

**COPENHAGEN
EDITION**

**Amateur
rocket
builders
are aim-
ing for the
stars**

**Maximising
the minute
with the
new ESS
neutron
microscope**

**In the
Ukraine,
journalists
are either
'nashi' or
'vashi': ours
or theirs**



Journalist, iconoclast, Jew

Martin Krasnik's battle against stupid and hypocritical morons

THE MURMUR

THE DANISH SUMMER slips away as fast as an equatorial sunset. On September 23, the days will be as long as the nights. Soon after the clocks go back an hour. Before we know it the ground will be covered in snow and we will be gripped by the icy cold.

It's important to look ahead, to look beyond the current season and 24-hour news cycle. What does the future have in store? It's an impossible question and The Murmur doesn't pretend to have the answer. But we do try our best to choose stories that resonate beyond the now.

Denmark's relationship with its minorities is one such issue. Some political leaders will have you believe that some religious symbols are less offensive than others. How informed is that belief? Others argue that residents of some countries should be given preferential treatment when wanting to move to Denmark. But is a person's passport sufficient for making a decision about their ability to integrate?

These subjects are discussed in this issue. So too are a number of scientific and technological questions. Can a volunteer space agency really lift a person beyond earth's gravitational pull? The ability to program is becoming increasingly important skill, but is computer literacy high enough to snag a piece of an increasingly lucrative economic sector? And what new discoveries will the European Spallation Source, a ground-breaking new neutron microscope in Lund, uncover?

Turning over to our culture section, you can discover how the city's musicians are using Cold War air-raid shelters to perfect their craft, the rising appeal of flea markets and how the punk-anarchistic community inspired photographer Fryd Frydendahl.

While we try to be forward-looking, we also know how to bask in the victories of the present. Look to the right and you see a list of contributors. Without them this issue wouldn't have been possible. We are humbled that so many people are pooling their resources to make The Murmur. But we want more! Please get in touch if you have a story idea or suggestion.

THE MURMUR

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“If people have nothing better to do than be anti-Semitic, well that’s a great way to kill a weekend. They just better not do anything about it.”

MARTIN KRASNIK

page 8

CONTRIBUTORS



Matilde Kimer DR's Ukraine correspondent has travelled to the region 10 times since February 2014 to cover the conflict. She shares her experiences on page 24. @matildekimer



Henrik Chulu Writer, speaker and activist, Henrik is partner in Solobeta, a qualitative research consultancy, and co-founder of Bitbureauet, an internet policy think tank. He wrote an op-ed about the need for improved computer literacy on page 22. @chulu



Claus Ankersen Bilingual writer, artist and performance poet, Claus has published five books, performed in 16 countries and had his work translated into six languages. He writes a regular column that can be found on page 18.



David Gee (top), Steffen Foss Hansen David and Steffen penned the op-ed on the precautionary principle on page 19. David recently retired from the European Environment Agency and is associate fellow at Brunel University. He specialises in science, policy and emerging issues. Steffen is associate professor at the Environment Department of the Technical University of Denmark. He specialises in risk analysis and governance of nanotechnologies and materials, and the applicability of decision-making tools under scientific uncertainty.



Elias Thorsson Elias is pursuing his masters degree at the University of Copenhagen, studying American politics. He also contributes to The Arctic Journal and writes Month in Review and Observed for The Murmur.



Sara Houmann A freelance illustrator and graphic designer based in Copenhagen, her mix of analogue and digital techniques is permeated by a humouristic touch. She provides a regular illustration to accompany Claus Ankersen's column on page 18.



Nicolas Dalby A mixed martial arts (MMA) fighter, Nicolas also has a sensitive and artistic side. He shot the photographs of the Copenhagen Suborbitals engine test on page 12.

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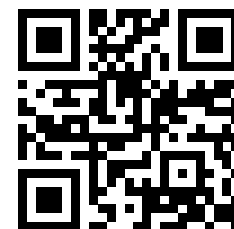
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MONTH IN REVIEW

RACIAL PROFILING

Police officers armed with automatic weapons swarmed downtown Copenhagen after a frantic woman reported a nervous, bomb-carrying terrorist on her train reading a book about terrorism. The 'terrorist' turned out to be English student Alisiv Ceran, who was nervous because he was running late for an exam. The "bomb" was his printer.



Photo: Anna Malzer

THEATRE PROJECT ACCUSED OF RACISM IN SWEDEN

Theatre company Global Stories has had to cancel a performance in Malmö following allegations of racism. The interactive performance invited participants to use make up and wigs to transform their ethnicity. According to the company, the purpose of the piece is to celebrate diversity and offer people a new perspective on the world and issues of race. The event was scheduled to be a part of the annual Malmöfestivalen, but after a series of complaints, organisers decided to pull the performance from the programme.

COMMISSIONER VESTAGER

Economy minister and leader of the Radikale party Margrethe Vestager has been nominated as Denmark's next EU commissioner. The European Commission, the EU's executive body, is led by 28 commissioners, one from each member state, and Vestager is expected to be assigned a high-profile position. She replaces Connie Hedegaard who has served as climate commissioner for the past five years.

ROYALS WILL RECEIVE MORE RICHES

Next year, Queen Margarethe and the royal family will receive an additional 9 million kroner, according to the preliminary budget proposed by the government. This will bring the royal family's annual allowances up to 106 million kroner.



GOVERNMENT PROPOSES INCREASED SPENDING

The government's proposed preliminary budget calls for spending to increase 18 billion kroner in 2015, bringing total annual expenses to 707 billion kroner. At the same time, the government estimates that public revenue will grow to 662 billion kroner, leaving a deficit of 45 billion kroner and bringing Denmark to the limit of an agreement with the EU requiring budget deficits to remain under 3 percent of GDP. Much of the increased spending will go towards wages, financial support for local councils and other overhead expenses. Some 5 billion kroner is earmarked for healthcare and 1.5 billion has been set aside for education. Development aid will rise to 620 million kroner. Socialistisk Folkeparti and Enhedslisten will be permitted to decide over 1.5 billion kroner in unallocated funds in exchange for helping secure passage of the budget.

MORE INVESTMENTS TO KEEP TRANSIT SYSTEM ON TRACK

Railway operator DSB has delivered a proposal to the government asking for 22 billion kroner to update and modernise the country's rail system. The funds would go towards buying 275 new trains and replacing diesel-powered engines with faster electric ones.



Photo: Frederik Rubensson

Elias Thorsson

BANK CLOSES ACCOUNTS OF RICH RUSSIANS

Nordea's Danish subsidiary has closed down a department that provided high-interest accounts to wealthy Russians, who are increasingly using foreign banks to protect their assets from foreign sanctions. The profitable accounts have been discontinued due to Western countries' intensified economic sanctions on Russia following the critical situation in the Ukraine.

Photo: Stig Nygaard



CONSTRUCTION OF A BIKE LANE THROUGH CHRISTIANIA WILL REQUIRE SPECIAL PROTECTION

The city has announced that the planned bike lane through Christiania, linking the city centre with Amager, will be patrolled by police and security guards. The bike lane was approved by the city in 2008. It was due to open this summer, but local resistance has resulted in construction being postponed indefinitely. The announcement comes in response to threats by residents of the commune who oppose its construction.

AIR FORCE RETURNS TO IRAQ

The government has voted to send an air force cargo plane to northern Iraq to deliver humanitarian aid to the war-torn region, as well as transport weapons and ammunition for Kurdish and Iraqi troops fighting Islamic State (IS) forces.

The proposal was met with widespread support in parliament, with only far-left Enhedslisten abstaining from the vote.

"We want to help the Kurds defend themselves against the extremists in IS, but it is paramount for us that this support will not lead down a slippery slope that ends with Denmark involved once again in a war in Iraq," said Nikolaj Villumsen, defence spokesperson for Enhedslisten, to Berlingske newspaper.



Photo: Nigel Duncan

JEWISH PRIVATE SCHOOL VANDALISED

Unknown culprits broke windows and wrote "peace in Gaza" and "no peace for you Zionist pigs" on the walls of Carolineskolen, a Jewish private school in Østerbro.

"We are afraid that the situation may escalate, and that somebody could get hurt," vice-principal Jonathan Fischer told Berlingske newspaper.

CONTAMINATED MEAT KILLS 13

At least 29 people have become ill or died since last September as a result of eating rullepølse cold cuts infected with listeria bacteria. The 13 dead were all elderly.

All of the tainted meat came from the same plant, which was closed on August 11.

"We expect to see more cases, since it takes a long time for someone to show signs of illness after becoming infected," said Steen Ethelberg, of Statens Serum Institut.



Photo: Jeremy van Beek



FOOTBALL DEAL DOGS CONSERVATIVE LEADER

New Conservative leader Søren Pape Poulsen got something of a rough start after being selected this month. It was revealed that a 3.3 million kroner deal to rescue the football club in Viborg, where he was mayor, was illegal.

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NEWSMAKER

THE POLITICS OF RELIGIOUS HEADDRESS

Though no longer leader of the Dansk Folkeparti, **PIA KJÆRSGAARD** has been enormously successful at keeping “value politics” on the agenda

IF A POLITICIAN’S INTEGRITY is judged by her consistency, then Pia Kjærsgaard might be in trouble. The values spokesperson for the Dansk Folkeparti (DF) is an unapologetic defender of Danish culture, but her views on minority rights and protections have been brought into question following two seemingly contradictory statements made this summer.

