

Research Communication unit Université libre de Bruxelles

# 2018 ULB 12 MONTHS" EXPERTS

## A scientific perspective for 12 events in 2018

Uninhibited racism The two Koreas draw closer Stephen Hawking passes away

The bitcoin bubble The United States open their embassy in Jerusalem

The Salvini government is formed in Italy Migrants in a deadly Mediterranean

A bridge collapses in Genoa Decriminalising abortion in Belgium

Nobel Prize awarded to immunologists G20 summit in Argentina

COP24 & Climate Change

Politics, society, economics, law, science and health... 2018 was an eventful year, with its share of tragedies in Belgium, Europe, and across the world. We have chosen 12 "major" events and asked 12 ULB researchers to analyse them and put into scientific perspective these 12 months.

We thank them for hitting the «pause» button in the middle of a hectic year, and hope you enjoy reading their analyses!

An initiative of the Research Communication unit, External Relations Department, Université libre de Bruxelles.

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com.recherche@ulb.ac.be



@ULBRecherche

#### January 2018



## **Uninhibited racism**

#### Andrea Rea

Group for research on Ethnic Relations, Migrations, and Equality, GERME



#### Looking back: Wednesday, January 24

Bart de Wever, president of N-VA, publishes in left-wing Flemish daily newspaper De Morgen an op-ed entitled The Left Must Choose Between Open Borders and a Welfare State. His inflammatory rhetoric results in many impassioned reactions.

But racism will continue to be heard throughout 2018: political speeches, insults directed at a female RTBF host, racist chants during a music festival or a football game, threatening behaviour or assault in the streets, etc. Belgium, Italy, the United States, and many other countries are affected.

On September 19, some fifty researchers and professors who are themselves migrants or second-generation Italian immigrants, led by Andrea Rea (ULB) and Marco Martiniello (ULg), publish an open letter in reaction to statements by Matteo Salvini.

## The president of N-VA [a Flemish nationalist party], Bart de Wever, claims migration is a danger to our social system. Has such a link been demonstrated Andrea Rea?

No, in fact Bart de Wever's statements even run counter to what studies have concluded. The National Bank of Belgium concluded, in a report published in 2016, that foreigners contribute to economic growth and are absolutely not a burden to the country's economy. Our research centre, GERME, has shown that refugees —obviously— cost the state when they receive a social integration allowance upon being granted residence. However, Belgium has not paid for their schooling, since they were educated in their home country, and as soon as they start working —as self-employed workers in certain cases—, refugees contribute to the country's economic growth and to an increase of the national budget and social security funds. Foreigners and refugees do not, therefore, jeopardise our social system; they actually contribute to securing its future.

#### Bart de Wever's rhetoric is nothing new, and Belgium is not an isolated case...

That's right: all societies build a hierarchy in which certain groups are stigmatised, racialised. The nature of these groups may shift in time, but the rhetoric remains unchanged: in the 1920s, Jews were called profiteers; in the 1960s, Italians were accused of coming to Belgium for its welfare benefits; then, Moroccans were said to abuse family allowances; and now, Africans and refugees are accused of threatening our social system. In this process, the racialised group is not just called different: more importantly, it is diminished and seen as inferior. Its members are 'sub-citizens', and their calls for equality in terms of rights, speech, and respect are delegitimised. In addition, the descendants of migrants who were stigmatised in the past often make this racist rhetoric their own, in order to set themselves apart from the new scapegoats. As the saying goes, 'the last one in shuts the door'!

## Speaking of descendants of migrants, you wrote an open letter to Italian minister of the interior Matteo Salvini, published in Le Soir on September 19.

Together with some fifty colleagues who are either migrants or second-generation Italian immigrants, we reacted to Matteo Salvini's remarks that what his country needs is not more African migrants, but for Italians to have more children. He is forgetting that between 1946 and 1955, Italy has exported 1.5 million workers, mostly young, to France, Germany, Benelux, and Switzerland. Italy's economic development in the 1960s is due in part to the country exporting much of its poverty, just like certain African countries today. Salvini responded to our open letter in a Facebook post. Comments soon started pouring in, and I was insulted, dismissed, intimidated... but saw very few arguments. It has become difficult to engage with controversial topics and to pursue civil debates, when confronted with a racist rhetoric that ignores, or even denies, history and facts.

## We have mentioned De Wever and Salvini, but there are also Orban in Hungary and Trump in the United States... have politicians in 2018 emboldened racist speech?

In the 1980s, there was a brief period when local politicians engaged in racist rhetoric. This racism in the political discourse is now becoming part of the government's communication itself in certain European democracies. When politicians endorse racist positions, they legitimise them and change the norm of what can be heard and said; in effect, they enable racist speech in assemblies but also in cafés, in the streets, at work, and so on. This rhetoric presents a 'thought algorithm' where migrant is synonymous with profiteer or criminal. Reality, of course, is much more complex. The European Union wanted to be a society built on knowledge, but we are now becoming a society built on ignorance, which is an essential ingredient of authoritarian regimes.

#### What is the relationship between immigration and racism?

The racialised group is not necessarily the one that has migrated, as evidenced by the Aboriginal Australians or the Native Americans. Hierarchies are built into our societies at a specific moment in time, when a dominant group contributes to stigmatising a segment of the population and denying its members' rights. The racialised group is created based on two main dimensions: one is its identity, grounded in ethnic and cultural attributes, and the other is its lower status in the socio-economic hierarchy. For instance, a Polish member of staff at the European Commission will be referred to as an 'expat', while a Polish construction worker will be called an 'immigrant'... Nothing new here either: the poor do not live and die like the rich, as Balzac wrote, thus contributing to the 'racialisation' of poverty.



#### **Andrea Rea**

A professor of sociology at ULB, Andrea Rea is the former founder and director of GERME, the Group for research on Ethnic Relations, Migrations, and Equality. He studies migration issues both in Brussels and Belgium, and conducts comparative studies in partnership with the universities of Geneva and Montreal, among others. Andrea Rea is also the author of many books on immigration, racism, and contemporary migrations. He has penned a chapter in "Antiracists", a book published in 2017 under the supervision of sociologist Michel Wieviorka. Andrea Rea is dean of the Faculty of Philosophy and Social Sciences.

