student, a “young professional” molecular biologist, a cardiologist, a chemist, a GP and a psychiatrist through to a fit 82-year-old geologist and expert on crude oil, which made for a lively atmosphere. It therefore comes as no surprise that the AlumniBasel admin team has been asked to start making plans for the 2017 trip very soon. ■





Markus Klammer is an art historian and Schaulager Professor of ArtTheory at the University of Basel, specializing in the theory of art and aesthetics, the epistemology of psychoanalysis, theories of images, 20th-century French philosophy, and Situationism.

Photo: Andreas Zimmermann

Markus Klammer

Languages of Art: Nelson Goodman's theory of symbols.

“Both the sciences and the arts make use of symbols in a genuinely ‘aesthetic’ way.”

One particular book that has been part of my life in recent years is “Languages of Art” (1968), by the philosopher Nelson Goodman. Goodman studied at Harvard University, ran an art gallery in Boston while completing his doctorate, and was himself a professor at Harvard from 1968. His thought is shaped by that of Carnap, Quine, and Wittgenstein. The book develops a general theory of symbols in the arts, in which “symbols” are understood not as concrete manifestations of an absolute, as in the romantic/idealistic tradition, but rather as objects that refer to other objects. Goodman differentiates between pictorial and linguistic symbols, exploring their properties and how they relate to the things that they denote. Concerning questions of image theory and the relationship of images to language and the world, I find the book a constant source of reflection and intellectual unrest.

In Goodman’s view, what we perceive as the “world” is not an immediate reality, but something produced by our – historically, socially,

and culturally determined – use of linguistic and pictorial symbols. Our perception of the world is always bound up with the use of symbols. I have been particularly influenced by Goodman’s insight that the seemingly natural connection between symbols and things is systematically undermined in two areas that, at first glance, have little in common: the sciences and the arts. Both make use of symbols in a genuinely “aesthetic” way, by applying them experimentally to kinds of phenomena for which they were not really intended. This means that the sciences and the arts are always playfully generating metaphors that highlight particular aspects of unknown phenomena and “stylize” them, as it were, thereby anchoring the new in what is already familiar, thus making it visible and communicable. An important lesson I have taken from the book is that scientific and aesthetic learning and understanding are closely linked and that both are not only “metaphor dependent”, but directly connected with the productive dimension of metaphors. ■

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A selection of events. November–December 2016



November 14, 6.15 pm

You Learn the Most When You Find Your Beliefs to be False: Three Examples from Experimental Economics

Bernoulli Lecture by Nobel Laureate Professor Vernon L. Smith, Chapman University
In his lecture, Vernon L. Smith will address several propositions that were once commonly believed by economists, but that were not valid. He uses these examples to argue that it is when we challenge the validity of our personal beliefs that we stand to learn the most; when we must reexamine what we think we know, and learn from the experience.
University Kollegienhaus, Aula, Petersplatz 1, Basel

November 16, 10.00 am – 12.00 pm

Schoenberg and Hollywood Modernism

Professor Kenneth Marcus from the University of La Verne gives a lecture on Schoenberg's connection to Hollywood.
University Kollegienhaus, room 208, 2nd floor, Petersplatz 1, Basel



November 17, 7.15 pm

The Smell of Politics: Liberalism in Civilia and Townscape

Lecture by Professor John Macarthur, University of Queensland.
eikones Forum, Rheinsprung 11, Basel

November 21, 12.00 pm – 2.00 pm

Uses and Misuses of Assessment in Language Policy

Lecture by Dr. Gad Lim, University of Cambridge.
As principal research manager, Dr. Gad Lim heads research on the assessment of writing and speaking and on the International English Language Testing System (IELTS). Many students know, have taken or are planning to take the IELTS (or other English language exams) or they are thinking of careers related to language teaching. This lecture will give them some insight into that.
Department of English, great lecture hall, Nadelberg 6, Basel

November 22, 4.00 pm – 6.00 pm

Research as a Garden – Pulling out Weeds and Tending to Flowers

Lecture by Franziska Thurnherr, research fellow at the Department of English, University of Basel.
University Kollegienhaus, lecture hall 107, 1st floor, Petersplatz 1, Basel



November 23, 12.00 pm – 2.00 pm

Language, Writing and Memory

Lecture by the Lebanese author Iman Humaydan. Iman Humaydan is a Lebanese novelist and fiction writer. Her essays and journalism have appeared in German, Swiss, French, and Arab newspapers and magazines. She has published several novels and short stories. Based in Beirut, she currently is a Writer-in-Residence at Literaturhaus Basel. In her lecture Iman Humaydan refers to the consequences of the Lebanon war, emigration and the loss of home as well as chances for migrants in other places.
Department of English, great lecture hall, Nadelberg 6, Basel

November 24, 7.15 pm

Hinterland: Scale Urbanisation and Planning of Territory Beyond the City

Lecture by Milica Topalovic, Assistant Professor at the department of architecture from the ETH Zürich.
eikones Forum, Rheinsprung 11, Basel



November 30, 6.00 pm

3 Millennia of Condoms

Professor Anthony J. Ryan from the University of Sheffield will take a closer look at how chemistry changes everything, especially condoms.
Ackermannshof, St. Johannis-Vorstadt 21, Basel

December 8, 7.15 pm

Pyrotechnic City: On the Repeated Failure to Build an Unburnable Tokyo

Lecture by Liam Ross, architect and lecturer in architecture at the University of Edinburgh.
eikones Forum, Rheinsprung 11, Basel

December 12, 6.15 pm – 8.00 pm

A Pound of Flesh – Shakespeare's Equitable Drama

Lecture by Professor Ina Habermann, University of Basel.
University Kollegienhaus, lecture hall 115, 1st floor, Petersplatz 1, Basel



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