“Women wearing headscarves should reflect on the situation and realise that if they continue to be met with reactions in public, then they can just take the head scarf off,” she told Politiken, before telling TV2:

“It can be incredibly dangerous to wear the traditional Jewish yarmulke [...] because of the risk of violent assault. [...] I think it’s sad for Europe and sad for Denmark.”

On the face of it, it seems that Kjærsgaard is suggesting that while Muslim women should accept that headscarves are provocative, Jewish men shouldn’t ever feel under pressure not to wear a yarmulke in public.

Kjærsgaard was called in to defend her statements on DR2’s debate programme Deadline, where anchor Martin Krasnik (see interview on page 8) grilled her on the difference between the two religious symbols. She argued that Denmark was witnessing a rising anti-Semitism following the conflict in Gaza, and claimed that while the Muslim headscarf is a political manifestation symbolising the oppression of women within the



Focussed but not forgotten (Photo: Peter Stanners)

Muslim community, the yarmulke, on the other hand, is simply a religious symbol that signifies the wearer’s faith.

DF’s antipathy toward Muslims is well known. The party has expressed concern over the number of people from Muslim countries that have obtained Danish citizenship, and it wants immigration from these countries reduced.

But the issue at hand wasn’t immigration; it was the right of individuals in Denmark to express their faith through religious symbols. Why should people of some faiths accept harassment while others shouldn’t?

Kjærsgaard’s statement about the harassment of Jews living in

Denmark came after a journalist from Radio 24Syv experienced verbal threats while wearing a yarmulke in Nørrebro, which is known for its large Muslim population.

The issue was taken up by Rasmus Jarlov, leader of the political party Konservativer in Copenhagen City Hall, who organised a march through Nørrebro in support of the right to wear Jewish religious symbols openly and without fear. Around a thousand people marched without incident through the neighbourhood, but detractors argued that the march should have addressed religious freedom in general, rather than the rights of one particular group. Muslim women in Denmark are also subject to re-

ligiously motivated abuse, while Muslim men have been shown to be systematically discriminated at nightclubs – but neither Kjærsgaard nor Jarlov have held rallies to condemn this discrimination.

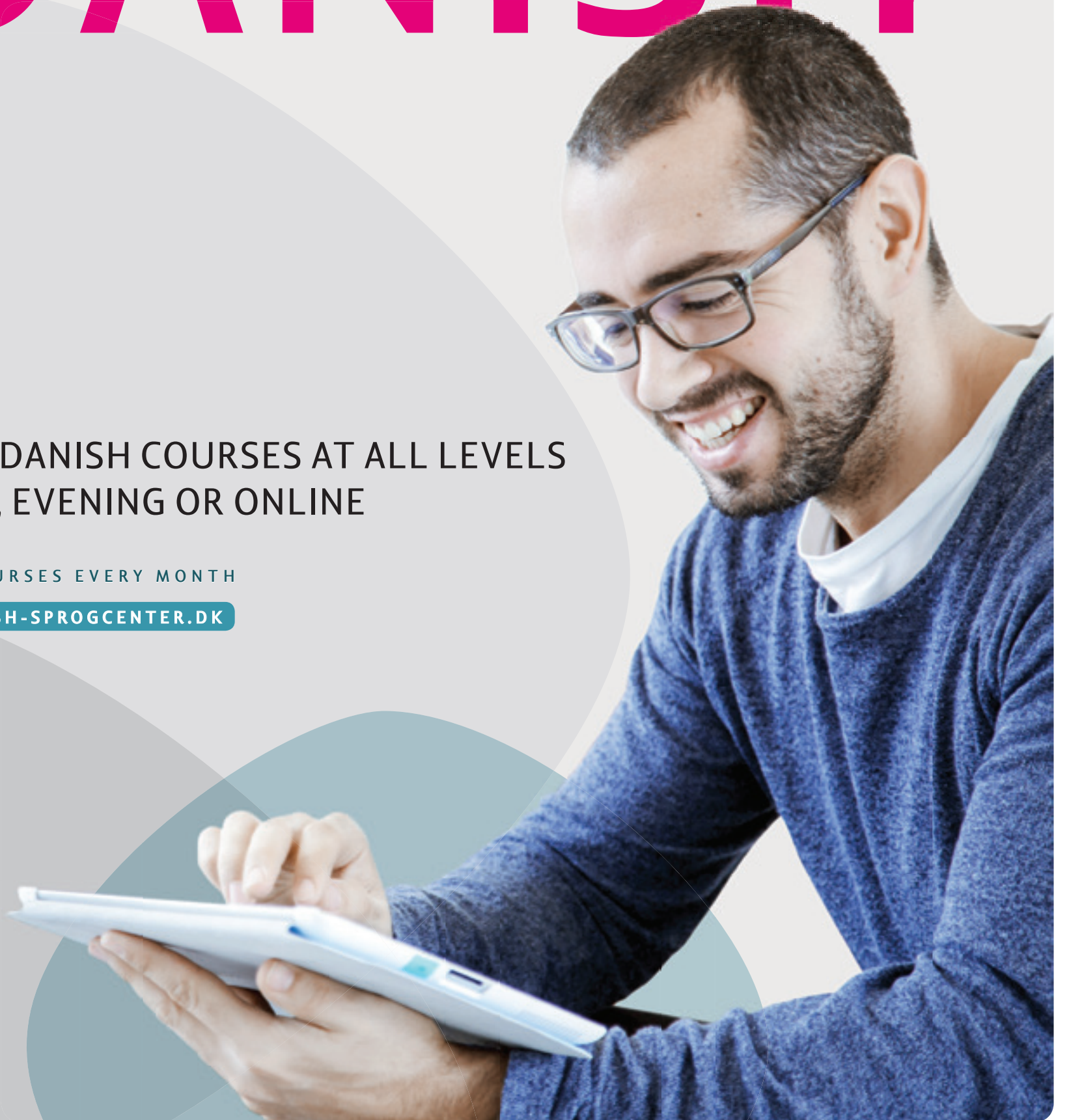
Kjærsgaard stepped down as DF’s leader in September 2012, but two years on her influence is still being felt in the political debate. Her party has almost doubled its support to over 21 percent since the 2011 election, and is a contender to be the most popular party at the next election, due within a year. Denmark would then be led by a party that argues that while religious freedom is an inherently Danish value, some religions are more equal than others. **M**

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Photos: Christoffer Rosenfeldt

“People hate each other.
That’s the way it is.”

INTERVIEW He's a bigger household name than most of his interview subjects, but **MARTIN KRASNIK** isn't universally adored. While his confrontative method divides public opinion, he sees it as a necessary tool for exposing people's beliefs and giving us a glimpse into power and those who wield it

THE PHONE RINGS. It’s Martin Krasnik. He apologises, but he needs to reschedule the interview. He’s simply too busy. Understandably. Over the last week he’s been under intense scrutiny for his coverage of the Gaza conflict. His employer, the state broadcaster DR, has been inundated with hundreds of angry complaints accusing the veteran journalist of not being impartial. Why? Well, he’s Jewish.

He swaggers through the lobby of DR’s headquarters a week later. On TV – where he hosts the debate programme Deadline – he’s a smartly dressed and imposing figure, firing questions at his nervous subjects. But as the photographer snaps away, the 43-year-old journalist looks a little dishevelled, dressed in a green T-shirt and hoodie combo and peering through smudgy glasses. It’s forgivable, and the photographer still manages to capture his signature smirk and boyish features before the interview begins.

“When you grow up in the Danish Jewish community, you don’t really notice that you’re different. You quickly get used to the fenced-in schools and security at the synagogue, but really it’s nothing compared to what it’s like in other countries. And until recently, I’d never actually experienced anti-Semitism. Over the past few weeks I couldn’t just go for a walk in Nørrebro. That would have been really stupid.”

He is referring to the multicultural Copenhagen neighbourhood where, a year earlier, he had walked wearing the traditional Jewish yarmulke. It was an experiment to discover whether it really was dangerous to be openly Jewish in Nørrebro. He received unpleasant verbal abuse but made it out unscathed. Though following the fall-out of a recent interview, he won’t be repeating it.

His subject was the Norwegian doctor Mads Gilbert, who tended the wounded at the Al-Shifa hospital in Gaza. He has accused Israel of genocide while refusing to call Hamas a terror organisation. Krasnik challenged Gilbert – who

Politicians, ministers, professors and lecturers, seem to think what I’m saying is always my own opinion. Some people are just fucking stupid.

was been widely consulted as a witness to the conflict by international media – and suggested that he wasn’t a reliable and impartial observer because of his known political activism.

The fallout of the interview was immediate. Krasnik received threats, and thousands signed a petition calling for journalists with Jewish backgrounds to cease reporting on the conflict.

“These morons have been connecting my Jewish background to the issue. You can find my photo placed next to the Israeli flag with the accusation that I’m a spokesperson for the Israel Defence Force,” Krasnik says with an exasperated gesture.

Krasnik denies that his Jewish background makes him more sympathetic to Israelis than Palestinians. In an interview a week before Gilbert’s, Krasnik grilled Israeli deputy ambassador Roi Dvir on whether Israel was really doing its best to avoid civilian casualties, given that hundreds of women and children had been killed during the Israeli offensive. Dvir hit back, accusing Krasnik of not expressing enough sympathy with Israelis who live in range of Hamas rockets.