#### February 2018



## The two Koreas draw closer

#### **Thierry Kellner**

Research and Studies on International Politics, REPI



#### Looking back: Friday, February 9

The 23rd Winter Olympics kick off in Pyeongchang, South Korea. During the opening ceremony, athletes from North and South Korea parade together, flying the Korean Unification Flag.

South Korean president Moon Jae In and North Korean leader Kim Jong Un officially meet on April 27, and agree to end the war on the Korean peninsula.

On June 12, Kim Jong Un and US president Donald Trump meet in Singapore; their talks conclude with the former promising to denuclearise North Korea and the latter promising to end naval manoeuvres in the region.

Thierry Kellner, the delegations from South Korea and North Korea paraded together during the Olympics: this is a strong sign pointing to reconciliation between two countries at war since 1953. Why this change?

This is the logical outcome of the previous month's events: in 2017, tensions between North Korea, South Korea, and the United States reached a climax. North Korea is planning on reinforcing its ballistic capabilities and making a show of its nuclear power on the world stage: this is the only way for the regime to ensure its own survival, as well as to bolster its internal security and international credibility. Once this is done, North Korea is in a stronger position and can move on to the next step: concentrate on its much needed economic development, likely following the Chinese model. To this end, Kim Jong Un plays the appeasement card in order to create a favourable opportunity and gain an upper hand when negotiations inevitably happen. In this context, the Olympics are a fantastic chance to give a concrete sign of thawing. Since 1953 there have been many cycles where tensions and belligerent rhetoric have been followed by a phase of cooling down: this is a proven strategy that North Korea uses masterfully.

#### Is the meeting South Korean president Moon Jae In part of this strategy?

Yes, but it should also be noted that the timing was especially good, as Moon Jae In had based his campaign in part on improving relations with North Korea. The third player involved, the United States, also offered an opportunity: Donald Trump had suggested during his campaign that he would consider meeting with a North Korean leader, which no US president had done before.

## The meeting between Kim Jong Un and Donald Trump in Singapore was indeed unprecedented, and both sides have expressed satisfaction: what will be the outcomes?

Both sides got something out of the meeting, including in terms of image. Beyond that, not much. The agreement on denuclearisation does not include an inventory of North Korea's arsenal, or a dismantling schedule, or control procedures. This is in stark contrast to the in-depth nuclear deal that Obama negotiated with Iran and that was later rejected by Trump. In terms of image and ego, this is a win for Donald Trump, but no actual issues have been solved! In fact, Kim Jong Un has come out on top: a one-on-one meeting with the US president is a recognition of his status and his regime. China and Russia have also relaxed the economic sanctions they had imposed on North Korea, which reduces the US' leverage: another win for Kim Jong Un, and another blow to Donald Trump.

#### So there is much to be done in 2019...

That's right: negotiations will continue, and Trump has mentioned meeting with Kim Jong Un for a second time at the beginning of the year. This could be an opportunity to tackle contentious issues and find out what North Korea is truly willing to cede. I believe that full denuclearisation will be extremely difficult to obtain, because the nuclear programme is how the regime ensures its own survival. However, it is also incompatible with the economic programme that Kim Jong Un would like to implement and that would require the US to ease its sanctions. It's like trying to square the circle; it remains to be seen what is acceptable for both the regime and the international community, whether a compromise is possible, and at what cost. Another question that will eventually have to be brought to the table is that of human rights, which is currently being completely ignored for the sake of moving negotiations along. One thing is clear to me, however: if North Korea does not get its way, we may see tensions rise and the cycle begin again.



#### **Thierry Kellner**

A professor in the Department of Political Science (Faculty of Philosophy and Social Sciences), Thierry Kellner is also a researcher at REPI-ULB (Research and Studies on International Politics) and at EASt-ULB (East Asian Studies), as well as an associate researcher at GRIP. His research mainly deals with the foreign policy of the People's Republic of China and, by extension, with the geopolitics of all East and Central Asia. He regularly covers the Korean conflict in his publications.

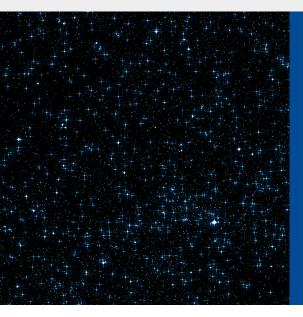
#### March 2018



## **Stephen Hawking passes away**

## **Geoffrey Compère**

Theoretical and Mathematical Physics Unit



#### Looking back: Wednesday, March 14

In a statement, Stephen Hawking's children announce his death at age 76: « We are deeply saddened that our beloved father passed away today. He was a great scientist and an extraordinary man whose work and legacy will live on for many years. »

The British astrophysicist, author of «A Brief History of Time: From the Big Bang to Black Holes», has strongly impacted the scientific community, especially with his 'information paradox' that puts the laws of quantum mechanics in opposition to those of general relativity. A remarkable historical coincidence: Stephen Hawking was excited to have been born on January 8, the day of Galileo's death. He died on March 14, the day of Albert Einstein's birth.

## Stephen Hawking was a specialist in black holes. He studied fundamental physics, just like you, Geoffrey Compère. Can you explain what these fascinating objects are?

In order to understand black holes, we must go back to Albert Einstein's theory of gravity, as he introduced one of the key concepts in fundamental physics: the theory of general relativity. The idea is that space and time warp in the presence of energy, and especially of mass. Picture a taut sheet. If you place an object on it, the sheet sags. Similarly, space curves around stars, and also a little around the Earth. In the case of a black hole, the curve is such that space itself tears at the centre: this is called a singularity. All around is a sphere of no return known as the event horizon. When one crosses the event horizon, the attraction is too strong and there is no escaping its pull. Stars remain in a state of equilibrium between two forces that counteract each other exactly: gravity, which tends to make the star collapse upon itself, and nuclear fusion, which causes the 'fire' that makes the star burn. When a star larger than the Sun has consumed all its fuel —hydrogen—, it collapses and dies. Its mass is so concentrated that it distorts the space around it, forming a black hole, the densest object in the universe.