Krasnik clearly plays devil’s advocate in his interviews and hammers his interview subjects with the same question until he’s satisfied with their answer. Often he isn’t. Last year he interviewed then justice minister Morten Bødskov about the new freedom of information act that limited public access to documents passed between civil servants and the government. Krasnik asked Bødskov 28 times for an example of why ministers need less transparency in order to do their jobs. Bødskov never answered.

“You could ask whether this style of interviewing even succeeds at making us smarter or wiser? Does it bring out new information? And the answer is: probably not. But the point is that it can offer a glimpse into power and how it works, and this is very important,” Krasnik says.

SCRUTINISING POLITICAL POWER

The way he sees it, politicians are unwilling to answer straightforward questions because they want to present politics as a sanitised and conflict-free arena. Denmark’s consensus-driven democracy rests on the assumption that politicians and civil servants have the same interests as the public. And when politicians are unable to answer very basic questions, it reveals that they actually don’t have the public interest at heart.

“The whole discussion of the freedom of information act is so Danish, because few are as closed as the relationship between politicians and the civil service. And this is connected to the false idea that we have a shared common interest. Why should we want to know what they are up to? After all, they know better! They will take care of it!” he exclaims sarcastically.

“It ought to be totally clear on what basis politicians are making policy. The freedom of information act was an obvious effort to make their decision-making even less transparent. And it was an incredible feat, because it was supported by the entire political elite.”

While Krasnik was widely praised for his interview with Bødskov, it’s often hard to tell where

Krasnik the journalist ends and Krasnik the opinionated iconoclast begins. He admits that sometimes he’s playing a role, and sometimes he isn’t. But he feels it’s should be obvious when he’s just trying to provoke a reaction.

“We’re talking about politicians, ministers, professors and lecturers, who seem to think what I’m saying is always my own opinion. Some people are just fucking stupid. The fact is that sometimes I agree with what I’m saying, and sometimes what I’m saying is totally bullshit in my opinion. But this is the way to confront people and reveal what they think. Of course what I have to say has to relate to the truth, but it’s simply one version of the truth.”

One of Krasnik’s most outspoken opinions is on the matter of the ritual circumcision of boys. Campaigners against the practice have sought to have it banned, arguing that it infringes on the boys’ right to choose. Krasnik has shot back, arguing that parents make plenty of decisions on behalf of their children, and circumcision is just one of them.

The circumcision debate exposes the invisible cultural gulf between Krasnik and mainstream Danish society. He went to synagogue, was educated at the pri-

FACT BOX – MARTIN KRASNIK

Born June 22, 1971 in Copenhagen.

Attended Carolineskolen and Ordrup Gymnasium before studying political science at The University of Copenhagen, The London School of Economics and Hebrew University in Jerusalem.

Started working at the weekly paper Weekendavisen in 1994 and became a member of its editorial team aged only 27.

First hosted DR’s Deadline in 2003 before returning to Weekendavisen in 2005 as its US correspondent. After a stint on TV2, he returned to Deadline in 2012.

His most controversial interviews include former justice minister Morten Bødskov, Islam critic Lars Hedegaard and Norwegian doctor Mads Gilbert.

vate, Jewish Carolineskolen, and attended the Hebrew University in Jerusalem. But he’s an atheist who, in a previous interview, referred to Carolineskolen as a ‘Sharia school’ for its religious orthodoxy. He’s also a Dane, and doesn’t think that one identity precludes the other, though some Danes are sceptical.

CONFLICT IS ETERNAL

“The circumcision debate is so much more intense in Denmark than in other European countries, which I think is because Danes are provoked by the notion of having a dual cultural identity. It’s perceived as a provocation, even though there are no obvious contrasts or contradictions. Identity isn’t seen as an individual choice that has no bearing or effect on your citizenship or loyalty or how you function in society. It’s seen as a collective issue, which I think is because as a pluralistic society, we are very young. When I was a kid, the only minorities were Jews and Greenlanders. There was no one else. So people in Denmark haven’t been forced to think about this at all.”

It’s not that Krasnik isn’t accepted and integrated. His performance on Deadline recently earned him the title of Male Host of the Year at the annual TV Festival, while Information newspaper lauded him for finally standing up to spin-trained politicians and their evasive answers. “It was about time the Krasnik method arose,” they wrote in the aftermath of his recent criticism.

He has no plans to leave our TV screens in the near future, for while print media is journalism’s holy grail, it lacks television’s emotional capacity.

“TV can be superficial and stupid and obvious. But while you

When I was a kid, the only minorities were Jews and Greenlanders. There was no one else. So people in Denmark haven’t been forced to think about this at all.

watch someone talking, you can detect their anger or bullshit or emotions. And we need more emotions in political debate. People don’t have political opinions because of some intellectual calculation. We have them because of how we are brought up and look at people and ourselves how we feel about the most important aspects of life. This is what politics is about. Any political attitude is rooted in a deep anger and insecurity and attitudes toward life and society, which are deeply connected to emotions and feelings,” Krasnik says.

He argues that the success of the populist anti-immigration party DF rests, in part, on their success in communicating through feelings. Krasnik recently took their values spokesperson Pia Kjærsgaard to task over her contention that the Muslim headscarf shouldn’t be afforded the same tolerance as the Jewish yarmulke (see page 5).

“I demonstrated that her arguments didn’t hold water, but she didn’t care, and I think her voters don’t care either. She doesn’t like Muslims, but she likes Jews. To her, there doesn’t have to be any comprehensive structure to that argument,” he says.

Krasnik’s philosophy of confrontation rests on a belief that conflict cannot be resolved. A good TV debate isn’t supposed to sway people from one side to another, but rather expose the feelings that we have.

“People hate each other. That’s the way it is. And it’s OK, as long as they don’t act on it. Then I think it’s fine. If people have nothing better to do than be anti-Semitic, well, that’s a great way to kill a weekend. They just better not do anything about it.” **M**

PETER STANNERS



ANGRY LETTERS

Above is a selection of some of the messages Martin Krasnik received following his interview with the Norwegian doctor Mads Gilbert. They are translated below:

Krasnik your arrogant, rude and one-sided and pro-Israeli mouth makes me sick. You're simply a mouthpiece for Israeli propaganda. You just prove how one-sided DR is and that DR is simply pro-Zionist propaganda. Krasnik you are a sissy journalist and I have no respect for your arrogance and defence of the killing of children. Especially not your deceptive and manipulative façade. You are insult to the journalistic profession. You are an insult to truth!

He is, after all, paid by Zionists to be their dog and spout all their shit!!!! Simply embarrassing.

Deadline's journalists are Zionists and therefore liars !

Fuck you you damned murderer, hope you experience the same fate as those in Gaza you fucking pig.

THE MURMUR NEEDS YOU!

The Murmur is looking for more contributors to help us report on the issues we think are important. Are you a specialist in an overlooked field? Have you bumped into someone with an interesting story? Do you think there are important issues that are affecting Denmark that aren't being talked about? We want to hear from you!

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The open source space race blasts off

COPENHAGEN SUBORBITALS wants to be the first volunteer organisation to put a person in space and return them safely. But after the departure of its two founders this year, and a spectacularly unsuccessful engine test this summer, the question is whether good intentions can ever conquer gravity

THE WIND blew a gale as dozens of onlookers trained their binoculars on a skinny white object in the distance. Fastened to the ground was a rocket towering 20 metres into the air and shielded with breezeblocks. The countdown ended, smoke billowed, the engine roared and flames flared. But things didn't go according to plan, and soon the entire rocket was engulfed in yellow flames. The HEAT-2X engine test failed. But it wasn't a failure.

"We're still in high spirits," explains Mads Wilson, spokesperson for Copenhagen Suborbitals (CS). "We knew there was a good chance of something like this happening. We just need to go back to the drawing board and design the engine a little differently."

Founded by Kristian von Bengtson and Peter Madsen in 2008, Copenhagen Suborbitals wants to be the first volunteer organisation to transport an astronaut 100km above the earth's surface and back safely. Von Bengtson is a space architect who has worked with NASA and the ESA, while Madsen is an artist, inventor and entrepreneur who has also built submarines.

From their base on Refshaleøen on the outskirts of Copenhagen, 50 volunteers pool their skills and resources to accomplish their lofty goal. No one is employed full-time (Wilson works elsewhere as a data analyst) and their 1.2 million kroner annual budget is provided by the organisation's sponsors and 1,000 individual sponsors from around the world.

"What we share is that we were glued to our televisions watching the shuttle launches in the 1980s, and dreamed of building our own rockets. Now we have the knowledge and skill to do it," Wilson says.

CS is more than merely an amateur rocket club. To safely launch and return a human being from space requires a range of technologies, including a guidance system, a spacecraft for transporting the human payload, and parachutes to float it back to the earth's sur-

We really want our work to contribute to an open source method of spaceflight for all mankind.

MADS WILSON

face. The organisation has experienced its share of successes – the 2011 launch of the HEAT-1X engine – and setbacks – the malfunctioned static test of the HEAT-2X engine as witnessed by The Murmur this August.

HUMAN ERROR

But CS's greatest challenge has not been its technological resources, but its human ones. Madsen and von Bengtson's tumultuous relationship finally reached its breaking point in February, when von Bengtson announced his departure. He went on to join the Mars One project, which plans to land a human on the planet before 2025, while Madsen soldiered on with a new board overseeing the project.

Madsen couldn't hold the organisation together, however, and several key volunteers also left CS following von Bengtson's departure. The writing was on the wall, and in June, Madsen announced that he too would be leaving CS. Von Bengtson immediately returned as a consultant, along with a number of the volunteers who had left

in frustration at Madsen's fiery and domineering temperament.

"Peter is a very unique individual, but he has no other obligations," Wilson explains. "He wants to work 24 hours a day. But he's also an artist, which means he quickly loses interest and can't cope when things get big and complicated. He wants to be able to oversee it all, but he can't."

The flat organisational structure of CS that so frustrated Madsen isn't unusual in Denmark, where volunteer associations are an integral part of society. The organisation is also transparent, publishing the results of its tests online, where it keeps the world abreast of its progress.

"We really want our work to contribute to an open source method of spaceflight for all mankind. People have noticed how open we are compared to private companies that are very secretive with their records, but we want to share everything, even our mistakes," Wilson says, adding that only the rocket's guidance system is kept secret since, in the wrong hands, it could be used in weaponry.

Wilson expects the organisation to fulfil its mission within 10 years, though the time frame will be dependent on its budget. Additional money would enable them to outsource some of the more tedious tasks, such as welding. In the meantime, it is developing the rocket in two parallel tracks. One track is developing a small engine that can be used to test the subsystems such as the guidance system and parachutes. The other is developing a large, stable rocket that can lift the human payload.

CS is also working on a special escape system to get the astronaut to safety if the rocket malfunctions.

"One of the major problems with manned spaceflight is making it safe for the astronaut. Peter is continuing to develop his own rocket, and I'm confident that he can build something that can fly. But putting a man in space requires so much more than that. You need electricians, doctors and engineers. Going up isn't the hard part. Coming down is." **M**

Peter Stanners



Rocket enthusiasts relax before Copenhagen Suborbitals tests the HEAT-2X engine on Refshaleøen (Photo: Nicolas Dalby)

Small, smaller, ESS

Building the world's most powerful neutron microscope will help scientists see individual atoms. But for the universities that will run the facility, it is just one aspect of a much bigger picture

IT'S HARD TO TELL FOR SURE, but the image on the monitor looks like a bone of some sort. Possibly a vertebra.

Henning Friis Poulsen opens the doors on the cabinet-like piece of equipment the monitor is connected to. Inside are a number of metal contraptions and a tiny jaw.

"I think it's a mouse," Poulsen, a physicist at the Technical University of Denmark (DTU), says. "Let me call Carsten."

A few minutes later. "Carsten says it's a water rat." (That's what Danes call a *mosegris*.)

Carsten – Carsten Gundlach, a research engineer – shows up. The first thing he does is hit a key on a computer. The grainy image becomes a highly detailed 3D-scan. Then he explains why equipment that fills nearly half a room is being used to scan the jaw of a common rodent.

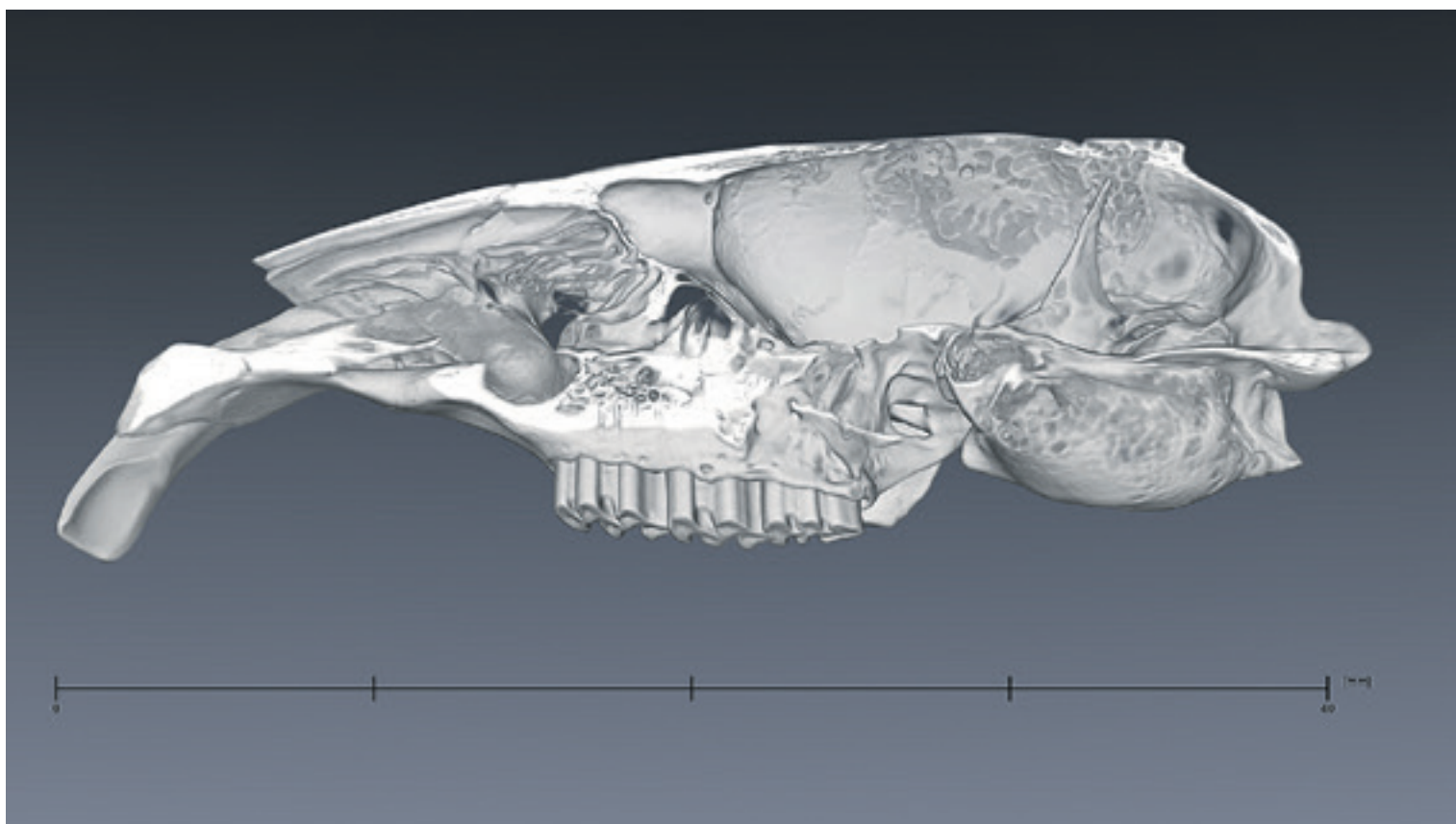
"The Zoological Museum asked us," he says, handing over a box, about half the size of a cigar box. It's filled with small envelopes and plastic bags he says contain bones. It's hard to tell, so just take his word for it.

"Imagine you had a skeleton that was rare and this small," he says. "You wouldn't really want people touching it, because it might break, but neither do you want to make it unavailable for research. What do you do? We can make this three-dimensional image. If that's not enough, then I guess we could also make a copy using a 3D printer."

Scanning water-rat bones and making 3D casts of them, Poulsen explains, is an example of how DTU works with outside organisations, and it is that mind-set he expects to carry over to a similar piece of equipment currently being built in Lund, Sweden, even though he admits it will be on a different scale.

"Right down to the atomic level," he says. "Although often nanometre and micrometre will be sufficient."

Ironically, to see something that small, you need something really big (as in two square kilome-



A highly detailed 3D scan of a water-rat skull made by bombarding it with neutrons

ters). And you need a lot of money (like 15 billion kroner). What you need, Poulsen says, is a spallation source.

"It's kind of like a microscope." It's obvious, though, that by microscope, he doesn't mean the one you used in your school's lab. Or anything even close.

In the first place, instead of light, he explains, a spallation source bombards an object with neutrons, one kind of subatomic particle, to see what it looks like inside. In the second, that microscope will be a research facility that, when completed in 2019, will keep 3,000 scientists busy.

Poulsen, it should be noted, has more than a passing interest in the spallation source being built in Lund. In addition to his duties as professor, he is head of a project responsible for making sure that Danish companies will benefit as much as possible from the facility, known as the ESS – European Spallation Source.

"DTU and the University of Copenhagen already have a good reputation, but this is going to be another way we can promote our-

selves. I personally travel to similar facilities in France, the US and Japan to conduct my research. This will allow us to keep that research here at home, but, not only that, it will bring people here to do theirs."

Some 17 countries are chipping in to pay to build the ESS, which turned the sod on September 2. For that, their researchers will get access to the facilities in Lund and Copenhagen, which will host the data processing centre where the ESS data are crunched. But it is the two host cities, and the region as a whole, that will reap the biggest rewards, both by making local universities more attractive places to conduct research, but also by making the area an attractive place for research-intensive companies to settle down.

"Of course this is a lot of money, but companies are very particular about where they put their research facilities, and this will show them we are serious about wanting them here," Poulsen says.

As an example, Poulsen points to a similar collaboration between

Manchester University and two facilities like ESS near Oxford. The university acts as a portal to the facilities and has 80 companies as customers. In 2013, BP, one of their biggest customers, built a £100 million research division in Manchester so it could be close to the data centre.