## Can you give us a sense of what these objects are like, while remaining inside the boundaries of theory?

Black holes do not emit light... hence the name! But stars do orbit around them, which lets us detect their presence. This is how we know that at the centre of our galaxy, the Milky Way, is a black hole whose mass is 4 million times that of the Sun: Sagittarius A\*. It is the largest black hole known in our vicinity, but it is still much too distant to even consider paying it a visit. This means our understanding of black holes is, first and foremost, mathematical, which is why Stephen Hawking had such a passion for them as a theoretician. In 1970, he discovered that black holes obey the laws of thermodynamics: they have a temperature, and they radiate heat... meaning they are not

completely black! This effect is now known as 'Hawking radiation'.

If black holes emit radiation, it means they have entropy. Entropy is a measure of disorder. For instance, a tidy room could be said to have low entropy, while a messy room would have high entropy. Entropy is proportional to the room's volume. What Stephen Hawking and his contemporary Jacob Bekenstein have demonstrated is that the entropy of black holes is proportional not to their volume, but to the surface area of their event horizon! This was a groundbreaking discovery in fundamental physics.

#### What will Hawking's legacy be?

His work has opened many avenues of research. Hawking radiation leads us to a paradox that has yet to be solved: since black holes emit radiation, they 'evaporate'. This means that whatever information has fallen inside them must be sent back out. And yet, according to Stephen Hawking's calculations, information cannot get out because Hawking radiation does not depend on the specifics of what went into the black hole. So either Einstein's theory of general relativity or the laws of microscopic physics must be changed to account for this. This is known as Hawking's 'information paradox'. Much has been speculated on this subject over the past years. Stephen Hawking's major contributions to fundamental physics have made it a more popular topic, as he was able to discuss it with both finesse and poetry while also fighting amyotrophic lateral sclerosis. He has left his imprint in the history of science.



#### **Geoffrey Compère**

Geoffrey Compère is a research associate for FNRS, working in the Theoretical and Mathematical Physics Unit of the Faculty of Sciences. His research interests include black holes, gravity waves, string theory, and gravity. He has won a European Research Council Starting Grant, which he will use to build a holographic model of a very quickly rotating black hole. Geoffrey Compère is also a member of the Gravitational Wave Centre.





# The bitcoin bubble Kim Oosterlinck Émile Bernheim Centre



#### Looking back: Thursday, April 12

The drop in bitcoin's value makes headlines: after reaching an all-time high of nearly \$20,000 in December of 2017, it falls by 65% in just a few months.

Created in 2009, bitcoin is one of the world's first 'cryptocurrencies', or 'virtual currencies'. The innovative technology upon which it is based —the blockchain protocol—ensures secure transactions.

From 2015 to 2018, the value of bitcoin has increased by a factor of nearly 60. On November 1, 2018, one bitcoin was worth €5,597 or \$6,382. Despite the recent buzz, bitcoins in circulation are just a tiny fraction of all capital in the world.

## Kim Oosterlinck, several newspapers have written that with its drop in value last April, bitcoin was «the biggest bubble in history». What do you think?

Throughout history, there have been a number of sudden drops in the value of various assets, i.e. 'bubbles' bursting. Perhaps the best known example is the tulip bulb bubble in the 17th century, but there have also been bubbles in railroad company shares, bicycles, radio and telecommunications —which contributed to the 1929 financial crisis—, and so on. What all these have in common is that they were technological innovations in their time. They are also correlated to the appearance of a new financial technology. Bitcoin fits both of these criteria, with its high volatility an additional factor: its sudden drop in value in early 2018 therefore shares a number of features with well known bubbles.

## How do you explain this sudden drop when bitcoin's value had been constantly increasing until then?

It is very difficult to define why a given asset, whether bitcoin or anything else, loses its value. There is currently no clear theory on this topic. Hacker attacks on several bitcoin exchange platforms have certainly played a part. There will most likely be more bubbles related to virtual currencies such as bitcoin, but it is impossible to predict them!

## There are other virtual currencies: darkcoin, ethereum, litecoin... How similar are they to bitcoin? What is notable about them?

There is significant competition on the virtual currency market today. All these currencies are based on the same founding principle as bitcoin: they represent pure exchange value, and are not backed by a tangible product. They do not all behave like bitcoin, however, and they react differently to market fluctuations: this can benefit investors who are seeking to diversify their portfolios. Still, all virtual currencies are subject to the same risk of fraud: they are not supported by a central bank, exchange platforms may engage in fraud, etc. The virtual currency market is not subject to controls of any kind.

## The issue of regulation is a central one when it comes to the future of current virtual currencies, including bitcoin...

That's right: regulation could harm bitcoin's attractiveness, which is based on lack of regulation and dependency on traditional financial markets —before it became a financial asset in its own right, bitcoin was used to make illegal purchases and launder money. Several central banks have already expressed interest in the blockchain technology, and may even launch their own virtual currency. Such a currency would be controlled and backed by an official institution, unlike other virtual currencies that are in use today.

#### So the blockchain technology is attracting financial players, but not only...

Where blockchain innovates is that it guarantees transactions: these cannot be modified by third parties. This is what makes the technology an attractive one. For instance, blockchain codes have been associated to artwork to prevent forgery. They might also be used in luxury goods, to fight counterfeiting. Unfortunately, blockchain is based on solving complex algorithms that require considerable processing power. The energy used in solving these problems has been pointed out as a problem (Ed.: data centres where the calculations involved in bitcoin are done consume as much energy as 159 countries according to «Le Soir»). This is the dark side of this new technology, and another hurdle to be overcome if it is to become successful.