That is where DTU's experience working with companies – and museums – will be valuable, Poulsen reckons.

"We already understand that companies need their data yesterday, not in six months. And we respect that the information we're dealing with will probably be something they want to keep under wraps."

But just because Poulsen understands the need for things like secrecy doesn't mean he's always happy about it.

"We want to use this to increase collaboration between universities and business as much as possible, and what better way to do that than to say someone made a breakthrough using our equipment." ■

Kevin McGwin

RESEARCH

GENETICS SHOWN TO MAKE SMOKERS SMOKE MORE

If you can't help but smoke a pack a day, go ahead and blame your genes. A new study from the University of Copenhagen has shown that people who inherit a specific gene from both parents smoke 20 percent more than smokers in general.

The evidence that heavy smoking is linked to genetics arose from a study of over 55,000 people, who were followed for ten years. While smoking has long been known to kill, this study is the first to prove it.

"It might seem obvious, but this is the first time that this sort of study has shown a direct causal link between smoking and mortality," said professor Bent Nordestgaard.

BARBECUES POLLUTE POPULAR RELAY RACE

Runners at the popular DHL relay race are exposed to unhealthy levels of ultra fine particulate pollution. The culprit is the many barbecue grills that are lit to feed the hungry spectators, creating dangerously high levels of the particles in the process.

Copenhagen University Master's student in chemistry Maria Bech Poulsen measured particulate levels on an underground train platform at Nørreport station. The level of particulate pollution created by the diesel trains was as high as what she found at the outdoor race in Fælledparken.

The particles are dangerous because of their size, mere micrometers, that enable them to travel deep into the lungs.

MAKING THE INTERNET TEN TIMES FASTER USING MATHEMATICS

Danish and US researchers have developed software that can increase internet download speed by a factor of five. The new software, developed by researchers from Aalborg University, Massachusetts Institute of Technology and California Institute of Technology, is getting international attention.

Internet communication formats data into packets, but to ensure that the signal arrives in its original form, it is often necessary to send packets several times, slowing down the network.

The researchers solved the problem with a new type of network coding that sends the signal in a different way, one which doesn't require the packages to be sent again if an error arises.

Instead, a mathematical equation rebuilds the missing data.

"This has the potential to change the entire market," said Frank Fitzek, a professor in the Department of Electronic Systems at the University of Aalborg.

"In experiments with our network coding of Internet traffic, equipment manufacturers experienced speeds that are five to 10 times faster than usual. And this technology can be used in satellite communication, mobile communication and regular internet communication between computers."

Network coding has a large application field, including internet of things, 5G communication systems, software defined networks, content centric networks, and distributed storage solutions. **M**

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Copenhagen Career Program is part of Jobcenter Copenhagen International and situated in International House Copenhagen. The department is responsible for administrating the Integration Act in the municipality of Copenhagen.



“Brazilians are not second-class citizens”

Liberal party Venstre wants to make it easier for citizens of some countries to live and work in Denmark. Brazil is not one of them. In a letter to the party's foreign spokesperson, Søren Pind, the Brazilian Embassy argues that the policy is misguided. Read it in full below

DEAR MR. SØREN PIND,

“I am a master of my silence and a slave to my words” – Thomas Carlyle.

I am writing you to comment on a statement made on public television this week concerning a future immigration law to be considered by the Venstre party. According to citizens, both Brazilian and Danish, who contacted this Embassy, your comments on this future proposal from Venstre referred to eventual Brazilian immigrants as liable to "second class treatment", intended for those who would not be granted a preferred channel and who do not integrate well.

Even though I am a liberal in my political and social beliefs, and am convinced that people have the right to say whatever they want freely, I also believe that when we say something freely we also have to listen. And I also believe that the freedom to say things has consequences that we have to cope with and reflect upon before we speak.

You mentioned that Brazilians are liable to this "second class treatment" and that a future immigration law would take as its main criteria the United Nations Human Development Index (HDI).

Without trying to teach you or Venstre how to develop a national policy for immigration, my first remark is that the HDI is a very relative index, and definitely not a reliable tool for developing a national policy on immigrants. These policies usually take into consideration the strategic areas of economic, social or cultural development that a country wishes to develop, in order to attract skilled workers, students or professionals in service, industry and agriculture. The HDI alone, in the

I am very worried when legislation classifies persons or groups of persons as white, black, gays or lesbians, Catholics or Muslims, green or blue, first or second class.

case of Brazil, for instance, is a very weak criterion.

Brazil is the world's sixth largest economy, and has 200 million people, out of which 190 million enjoy a relatively good quality of life (upper, middle or lower-middle class), education, work and health, while about 10 million live in poverty (under the middle class and below the poverty line). Our aim in the short run is to bring those 10 million people into the middle class. Even if our HDI is below that of the present developed nations, we are very close to it. If one read only the newspaper Politiken, one would think that all Brazilians live in "favelas" (slums), but the percentage of the population living in poor slum conditions is five percent, and the government has instituted housing programs that are continuously eliminating such conditions.

Brazil has the largest industrial base in Latin America, at least 20 highly developed urban centres with millions of citizens enjoying a high quality of life, the most sophisticated universities in the region, modern capital-intensive agriculture, a solid and modern service sector that includes financial services, as well as centres of excellence and innovation, such as the aeronautical industry (you probably fly on the jets we build at EM-BRAER), the oil industry, and the automobile industry (Mercedes Benz, BMW and VW are increasingly opening factories in Brazil). Not to speak of the more than 50 Danish companies that invest and have settled today in Brazil, leading to a flow of trade and people from both countries (you probably don't know about that either).

All this because Brazilian nationals are known to be skilled, educated and disciplined workers. Without extending myself

to explain the Brazilian nation, which you seem to know very little about except for the pictures printed in Politiken of a minority living in poor conditions (as if, for instance, the only pictures in a newspaper overseas about beautiful Copenhagen were those of its most depressed areas and not of Nyhavn), you apparently have no information about the characteristics of Brazilian emigration and the behaviour of Brazilian nationals when they choose and are accepted to live in a foreign land. Let me clarify:

Brazil is a country of immigration more than emigration. We are made up of Europeans, Africans, Arabs and Asiatic peoples. An important part of our population is also made up of the original indigenous peoples that populated Brazil before the arrival of the Portuguese. Our blood is made of immigration.

Emigration is not an important trait of our society. Brazilians prefer to live in Brazil, and we are in love with immigration from the outside. But of course there are emigrants. The flow has been decreasing, but there are those that go overseas to work, study or because of family.

Emigration is a recent phenomenon, starting about 25 years ago. The main destination countries of emigration are the USA, Portugal, Paraguay, the UK and Germany, but the USA stands out as the leading one, with about 1.4 million Brazilians. In these countries, we are treated as first class citizens. We have a small amount of emigration to Denmark too, but since the Danish population is not big, it could not be as significant as in other countries mentioned.

But there are about 3000 Brazilians living here. And they are first class citizens. They are skilled workers (in the oil industry, energy and service sectors), students (in Copenhagen University and in Aarhus), and artists, as well as Brazilian men and women who married Danish citizens (our peoples get along very well, you see!). And you have probably never heard of one of the 3000 Brazilians working, studying or married in Denmark that is unemployed or has problems with the police, or is here illegally. Have you ever read that in the press, even in Politiken? This behaviour is the same in the US, Portugal, the UK, Germany and in our neighbouring countries.

Liberal that I am—and I am sure that you, being a member of Venstre, are also—I am very worried when legislation classifies persons or groups of persons as white, black, gays or lesbians, Catholics or Muslims, green or blue, first or second class, etc.

We are not worried whether we would receive a preferred channel in Venstre's immigration policy, as this is an internal matter for Denmark. But we are worried when Brazilians are not perceived as well as they should be. We are already treated very well in Denmark and vice-versa. Danes and Brazilians don't need tourist or business visas, and the numbers of Brazilians emigrating to Denmark are relatively small. Brazilian immigrants are always very well adapted. And this has nothing to do with the UN's HDI.

Best regards,

Rafael Vidal, Minister Counsellor,
Embassy of Brazil Denmark

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Illustration: Sara Houmann Mortensen

On when to say ‘yes’ and when to say ‘no’

IN TODAY’S WORLD, one of our biggest challenges is to say ‘no’ to the right things. ‘No’ to the supermarket shelves bulging with fat, sugar and prefabricated foods of all kinds. ‘No’ to toxic toothpaste and tomatoes. ‘No’ to fake spring water and consumer goods produced by underprivileged child labour. It’s not easy.

In fact, it is incredibly hard. Almost impossible. This is no secret to the manufacturers and distributors of these so-called ‘goods and services’, which could be more accurately named ‘evils and entrapments’. Let us use the otherwise-innocent tomato as an example. What is now produced, marketed and sold as an ‘ordinary’ tomato is in fact little more than a evil clone, loaded with toxic pesticides and almost completely deprived of its natural nutrients. The ordinary tomato is now manufactured, marketed and sold as an organic tomato. A biodynamic tomato. Really, it’s just a normal tomato.

The same goes for all produce. Whenever you see a banana labelled ‘organic’, rest assured that the other bananas in the unmarked box are slightly poisonous. Not enough to see, smell, feel or taste, but enough to have a long-term deleterious effect on your health. Some farmers don’t eat the ‘ordinary’, ‘conventional’ potatoes they grow.

It’s hard to resist the temptation and say no. Unfortunately, there is also a class element in-

involved. Organically grown – not to mention biodynamically-farmed-super-moon-calendar-yin-yangish-Rudolph-Steiner veggies – don’t come cheap. In fact, only the most privileged can afford to run a completely organic household made up of two parents and two kids.

Manufacturing, distributing and selling toxic things, be they electronics, toys, clothing or foods, should be considered a crime against humanity and treated as such. This is not news, the informed reader might say. And while this is regrettably true, Danish food minister Dan Jørgensen’s ‘gurken-zeit’ crusade against unhealthy Danish food habits, as well as his recent ‘ministerial action’ on listeria poisoning, have once again raised the question: is our government really working for the greater good of its citizens, or for the greater good of its corporate sector?

In fact, Jørgensen’s crusade smells of the deep, dark corners of the food industry. I might have written ‘well-meaning’ crusade, were it not for the fact that Jørgensen’s Food and Agriculture ministry has actually pushed to dramatically increase legal levels of truly toxic pesticides in meat and other foods. According to the newspaper *Arbejderen*, the new threshold for some pesticides will be as much as three thousand times higher than before. While the ministry did open the proposal to public comment, the consultation period lasted only six days over the

Manufacturing, distributing and selling toxic things, be they electronics, toys, clothing or foods, should be considered a crime against humanity and treated as such.

Claus Ankersen

Ascension Day bank holiday, leaving a mere two working days for submissions.

Sure, it’s not exactly news that political institutions bend the rules to serve their agendas. But a stench is also rising from some supposedly impartial organisations meant to serve the public good. Take the European Food and Safety Agency, an independent agency spawned by the supranational overlord that is the EU. According to a report by the Corporate Europe Observatory, half of the EFSA’s 209 scientists have direct or indirect ties to the food industry.

“Even without checking for undeclared interests, the number of conflicts of interest in this agency is very worrying,” says Stéphane Horel, who co-wrote the report. “Experts with conflicts of interest dominate all but one panel. We found that the bulk of conflicts are from research funding and private consultancy contracts, but certain crucial institutions for scientists (scientific societies, journals) are also targeted by industry lobbying, and EFSA seems to ignore this.”

So who are these powerful national agencies – the operational divisions of the ministries themselves – working for? Is it the citizen? You and me? The guy next door? Or is it corporate, capital interest? The answer, dear reader, is sadly obvious. These formerly-trusted entities, once believed to provide a well-informed and value-neutral barrier between the politi-

cal tide and good governance, that are supposed to work in the best interest of citizens, really work for a whole other set of interests. We are not, in other words, their primary clients. Companies are. The huge slaughterhouses are. The pig-farmers are. Faceless conglomerates with only greed and survival on their minds are their real clients. Not you and I.

And this is another hard thing to keep saying no to. But even though it may seem like the walls of the castle have no ears, and that our voices are useless, we need to keep saying ‘yes’ to the right things and ‘no’ to the wrong. No matter how hard it is and how confusing it all seems. Even if it means looking to alternative media, like The Murmur. Even if it means putting your ear to the ground and sniffing the air.

We need to read between the lines, because neither the private sector nor the government will do it for us. Their agencies, and the civil servants working for them, will become ever more politicised, spending more on ‘informative’ campaigns of persuasion to modify our opinions and perceptions of them, while leading us all down the same road paved with good intentions, straight to you-know-where. Nobody needs that. So lift your finger and say ‘nay’, or lift your thumb and say ‘yea’. But please do it right, because it is among our biggest collective challenges. ‘Yea’ to life, love and laughter. ‘Nay’ to slave-planet poisonous. **M**

The downsides of innovations: anticipate and act rather than ignore?

TECHNOLOGIES and innovations have helped to eradicate much poverty, enrich many lives and cure some deadly diseases. But technologies can also be malign. Asbestos turned out to be malevolent, causing hundreds of thousands of excruciating deaths and much economic damage. And while measures have been taken after the fact to protect people and environments from some harmful innovations, such as leaded petrol, we have usually acted far too late.

The first observations that asbestos was harmful were made in 1898, but it wasn't until 1999 that the EU banned it. The first evidence that CFCs were accumulating in the stratosphere and breaking down the ozone layer that protects the planet from harmful ultraviolet radiation was discovered in the 1970s, but it wasn't until 1989 that the Montreal Protocol began to slowly limit global CFC emissions. Despite this action, the 'ozone hole' is still not fully closed.

Both time to harm and time to repair can be decades long: but could we have anticipated these hazards and acted sooner? What can we learn from earlier examples of harm that could help us to minimize the costs, whilst maximising the benefits, of current and future technologies?

The Copenhagen-based European Environment Agency has published two reports on *Late Lessons from Early Warnings* (EEA, 2002, 2013) which address these issues. The reports analyse over 30 case studies to see whether more anticipatory research, and/or precautionary actions on early warnings, can minimise harm to people and the planet without compromising the benefits of new technologies and products. One of many problems identified was that the

short-term costs of preventive actions are usually tangible and clearly allocated to specific risk-creating corporations, whereas the costs of failing to act are usually long-term, less tangible, and distributed across much of society, thus presenting powerful political obstacles to anticipatory actions on the early warnings of harm.

In the second volume, *Late Lessons from Early Warnings: Science, precaution, innovation*, the EEA found that cases of misuse of the precautionary principle are rare, the fear of its use is largely misplaced, and that precautionary actions can stimulate, rather than stultify, innovations. Some people have argued that the precautionary principle needlessly regulates technology before it has been 'proven' to be harmful.

But the report found few examples of true 'false positives', that is, instances where government regulation based on precaution turned out to be unnecessary or overly restrictive. Of the 88 alleged false positives studied for the EEA by Steffen Foss Hansen of the Technical University of Denmark, only four were robust "false positives", and only one of these, the ban on irradiated food, was a European example; the other three were from the US.

But why is there a scarcity of genuine false positives, compared to the large number claimed by critics of the precautionary principle? A contribution to the mismatch between the rhetoric and the reality of false positives comes from the 'product defence' strategies of companies whose short-term profits are threatened by evidence of harm from their products. These strategies were documented in the chapter in *Late Lessons* about the tobacco industries'

What can we learn from earlier examples of harm that could help us to minimize the costs, whilst maximizing the benefits, of current and future technologies?

David Gee &
Steffen Foss Hansen

response to the evidence about passive smoking, strategies later emulated by fossil fuel and other corporations.

MORE RESEARCH INTO HAZARDS

A more substantial reason for the scarcity of genuine false positives is that the burden of evidence required to prove a false positive is very high. It takes decades of monitoring and research to establish robust evidence of harmlessness. But how much research into the potential hazards of new chemicals, products, and technologies is actually carried out? And is it done in time to anticipate and minimise harm, and to prolong the commercial life of the new technologies?

An analysis of 79 environment and health journals from 1899 to 2012, which Philippe Grandjean from the University of Southern Denmark published in *Late Lessons* (2013), showed that most research on the hazards of chemicals had focused on well-known hazards, such as those from heavy metals, PCBs and DDT, while there was little research into emerging chemicals identified as priorities by the US Environmental Protection Agency.

What about the new bio-, nano- and information technologies? Hansen found that between 1993 and 2013, only 0.6 percent of the EU research and technological development (RTD) budgets were set aside for research into environmental health and safety (EHS). For example, between 2007 and 2013, some €31 billion was set aside for RTD into nano-, bio-, and information and communication technologies (NBIC), but only 1.3 percent was spent on investigating their potential hazards. We already know that some nano-fibres behave like asbestos fibres in ani-

mals, yet of the €3.5 billion provided for RTD into nanotechnologies, only 2.3 percent had been spent on EHS by 2011.

This low EHS research ratio seems to be the result of a number of factors: an unintended consequence of disparate funding decisions, technological optimism, a priori assertions of safety, collective hubris and myopia. But the history of known hazards shows that without adequate anticipatory research, the cost of innovations can be huge. And as the time lag between evidence of harm and action to reduce that harm seems to be shortening, via enhanced public awareness and consumer reactions that can quickly go viral, a lack of anticipatory EHS research could lead to the premature decline of promising technologies.

We suggest that a prudent RTD/EHS ratio for nano, bio, and communications technologies would lie somewhere between 5 percent and 15 percent, depending on their intrinsic potential for harm and plausible exposure scenarios, based, for example, on their novelty, bio and eco persistence, bioaccumulation potential, and spatial range.

The Netherlands, for example, has decided to devote some 15 percent of its research budget to the EHS of nanotechnology on the basis of such considerations.