#### Kim Oosterlinck

Kim Oosterlinck is a professor of finance at ULB's Solvay Brussels School of Economics and Management, and a researcher at the Centre Émile Bernheim, over which he presides. His research deals with finance in the broader sense, sovereign defaults, historical finance, and the art market. He has co-authored, with Marie Brière and Ariane Szafarz (also ULB researchers), one of the first articles that discussed bitcoin from the perspective of investors. Kim Oosterlinck is also ULB's vice-rector in charge of prospective and financing, and a research fellow at the Centre for Economic Policy Research.

May 2018



# The United States open their embassy in Jerusalem

## **Anne Lagerwall**

Centre for International Law



#### Looking back: Monday, May 14

The United States celebrate the relocation of their embassy to Jerusalem (from Tel Aviv) in the presence of Israel's prime minister Benjamin Netanyahu, second-in-command of US diplomacy John Sullivan, and Ivanka Trump, daughter and advisor of the US president. Only a few countries accepted the United States' invitation, while President Trump received a barrage of criticism.

At the same time, Israeli military forces shot at the thousands of protesters who had gathered along the border in Gaza, resulting in at least 58 dead and 1,350 wounded.

In November, far-right president of Brazil Jair Bolsonaro announced that his country would also be moving its embassy to Jerusalem.

## Anne Lagerwall, how do you explain the United States' decision to move their embassy to Jerusalem?

The decision implements a law adopted by the US Congress in 1995, according to which the United States should recognise Jerusalem in its entirety —east and west— as the capital of Israel and, therefore, relocate its embassy there by May 31, 1999. Yet no US president has actually done this until Donald Trump, as it could jeopardise the country's interests, a possibility that the law itself had actually taken into account. As long as it was not enforced, this law was not in violation of international law. However, its implementation on May 14, 2018 —the seventieth anniversary of the creation of Israel— flew in the face of international law.

#### How is this decision a breach of international law?

International law does not define any particular status for Jerusalem, but it does provide a specific method by which this status should be defined: Jerusalem's status should not be imposed by force, but rather negotiated. Should its status be imposed by force, then other states must refuse to recognise it. This principle was applied to Jerusalem many times since the creation of Israel.

#### Can you tell us more?

In 1967, following the 'Six-Day War' when Israeli forces took seized East Jerusalem, the United Nations Security Council issued a reminder that taking over territories using military force was unacceptable. In 1980, as Israel was attempting to affirm its sovereignty over Jerusalem, the Security Council asked states that had opened embassies

there to withdraw them. Finally, in 2017, following President Trump's decision to recognise Jerusalem as the capital of Israel and to relocate the US embassy there, the General Assembly of the United Nations once again advised states that they had a duty not to establish diplomatic missions in the holy city.

This principle is at the core of international law and is connected to the ban on military force: if war is not allowed, then it makes logical sense not to allow approving the results of war. Doing otherwise might encourage more powerful states to adopt a 'fait accompli' policy.

#### So how can we enforce international law?

There is no international police force that can be deployed on the ground to enforce international law and make sure the US embassy is removed from Jerusalem. The strength of international law lies first and foremost in its use of words and discourse. In this case, for instance, Palestine initiated proceedings aimed at having the United States prosecuted by the International Court of Justice (the principal judicial organ of the United Nations), whose activity is closely watched by the international community. In addition, over a hundred states have voiced their disapproval and kept their embassies in Tel Aviv. The United States are now relatively isolated, and their relationship with the international community is weakened as a result.

## Is the election of Palestine as chair of the G77 (group of developing countries) another way to express opposition to the US?

In principle, the G77 can only have a member state of the United Nations as its chair. Yet at the moment, Palestine is only an observer state: in order to become a full-fledged member of the UN, it must be recommended by the Security Council, an organ within which the United States do not hesitate to resort to their veto power. By approving Palestine as chair of the G77 and giving it the additional powers required to perform its role, the General Assembly demonstrates its support of the Palestinian state and recognises its willingness to play an important part on the diplomatic scene. This decision is also a setback for the United States and Israel - who were virtually alone in denouncing it -, and most likely a way for other states to express their disapproval of the US' position.



#### **Anne Lagerwall**

A professor at the Faculty of Law and Criminology, Anne Lagerwall conducts research at the Centre for International Law and Sociology Applied to International Law. Among her fields of study are states' practices in relation to bans on military force in international law and to their duty to not recognise situations that result from such bans.

June 2018



# The Salvini government is formed in Italy

## **Caroline Close**

Centre d'étude de la vie politique, Cevipol



#### Looking back: Friday, June 1st

In Italy, Giuseppe Conte forms a government with the support of an unprecedented political alliance between the Five Star Movement (M5S) and Lega (the northern league): together they total some 56% of the seats in the Chamber of Deputies.

Often referred to as the 'Salvini government' from the name of Lega's leader, who has been appointed minister of the interior and deputy prime minister, this government is yet another example of the rise of right-wing populism in Europe.

In October, municipal elections are held in Belgium; 'non-traditional' parties come out on top with Ecolo-Groen and PTB in Wallonia and Vlaams Belang in Flanders.

After Fidesz in Hungary and PiS in Poland, the Salvini government is now ruling Italy; what might explain the rise of the far right and populism in Europe? Is it fair to draw comparisons with 1930s Europe, Caroline Close?

Yes, it's a fair comparison. In 1930, like today, far-right ideologies were on the rise against a backdrop of economic and social hardship. In addition, these parties have come to power in the past few years though the democratic process. They attract the unsatisfied—voters who are displeased with their own economic status and with the 'traditional' political elites who they believe are unable to meet their hopes and expectations. These elites are also accused of being corrupt and putting their own interests above those of the people; such accusations are borne out by political scandals. However, comparisons with the 1930s also fall short in some regards. The rise of extremism in Europe in the first half of the 20th century (in Italy and Germany, but also in Central and Eastern Europe) came in the wake of World War I and its devastating aftermath, such as the colossal reparations required from Germany and the loss of territories. The current crisis, on the other hand, follows a period of prosperity—e.g. with the Golden Sixties— and several waves of democratisation. In addition, rivalries between European states have been quelled within the European Union, an institution that populist parties are now opposed to.