The histories of hazards described in the *Late Lessons* reports are likely to be repeated unless there is timely and sufficient anticipatory research into the potential hazards of emerging chemicals and technologies, research that could encourage more responsible innovation dedicated to meeting the sustainability challenges of our times. **M**

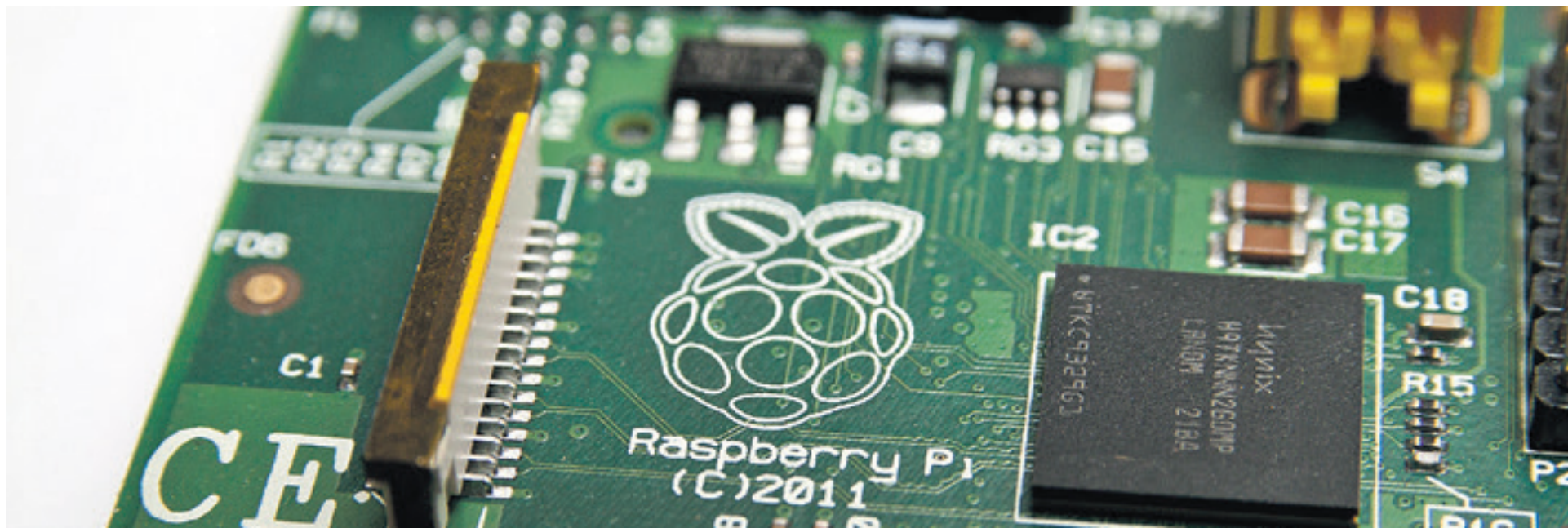


CAPTURED

Photo: Simon Dokkedal



A rooftop view of Copenhagen looking north over the Langebro Bridge. To the east, the Amagerværket power plant releases plumes of white smoke.



Does not compute

TODAY, THE ABILITY to program computers is the single most important general skill you can learn, but who will take responsibility for the social proliferation of computer literacy?

First of all, I must admit: I am not a good programmer. I couldn't write good computer code if my life depended on it. However, I was exposed to programming early enough in life to have a good understanding of how code and computers work.

I was seven when my family bought an Amiga 500. I mostly played games on it, but at one point my brother sat me down and taught me how to program tick-tack-toe in BASIC. This also taught me that there is no way to actually win the game – you can only tie – a point elaborated years earlier in the seminal 1983 hacker film *WarGames*.

Programming computers was never my calling, but knowing how they work has been an indispensable asset for me. Without this knowledge, computers of all kinds would seem magical to me, and the people controlling them would seem wizards. But code is not magic, and programmers are just people, albeit with important skills.

DEMOCRATIC COMPUTING

In principle, nothing can be taken for granted when it comes to

programming. There are decisions made at every line of code, and the final program is the result of this decision-making process. In a certain sense, this makes programming itself a political endeavour, since programmers mostly make their decisions on behalf of end users, both empowering them and limiting what they can do with the program.

But without an understanding of how computers work, how will the potential end users be able to have a well-informed say in what they can and cannot do with the programs running on their own computers?

The argument that programming computers is a political act, while not particularly new, was fairly academic until we started putting computers into everything. Your phone is a computer, your television is a computer, cars are computers with wheels, and aircraft are computers with wings. We even put computers into ourselves. A hearing aid is a computer placed in your ear, and a pacemaker is a computer attached to your heart.

Perhaps one day, computer implants will not be merely prosthetic. Science fiction and cyberpunk literature has long toyed with the idea of computerised implants as enhancement. Case in point: many agree that Google Glass makes

Google Glass makes you look like an idiot, so why not get it invisibly implanted into your skull?

Henrik Chulu

you look like an idiot, so why not get it invisibly implanted into your skull?

Before we put even more computers into our things – and possibly ourselves – we need to ask if we understand what they make us capable of and in what ways they limit us. And there is no way to do that without some degree of computer literacy.

WHO IS RESPONSIBLE?

It's fruitful to compare computer programming to reading and writing when attempting a broad societal view. After the invention of the printing press, alphabetical literacy became widely democratised, radically changing the way societies functioned. Today alphabetical literacy is well over 95 percent in the Western world, with most places closer to 100 percent.

Since the advent of the personal computer, basic computer literacy has naturally increased, but actual computer programming skills seem to be falling behind. As programs became more and more user-friendly, and computers more and more opaque, the understanding of how they work stagnated, even as their usage increased.

This is where programming differs from reading and writing. While being able to read and write are each other's prerequisites, be-

ing able to use a computer today does not require being able to program one.

Not everyone has to be a programmer, one might object. But not everyone has to be a writer either, and we still value literacy as one of the most important skills one can have.

Similarly, in the future, computer literacy – that is, knowing how to program computers – will increasingly be an invaluable skill. Not having it will limit one's possibilities for participating in public affairs, getting decent work, and even just having rudimentary control over one's personal life.

But who will be responsible for increasing the rate of computer literacy?

If we leave it to private companies, we will see a huge social imbalance between those who can afford to learn and those who cannot. If we leave it to the state to implement nationwide computer-literacy policies, who knows when they will actually take effect?

I'm sure both scenarios will play out simultaneously, but if we want to actually do something to both negate the social imbalances (not to mention gender ditto!) in the availability of programming skills, and to speed up the process of their proliferation, it will be the responsibility of civil society. That means you. **M**

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Integration, internationalisation and education

Institut Sankt Joseph is the first bilingual international school to open its doors in Denmark. The programme offers children the opportunity to learn in both Danish and English, in an environment that values diversity, understanding and integration

THIS AUGUST, Institut Sankt Joseph launched the first fully international bilingual programme of its kind in Denmark. Their bilingual model incorporates two curricula, wherein half of the weekly lessons are taught in English (English, Maths and Science), and the other half are taught in Danish (Danish, Religion, Art and History).

The school believes that the time has arrived for a programme that is designed to offer the academic quality and transferability of Cambridge International Examinations, while simultaneously providing a framework for the possibility of authentic integration and internationalisation.

Institut Sankt Joseph is a private Catholic school founded in 1858, and is attended by students from more than 55 countries.

It is the firm belief of the school that Institut Sankt Joseph's bilingual approach to an international education is quite distinct not only from Danish schools, but also from other international programmes in the area. The programme will be the first fully integrated English/Danish international programme of its kind in Denmark.

The international bilingual department at Institut Sankt Joseph offers an attractive alternative for both Danish and expat children, who often find themselves in between systems due to relocation or

Every child should be equipped to take on the task of what it is to be human: in short, to become themselves.

lack of authentic integration possibilities.

Families are left to choose between a "regular" Danish educational program, where authentic internationalisation and maintaining or cultivating academic English skills is a true barrier, or must choose an international program where the language of instruction is exclusively or primarily in English. These students and their families never become fully integrated or re-integrated members of the Danish society in which they live.

In addition to providing for the possibility of authentic integration, the school programme emphasises an intercultural pedagogical approach, in which students

are not only encouraged to become academically bilingual, but multicultural, too. Institut Sankt Joseph wants its students to experience diversity as a positive catalyst for understanding: a broad understanding, that provides students with the tools to overcome prejudice, and demystify other cultures.

This intercultural emphasis exists in concert with the celebration of Danish traditions and an emphasis on the unique history and culture of the Danish people.

Institut Sankt Joseph's new programme is designed to overcome the barriers to successful internationalisation and integration. The programme is targeted to all, and is appealing to expat and

Danish families alike because of the dual curriculum model, which produces students who are fully bilingual and equally prepared to attend a Danish gymnasium or an international high school. Students in this program will have access to an international curriculum and examination process that is structured, objective and able to deliver the content and language-integrated learning approach that a bilingual programme requires.

Instructors are native English speakers who are experienced in preparing students for the Cambridge International Examinations. Students navigate the key stages of the Cambridge International Examinations process, which ultimately culminates in the IGCSE examinations at age 15 or 16. Completion of the IGCSE examinations will give students access to IB gymnasiums in Denmark and international high schools abroad.

Institut Sankt Joseph has a clear set of values that inform and ground the school culture. Among them is the ideal that the school wishes to develop thoughtful, caring students who take their lives, opportunities and choices seriously. As a means to achieving this ideal, the school community believes that service is essential. Thus, the school offers service opportunities, both during the sum-

Photographs from the opening reception of Institut Sankt Joseph's bilingual programme, on August 29.

Right: Father Jesper Fich, educational consultant for the Catholic Church in Denmark

Below: (l-r) Head of School Peter Franklin and leader of the international department, Thomas Mulhern

Bottom: (l-r) US embassy public affairs officer Gavin A Sandwall and president and CEO of the British Chamber of Commerce in Denmark, Mariano A Davies



Institut Sankt Joseph wants its students to experience diversity as a positive catalyst for understanding.

mer and for all eighth grade students, through which children can learn to give back and take responsibility for their fellow man and for the world.

As a Catholic school, Institut Sankt Joseph believes that a Catholic education must be essentially understood as an educational and formational project. The overall objective of this project, whether it is at the end of the first day of kindergarten or at the end of 10th grade, is that every child should be equipped to take on the task of what it is to be human: in short, to become themselves.

Institut Sankt Joseph believes that its educational and formational project go hand in hand with both its original Danish department, and in the international, bilingual department.

Institut Sankt Joseph has come a long way since its founding in 1858 as a French-inspired all-girls school. Today, Institut Sankt Joseph is convinced that the international bilingual programme will continue the school's long tradition of Catholic-humanistic education that prepares students, both locally and abroad, for being positive members of society. Institut Sankt Joseph believes that children should not be divided by linguistic and cultural differences, but united by the shared vision of the school.

FOREIGN

Are you with us or against us?

ETO NASHI? He has turned his back to us, but through the scratching of the walkie-talkie, his superior's question cuts through the nervous air. *Eto nashi?* Russian for: Are they ours? Meaning, are these journalists Russian, and therefore supporters of our cause? Meaning, if they're not, they will not be allowed entry to the rebel-held Ukrainian city of Luhansk.

The commander of the checkpoint swings around towards us again, revealing his bloodshot eyes and letting our driver almost taste the alcohol on his breath as he looks into the car and barks down the walkie-talkie. No, they're European!

Nyet! Of course not. We've struggled to make it through at least ten Ukrainian army checkpoints to get to here, with warning shots fired over the car at the latest. In their opinion, we weren't moving the right way fast enough. It's 5PM, and we've been driving since 8 to get to this rebel city, where a Russian humanitarian convoy is to arrive today. But now, after nine hours of driving on crazy roads dotted with the impacts of Grad missiles, we seem to have come to the end of the line.

We try one more time to ask the commander how we can document the distribution of Russian aid to the civilians of Luhansk if they won't let us enter the city, and before he answers, the deep roaring of heavy impacts makes us all pause for a second.

Then his mouth opens in a teasing smile and he asks: Do you really still think it's humanitarian aid?

Nobody really has a ready answer for that, and a younger guy approaches our bus and asks to see our phones. I've learned already that this is a classic and very dangerous ploy. You really do not want

to show your contacts, pictures or emails to anyone in this conflict, as the typical conclusion is that you're a spy.

My Ukrainian friend and colleague is in the front seat of our minibus, and the rebel, armed with a Kalashnikov, hunting knife and pistol, leans in to get a closer look at his pictures. Even though I'm sitting two seats back from him, I can feel the fear pumping through his veins. I ask him to ask the guy why they care, if they're not going to let us through anyway. They let us go, and we do a U-turn. We don't stop the car until we're visibly out of sight, and I can see my friend in the front feverishly deleting pictures from the day before. That day we were at the front on the Ukrainian side, and there were several pictures with me filming the soldiers.

People have been taken hostage here for a lot less. But that was not our destiny.

This trip to Ukraine was probably around my tenth in six months. I've watched this conflict deepen into full-scale hate, full-scale violence and full-scale war. The hate, violence, suspicions and generally annoying conduct is not exclusively on the rebel side.

A week before being turned away from this scruffy checkpoint with breath held and palms sweating, I was subjected to my first interrogation ever. Standing in the immigration queue in Kiev, chatting with a new colleague, I lost track of my papers and didn't notice the little white paper stuck in my passport.

I keep my passport in a black leather case, so as not to proclaim where I'm from. It's just easier that way. It also has pockets for all the different accreditation cards needed in different countries. And it hit me the split second the of-



Matilde Kimer on location covering the conflict in the Ukraine

ficer opened the case and, as if in slow motion, pulled out that little white paper.

Please wait, ma'am. Oooh fuck! Fewer than 20 seconds pass, and the officer returns flanked by two others. Both armed.

Please come with us, ma'am. After the first round of "why do you have that little white paper, why do you travel so much in Russia, how come you're interested in Ukraine?" my colleague and I are put in a grey, sparsely decorated room.

That little paper said that I was accredited from the People's Republic of Donetsk. The rebels. A paper you really need to have on you to work in the Donetsk Region, and for sure not a paper you want to have on you at the Ukrainian immigration office in Kiev.

Eto nashi? Though I don't hear the question here, it's been asked and answered. A happy looking officer informs me that deportation has been taken off the table. Great news—so what are we waiting for?

Just some senior officers from

the intelligence agency, he says. And we're off again for round two. The same questions, and then the: "Can we look at your phone?" Erm, I'd rather not.

Would you like to show us your pictures yourself, or would you rather we look ourselves? And so, we shuffle through hundreds of pictures and I answer hundreds of questions. Mostly with: "I don't know". As they want names and locations of rebel representatives and I neither have them in my phone nor do I want to provide anybody with that kind of information.

After four hours, no restroom, no water, no information, but a small apology for the inconvenience, we're let through. Unlike Russian journalists, who have not been allowed in Ukraine for months and are now forced to cross into the country illegally if they want to cover the war.

Even though I prefer to look at myself and my job as fully and wholly my own, the rest of Ukraine doesn't. Journalists are either *nashi* or *vashi*. Ours or theirs. **M**

Matilde Kimer

COLUMN

The politics of religious fashion and fascism

EVERY DAY, I cycle past drug dealers in Nørrebroparken. They sport tattoos and wear baggy jeans and baseball caps. Sometimes they smoke enormous joints. I wonder who they are and whether this is really the best job going. In a country with free education and student grants, it's hard to believe they are forced into criminality to subsist. So why do they do it?

I remember listening to an episode of the epic BBC podcast *Thinking Allowed*, which presents weekly insights in the field of sociology. A sociologist (who was also working-class resident of a council estate) trained her attention on her neighbourhood's young men. Most were unemployed, few were looking for work, and many were affiliated with gangs. She concluded that these men valued status more highly than material wealth—in fact, their status within their community mattered more than anything.

This thesis is supported by research from the University of Warwick and the University of Cardiff, reported by *Time* magazine in 2010, which found that a person's status was a better indicator of their happiness than their level of material wealth.

Just as I couldn't dream of becoming a drug dealer, I also couldn't imagine travelling to Iraq to fight for the Islamic State, as hundreds of young men have done in recent months. The man who beheaded the

American journalist James Foley is thought to come from London. Twenty-one-year-old Victor Kristensen from Aarhus, a convert to Islam, was killed in battle fighting for IS earlier this year.

But are these men being drawn into the conflict because of their religious conviction? Perhaps not. According to an article in *The New Statesman*, two British fighters bought Islam for Dummies before setting off on their travels. This revelation supports a report by Britain's MI5, leaked to *The Guardian*, that stated, "far from being religious zealots, a large number of those involved in terrorism do not practise their faith regularly. Many lack religious literacy and could ... be regarded as religious novices."

This claim is further bolstered by the findings of an anthropologist and senior fellow at Oxford University, Scott Antran, who told the US Senate in 2010 that foreign fighters tend to be "bored, under-employed, overqualified and underwhelmed" young men for whom "jihad is an egalitarian, equal-opportunity employer ... thrilling, glorious and cool."

European foreign fighters may not be so different from the drug dealers on my block. Both participate in risky behaviour with like-minded peers in order to give their lives some kind of meaning. What sets them apart from mainstream

society isn't that they are looking for meaning in their lives, it's that they sell drugs and kill people in the process.

While we label the young drug dealers as criminals, European jihadis are called religious extremists. This narrative confirms the fears of right-wing Islamophobes who regard Islam as a political movement whose goal is to overrun Europe through mass immigration.

This is far from a fringe view. In a recent TV interview, Pia Kjærsgaard, values spokesperson and former leader of the populist Dansk Folkeparti, alleged that Islam is a political ideology, and the headscarf an offensive political statement. She contrasted it with the Jewish yarmulke, which she argued was a faith-based garment that ought to be fully tolerated. Islam, being political, was not entitled to the same tolerance.

We could take Kjærsgaard seriously if she were just as consumed with disdain for other religions. At a meeting of Jehovah's Witnesses last summer, apostates were called deadly viruses, snakes and poisoned. Where was her outrage then? And while she condemned Hamas for firing rockets at Israel, why didn't she denounce the racism and violence of Jewish settlers in the West Bank?

So-called 'Islamist' groups are a cause of great suffering around the

world, from al-Qaeda in Yemen to Boko Haram in Nigeria. That much goes without saying. But to conflate their violence with the practice of the religion generally, by suggesting it is an outgrowth of the teachings of the religion, is clearly misguided.

This doesn't mean we shouldn't stand against those who preach hate in the name of any religion, or stand for the liberal values that have allowed Western civilisation to flourish. Tolerance should be expected, and hate crimes (such as the vandalism of the Jewish Carolineskolen in Østerbro) should be punished accordingly.

But the right-wing focus on Islam as a religion that encourages acts of despicable violence (as we've witnessed by the Islamic State in recent weeks) distracts from dealing with the root causes of a disenfranchisement among some demographic groups. Why is it that young men find more meaning in life fighting in Syria, or selling drugs in Nørrebro, than pursuing more peaceful and productive careers?

The campaign against the Muslim headscarf might actually be counterproductive. According to the leaked MI5 report, "a well-established religious identity actually protects against violent radicalisation." In other words, if we want these young Muslims to become better Danes, perhaps we should actually encourage them to become better Muslims first. **M**

Peter Stanners

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