During the recent municipal elections in Belgium, French-speaking citizens voted for alternative parties on the left of the political spectrum (Ecolo-Groen, PTB). Why is the far right in the Wallonia-Brussels Fédération Wallonie-Bruxelles not as successful as it has been in other areas?

There are a number of factors at play here, but I believe three are the most salient. First, the Walloon FN's organisational weakness. The party has never managed to build itself into an efficient organisation, one that can massively recruit members and supporters and create durable strategies for campaigning and communication. Second, the weakness or absence of far right parties in French-speaking Belgium does not mean that there are no potential voters for this type of group. Voters with ethnocentric tendencies (i.e. against immigration) can be found in the 'underclass' as well as in higher or wealthier segments of the population, although they might not all vote for the same parties: the lower class still mainly votes for left-wing parties (PS and PTB), while the ethnocentric vote in the higher class goes to the MR (and, sporadically and in low amounts, to the People's Party). This same MR has, over the past few months, been moving to the right, with more emphasis on security and ethnocentrism, in line with the preferences of this voter group. Finally, while these ethnocentric attitudes are reinforced by a strong nationalist sentiment in Flanders, this is much less true among French-speaking voters.

## Could the recent municipal elections predict the 2019 federal elections, with opposite results in the north and south of the country?

It is fair to wonder —perhaps even to worry— about the results of the federal elections in 2019. At such a high level of governance, it is increasingly difficult to form a coalition that makes up a majority of seats in both of the country's linguistic groups. If forecasts on the number of seats in the Chamber of Representatives should come true, N-VA and Vlaams Belang could take over nearly half of Dutch-speaking seats on their own. The 'Swedish coalition' could be prolonged, with an even lower representation of the French-speaking side than in 2014 due to the losses incurred by MR in Wallonia and Brussels. This could be compensated somewhat by CDH entering the government, but it is now only the fourth party in Wallonia. Furthermore, it is likely that a coalition will be formed without the support of a majority of French speakers, which will cause discontent among this group. This might drive some French-speaking voters to call for increased separation from Flanders... in other words, confederalism, which Bart de Wever is a major proponent of.



#### **Caroline Close**

A postdoctoral researcher for the FNRS, Caroline Close is a member of the Centre d'étude de la vie politique (CEVIPOL) in the Faculty of Philosophy and Social Sciences. She conducts most of her research on voting behaviour, public opinion, and political parties (ideology, members, organisation). She also teaches political science and has coedited 'Liberal Parties in Europe' in 2018.

July 2018



## Migrants in a deadly Mediterranean

#### **Federica Infantino**

Group for Research on Ethnic Relations, Migrations, and Equality, GERME



#### Looking back: Friday, July 6

The United Nations Refugee Agency (UNHCR) announces that in 2018, more than 46,000 migrants have reached the coasts of Europe after crossing the Mediterranean; this is five times fewer than during the first half of 2016.

However, while the number of crossings has decreased, crossing is deadlier than it has ever been. In the first half of 2018, one person out of every 19 who attempted to cross the Mediterranean did not survive.

The Mediterranean is at the heart of many debates on migration that should be at the forefront of the 2019 EU electoral campaign. Federica Infantino, what can we learn from the data on migrant crossings?

We must be very careful with statistics: quantifying irregular migration is, by definition, a complex endeavour. Still, comparing the data available in 2015 and 2018 reveals a decrease in the number of crossings. Routes have also changed: 10 years ago, most migrants went to the Strait of Gibraltar; then, starting in 2015, most crossed the eastern Mediterranean, towards Greece and Turkey; then was Italy, and now, in 2018, Spain has become a major destination.

#### How do you explain these route changes?

In 2015, as most of the migrants were from Syria, the eastern Mediterranean was the most popular route. More generally, though, routes actually change depending on how strictly the borders are controlled: when a border closes, migrants move to another one. As they leave their home country, they learn border crossing strategies and routes as they go.

## While crossings have decreased in 2018, the Mediterranean has never been so deadly: in the first half of 2018, one migrant out of every 19 has died at sea. Why is this?

This is another consequence of stronger border controls. If crossing is more difficult and dangerous, risks increase and so do costs. As a result, the informal economy behind border crossing becomes stronger: smugglers demand more money to migrants and their business becomes more profitable. If Europe intends to put an end to smuggling and irregular migration, the best method is to authorise legal crossings and better manage arrivals. And those who might worry about massive waves of migrants should keep in mind that Europe is not governed by laissez-faire: each state controls its borders.

## Several EU leaders have suggested creating 'landing platforms' along Africa's Mediterranean coast. What do you think of this idea?

This is called remote control: the border is moved to partner neighbouring countries, such as Morocco, Tunisia, or Libya. It may seem like an appropriate solution to end deadly crossings, but the risk is that other parties could end up in charge of migration. And of course, the very first requirement is that the countries involved accept this partnership, which is not the case. Political discourses based on security, humanitarian principles, or utilitarianism always focus on migrants, but the fundamental question is more about what Europe we want. Do we want to limit the mobility of people, goods, services, capital, ideas, and images? A 'locked down' Europe or Mediterranean has never existed, most likely because this is neither possible nor even desirable.



#### **Federica Infantino**

A postdoctoral researcher for FNRS, Federica Infantino is a member of GERME (Group for Research on Ethnic Relations, Migrations, and Equality), in the Faculty of Philosophy and Social Sciences. Her research focuses on the players and organisations that enforce border and migration controls, on the sharing of best practices, and on the inclusion of non-governmental entities, especially private companies.





## A bridge collapses in Genoa

#### Arnaud Deraemaeker

BATir, Building, Architecture & Town Planning



#### Looking back: Tuesday, August 14

In Genoa, Italy, the viaduct on the A10 motorway collapses. A 600-foot section of the concrete structure crashes onto a residential neighbourhood, taking motorists with it. Many are wounded, and 43 are dead.

This disaster reveals a more general issue with the maintenance of concrete bridges, viaducts, and tunnels. Built half a century ago, many such structures are now in critical condition...

## Last August, the Morandi bridge in Genoa collapsed. What did this disaster teach us, Arnaud Deraemaeker?

The event revealed a very real problem in the upkeep of concrete structures, a topic that has been talked about for a few years without much being done. Most concrete bridges were built in the 60s and 70s, with an estimated lifespan of 50 years: this means we are now reaching a critical point in time. The problem is all the more significant that loads and vehicle numbers have both increased over the past few years.

## In Belgium, following the disaster in Genoa, some forty bridges have been reported as critical. Should we fear a similar collapse?

I cannot see into the future, but I do know that cracks, concrete decay, and even stability issues have been found on many bridges. This means that significant renovations must be done quickly, in order to ensure the safety of all those who use these infrastructures. Unfortunately, maintenance work is often done as part of short-term policies, and urgent work is more expensive when no maintenance was done during previous years. Maintenance also requires closing off bridges, which decreases mobility, as evidenced by the destruction of the Reyers viaduct in Brussels.

#### What might be a long-term solution to the critical condition of our bridges?

Predictive maintenance of concrete structures could be an adequate solution. This involves measuring decay over the years and predicting its evolution in order to develop an optimal maintenance schedule. Predictive maintenance can extend the lifespan of a structure while keeping costs low, by taking appropriate measures as soon as an issue is detected and before it becomes critical.

## Concrete structures are currently maintained by people who look for various signs of decay. Could monitoring be improved using technology?

There currently exist many types of sensors that can be embedded into civil engineering structures such as bridges, in order to monitor their condition, but there is also a dire shortage of algorithms that can interpret the data gathered. Therefore, the current priority is to develop a smart system that can analyse this monitoring data. This is why I am developing, together with my team, project 'TweetCon', with a goal to offer connected sensors in 1 to 2 years. These will be embedded directly into the concrete and send out information in real time about the structure's condition. Data will be collected and sent to an online portal, including information on cracks, humidity, and so on. There have been changes recently in how maintenance is done, with construction managers tending to place contractors in charge of the maintenance, which is now included in calls for tenders. As a result, contractors are looking closely at smart maintenance techniques using sensors, in order to reduce costs and gain a competitive edge.



#### **Arnaud Deraemaeker**

A professor at the Brussels School of Engineering, Arnaud Deraemaeker is a researcher in the BATir unit (Building Architecture & Town Planning). His research interests are structure dynamics, vibration dampening, and monitoring structure condition based in dynamic measurements. Among other activities, he supervises spin-off project «TweetCon», which is supported by the Brussels-Capital Region and aims to develop a fully automated diagnostic kit for concrete structures.

#### September 2018



# Decriminalising abortion in Belgium

## **Anne-Sophie Crosetti**

Striges («Maison des Sciences Humaines») and METICES



#### Looking back: Wednesday, September 19

The Chamber's justice committee approves the bill that removes abortion from the penal code, but does not decriminalise it: the four majority parties, along with CDH, win the vote against the opposition. A few days later, the Chamber passes the law with 84 votes for, 39 against, and 5 abstentions.

Family planning centres, the secular movement, and women's rights associations, voice their disappointment. After months of debates, and ignoring the opinion of many experts heard in Parliament, the law is barely changed, leaving 'offenders' vulnerable to prosecution.

Béatrice Delvaux, editor-in-chief of daily newspaper Le Soir, published an op-ed entitled 'Decriminalising abortion: a fraud'. Can you remind us, Anne-Sophie Crosetti, why the decriminalisation of abortion has raised such criticism and disappointment?

The 1990 law on abortion allowed it under certain conditions, while leaving it in the penal code. Although people were rarely prosecuted when these conditions were not met, the law symbolically made abortion an exception rather than a right, meaning it remained morally reprehensible. And today, after months of debates, abortion is still not a right in Belgium: those who have performed or received an abortion outside the conditions laid down in the law may still be criminally prosecuted. This means that abortion has not been 'decriminalised' in reality. The specific conditions have not changed much from the 1990 law to the 2018 law; many experts have called for a longer time limit for abortion than the current 12 weeks in Belgium —as is the case in the Netherlands and in the UK—, but they were not heard. As a result, 500 to 1,000 women must go abroad because it is too late to have the procedure done in Belgium. The new law has been very controversial because it is seen as paternalistic, blaming women, and moralising.

#### Was Belgium a pioneer in 1990?

No: back then, eighteen EU countries had already passed laws partially allowing abortion. In Belgium, the issue of abortion was discussed starting in the late 1960s, with strong divisions between communities and philosophies: debates lasted some twenty years, resulting in a 'compromise' law. The same is happening in 2018.

#### Is Belgium going in the opposite direction to Europe?

Not really: all of Europe is experiencing a return of conservative forces on abortion and, more broadly, all sexrelated issues. In 2013, the Manif pour tous in France was already challenging the right to abort. Starting in 2015, Spanish minors need their parent's permission to request an abortion. In Portugal, women must pay all costs related to the procedure. In Italy, over 70% of physicians invoke their right to conscientious objection and refuse to perform abortions. So even though abortion is legal in 2018, actually getting the procedure done can be tricky.

## The new abortion law has just been passed, and a new debate is now raging in the Belgian Parliament on the recognition of stillborn children.

That's right, and some observers even believe there was a quid pro quo: the law on abortion was voted under the condition that another law would be voted allowing parents to register stillborn children in the civil registry. Belgian law already provides for legal recognition of stillborn babies starting from the 180th day of pregnancy. The proposed law would move this to the 140th day, and include registration in the civil registry. But 20 weeks is also the period that many would like to see abortion extended to. The question of the foetus' legal status is an important one, and it has symbolic repercussions as it can increase feelings of guilt associated with getting an abortion. In Italy, for instance, the pro-life movement is creating foetus graveyards, complete with tombstones and engraved names.

## In 1969 we could see slogans such as 'my body is mine' and 'private life is political'. In 2019, the fight for women's rights still appears to be ongoing.

Yes. Of course, getting an abortion today is less dangerous than it was in the 1960s. And, fortunately, the position of women in society has improved in the past 50 years. Still, there are many fights left to be fought —as illustrated by the #MeToo movement— to solidify the rights of women with a variety of profiles and backgrounds; this is all the more important that we are experiencing a return of conservatism in Europe. In 2019, women and members of the LGBT community will make their voices heard.



#### **Anne-Sophie Crosetti**

A research fellow for the FNRS in the Faculty of Philosophy and Social Sciences, Anne-Sophie Crosetti is in the 4th year of her PhD studies. Under the supervision of Valérie Piette and Guy Lebeer, she is studying family planning centres in Belgium with Catholic roots from 1960 to 2000. Her project is part of the 'Action de Recherche Concertée' (ARC) entitled Une spécificité belge? Révolution sexuelle et (dé)pilarisation de 1960 à 2000. Une contribution à l'histoire de la transformation des normes de genre et de sexualité ('A Belgian specificity? Sexual revolution and (de)pillarisation from 1960 to 2000. A contribution to the history of the transformation of norms on gender and sexuality').

#### October 2018



## Nobel Prize awarded to two immunologists

## **Stanislas Goriely**

Institute for Medical Immunology, IMI



#### Looking back: Monday, October 1st

The Nobel Prize in Medicine is awarded to two researchers in immunology: James Allison (US) and Tasuku Honjo (Japan), for their discovery of cancer therapy by inhibition of negative immune regulation. The immune system constantly 'monitors' the organism, preventing tumours from appearing. When cancer develops despite this, certain immune cells are present but unable to fight the tumour cells. What the two Nobel-winning immunotherapy approaches have taught us this year is that the immune response can be reactivated and, in certain cases, fight tumours with spectacular results. However, this does not work on all cancers, nor on all patients; finding a solution will be one of the main challenges in immunology today.

## Over the past ten years, immunology has been one of the most active areas of research in fundamental medicine. What kicked off this trend, Stanislas Goriely?

In its infancy, immunology was closely related to microbiology and 'germ theory'. The discovery of the first vaccines and of microbes that caused infectious diseases set the stage for research in this area. Early milestones were set by Edward Jenner and Louis Pasteur, when they defined the basic concepts of vaccination. Later, in the early 20th century, as the first Nobel Prizes were given to immunology pioneers Élie Metchnikoff and Paul Ehrlich, the pace of discoveries picked up. A number of concepts were still being discovered as I was starting on my own thesis. Over the past decade, many of immunology's founding dogmas have been reviewed.

The entire discipline is now buzzing with activity. Not only must the immune system protect us from infection, but it must also let us live in harmony with the myriads of microbes that make up our gut and skin flora. Our organism is not made only of our body cells: it also includes all the micro-organisms upon which we rely to survive. When this was discovered, it radically changed how we view medicine in its entirety. For instance, it enabled us to understand that our immune system is 'educated' by all the microbes it encounters throughout our life, and even by what we eat! This system is constantly being reshaped, and it is far more complex than what we believed just ten or fifteen years ago.

#### Does this mean that all of our diseases are related to immunology?

As its role is to maintain the equilibrium of our organism, we are finding that the immune system plays a part in most diseases that afflict humans: infections, allergies, and autoimmune and inflammatory diseases, but also neurodegenerative diseases, cardiovascular diseases, and even cancer. We know that the immune system 'monitors' our organism looking for tumour cells. But tumours are constantly adapting and evading the immune response, which means the immune system is not always effective. This is where James Allison and Tasuku Honjo made a breakthrough. James Allison interfered with one factor that slows down the immune response by preventing our T lymphocytes from attacking tumour cells: the CTLA-4 molecule. This reactivated cells that were present but unable to perform their tumour-fighting function. Tasuku Honjo discovered another such 'brake' that slows down the immune system: the PD-1 molecule. These discoveries caused a significant stir in immunology and oncology, as they pave the way for virtually limitless combinations of traditional approaches and the various targets of immunotherapy!

#### What is the potential of immunotherapy for cancer?

We now know that it is possible to harness the immune system to fight cancer. The challenge is now to define precisely when such approaches are appropriate, and to prevent their secondary effects. We still need to learn why they work on certain patients and not on others, which will require much more fundamental research. But the immune system is now everywhere: we have gone through a paradigm shift and all our previous knowledge can be re-examined through the lens of immunology. This is promising... and fascinating!



#### **Stanislas Goriely**

A senior research associate for FNRS, Stanislas Goriely works at the Institute for Medical Immunology (IMI), a department of the Faculty of Medicine. His interests are immunology and gene regulation; more specifically, he studies the molecular mechanisms involved in controlling inflammation and the differentiation of cytotoxic T lymphocytes in order to develop new therapeutic approaches.

November 2018



## **G20** summit in Argentina

#### Alicia Dipierri

Centre for European Research in Microfinance, CERMi



#### Looking back: Friday, November 30

The G20's 13th annual summit kicks off in Buenos Aires, Argentina. Among its priorities is sustainable farming, with a focus on soil productivity without harming the environment. G20 countries tackle the issue of sustainable food from the perspective of preserving farmland, including though a balance between public and private players.

## The topic of sustainable food was discussed during the G20 summit in Argentina. What makes this such an important issue, Alicia Dipierri?

A sustainable food system guarantees food equality for future generations, from both a social and economic perspective. The challenge we are now facing is therefore to figure out how to feed a growing population while also protecting the environment. This year, the issue was addressed from the angle of farmland protection through collaboration of the public and private sectors. Discussions were centred around two observations: first, consumption is increasing in low- and middle-income countries as well as in the biofuel industry; second, production profitability is very low due to the loss of biodiversity in certain areas.

#### What, then, are the best courses of action in terms of agriculture?

Intensive farming, which became the norm after World War II, is not sustainable in the long term. It exhausts natural resources and causes considerable pollution due to the logistics involved. One solution could be agroecology, which focuses on local production while taking global factors into account. It contributes to a decentralisation of power, and involves some of the agricultural system's poorer players, such as small producers.

## Can agroecology be implemented in African countries, for instance, which are known for their high population and low productivity per unit?

Some experts believe that agroecology, as a system based on the balance between soil resources and crop inputs, is totally relevant in Africa. Other experts believe that this approach is not adaptable everywhere. For the time being, no agreement has been reached on the means to be put in place in practice.

## Diverging interests make the transition to sustainable farming a difficult one, but is there still room for optimism?

Yes, in fact a number of positive signs can already be observed. Certain companies have adopted more sustainable practices, while many consumers—especially in developed countries—are driving demand for food products from sustainable farms. One example is the BEES coop supermarket in Brussels. Furthermore, researchers at the ULB's CEESE have just completed a study on the resources necessary for a company to be environmentally and socially sustainable. Lastly, the Food4Sustainability project, to which I have contributed, has recently presented interesting data on the various aspects of sustainable food that should be implemented.

I believe the time has come to accelerate this transition towards sustainability. We must gain more insight into the various aspects of food production, in terms of production, distribution, and consumption. Once we have determined what can be produced, distributed, and consumed locally while guaranteeing food for all, we will be close to achieving a sustainable food system.



#### **Alicia Dipierri**

Alicia Dipierri is a research fellow for the FNRS working at the CERMi (Centre for European Research in Microfinance), part of the Brussels School of Economics and Management, a faculty of ULB. Her PhD thesis, under the supervision of Marek Hudon and Tom Dedeurwaerdere, studies behavioural changes in a food system transitioning towards sustainable development. More specifically, she is conducting three case studies that will contribute to her study: with Argentine farmers, in Belgian companies, and in Namibian communities.

December 2018



## **COP24 & Climate Change**

#### **Romain Weikmans**

Centre for Studies on Sustainable Development



#### Looking back: Wednesday, December 12

Exactly three years ago, the States Parties to the United Nations Framework Convention on Climate Change unanimously adopted the Paris Agreement. The agreement had confirmed the international community's ambition to keep warming 'well under 2°C' and to 'pursue efforts to limit [it] to 1.5°C' compared to pre-industrial levels.

The Paris Agreement is based on a 'pledge and review' mechanism, by which each state announces the efforts it is willing to make to fight climate change; the various countries' commitments are then added up and assessed in light of warming objectives. This is intended to encourage states to increase the scope of their emission reduction policies.

## The COP24 conference is happening this December. Romain Weikmans, could you explain what is at stake?

The Paris Agreement, which was adopted at the conclusion of the COP21 conference, lays the general groundwork for a new international climate governance. The COP24 is an important one, as the negotiations conducted should lead to a definition of practical implementation details for the Paris Agreement. Another goal is to determine how the various countries' commitments to reduce greenhouse gas emissions are placing the planet on a trajectory that is compatible with the Paris Agreement, especially in light of the IPCC's recent report on global warming of 1.5°C.

#### What should we take away from this IPCC report?

The report underlines the fact that it is still possible, from a geophysical perspective, to keep the increase in global temperatures under 1.5°C compared to the pre-industrial period. In other words, our past greenhouse gas emissions have not yet placed us on track towards an unavoidable 1.5°C increase in temperature.

I believe, however, that this is as far as we can go in terms of optimism. Temperatures have already risen by 1°C, and considering the speed and scale of the socio-economic transformations that would be required to reduce global emissions and stay within the 1.5°C target, it is entirely unrealistic to expect this target to be met. It is important to understand that the IPCC report was ordered by various countries, prompted by insistent demands from states that are extremely vulnerable to climate change. This includes, among others, states that are threatened by rising ocean levels. As a result, this report was produced by scientists but has considerable political impact.

#### What does a 1.5°C increase imply, and what would the consequences be?

Intuitively, a 1.5°C increase seems minor when the temperature frequently varies by more than 10°C in a single day. Looking at global averages, though, even a 0.5°C difference can have drastic effects. The IPCC's special report draws attention, for instance, to the fact that a 1.5°C increase in global temperatures would cause a 70 to 90% decline in tropical coral reefs. A 2°C increase would lead to 99% of reefs dying out. There are currently 500 million people across the world whose livelihoods depend on these ecosystems.

#### Is there still time to do something?

be observed, and past and current greenhouse gas emissions have brought us to a level of warming that will have severe consequences for human and non-human beings. That being said, it is still possible to avoid much loss and suffering. All levers must be acted upon, whether at the individual or collective scale. In fact, there is no point in attempting to contrast these two scopes of action, as they are mutually reinforcing. Meat consumption and air transport are two levers that citizens can act upon easily, with significant effects in terms of reducing individual GHG emissions. Citizens should also demand and support public policies that enable a quick reduction of emissions. An essential question is that of preparing and adapting to the impacts of climate change. Another is support for populations that are most vulnerable to the effects of climate change, whether in our country or abroad. We can only hope that the IPCC's special report will drive countries to announce they are reinforcing their commitments to reduce greenhouse gas emissions. We must all increase our efforts, as global commitments to reduce emissions currently add up to a 3°C increase in temperatures, which would radically change our planet.



#### **Romain Weikmans**

A postdoctoral researcher for the FNRS, Romain Weikmans works at the Centre for Studies on Sustainable Development, in the Faculty of Sciences. He has a particular interest in international governance on climate change, and in the integration of environmental issues in development cooperation. Among other titles, he is vice-chairman of the working group on energy and climate, in the Federal Council for Sustainable Development. Romain Weikmans teaches at the ULB's Faculty of Sciences and at Sciences Po Lille.