The university of tomorrow: on science and politics

Academic opening speech by Rector Herman Van Goethem, 30 September 2021

Between March 2020 and September 2021, the COVID-19 epidemic forced us all to switch to crisis mode. We put all of our efforts into the necessary switchover in education and took the necessary health measures to safeguard research. UAntwerp weathered the storm firmly, because we could immediately count on very large joint efforts at every level of the organisation, on mutual solidarity, on joint commitment and omnipresent goodwill.
I give a big thanks to everyone, staff and students alike. We are very proud of our experts who became the face of our university from March 2020. What they achieved with so much talent is the result of the work and dedication of so many people, of departments and faculties, of a whole university focused on quality and excellence. As a university, we are stronger than ever, and together we can be proud to be part of this very special working environment.

Besides the gratitude, there has also been a great deal of emotion. What is true for environmental disasters is also true for the COVID-19 pandemic: it mainly affected those most vulnerable. We have focused on treating each other with care. The commitment to students and colleagues required intense communication and vigilant guidance, building informal networks in response to the impoverishment of our face-to-face interactions.
The COVID-19 pandemic is not over, by the way, and its impact has daringly been delayed. So let us remain vigilant, and be extra patient and extra caring towards each other.

Even if the COVID-19 pandemic happened very unexpectedly, other challenges were not so unexpected and presented themselves sharply and intensely in 2020–21: the climate and environmental issues, Global Health, fake news and pseudo-communication, Black Lives Matter and the issue of ‘decolonisation’, the geopolitical transition, etc. These kinds of challenges will also have a major impact on the university of tomorrow.

From these contexts, let us turn to the theme of this academic speech, on science and politics and the university of tomorrow.

1. On science

1.1. Value-free science?

We look back on a very special period. The COVID-19 pandemic gave masses of citizens their first unique glimpse into the inner workings of scientists' creative use of ingredients. Knowledge of scientific practices has increased enormously. In addition to gaining an understanding of viruses, vaccines and mutations, all kinds of media have helped many people learn about the basic aspects of scientific research, such as: questioning and developing insights, systems thinking and interdisciplinarity, statistics and probability calculations.

Using facts and only facts turned out to be much more complex than many thought. Because the virus was unknown, theories and models were first used by analogy, which were then gradually adjusted based on data. Measurable data – that was what it was all about.
Crucial *facts* – that is what it is all about now. Firstly, the death toll in Belgium in 2020 was 18,000; this is an order of magnitude comparable to the death toll in Belgium between 1940 and 1944.

Secondly, a recent study on long COVID involving 273,000 COVID-19 survivors found that in the period between 3 and 6 months after the first day of illness, 37% of them were still dealing with at least one severe disease symptom.[1] This means that those who survive hospitalisation have a good chance of being seriously ill for a long time.
Thirdly, the hospital admissions show that vaccination helps tremendously, whereby the very small risks associated with vaccination do not outweigh the very large risks of infection if not vaccinated.

Such facts can only be stated with certainty when they are based on data, which we have been collecting slowly. That being said, the communication problem remains.
While such facts may have already been established, the origins of scientific practices can be situated at an earlier stage: science starts from a question, from a choice. This is rarely value-free. The experts who were consulted were able to do this because politicians agreed with their premises: we must not let the virus fester but fight it, using existing models and measurable data. This choice meant that certain emphases were placed, certain questions were asked, and others less so or not at all.
In short, even 'exact' science is not value-free.

[1] Taquet, et al. (PLoS Medicine, 2021) analysed the electronic health record data of 273,618 patients in the United States diagnosed with COVID-19 and estimated the risk of long-term COVID features up to 6 months after a diagnosis of COVID-19. The authors compared the risk of long-COVID features in different groups within the population. The study found that more than 1 in 3 patients had registered one or more features of long-COVID between 3 and 6 months after a COVID-19 diagnosis. (Many thanks to Niel Hens.)

1.2. Searching scientists in a complex world

Science is also searching. Today, citizens will see how the knowledge of COVID-19 evolves from day to day – with successes and setbacks, with projections and necessary corrections. Science is also complex. Let us take a closer look at today's wicked problems.

We have entered a period in which we are experiencing a transition from monocausal policies to complex clustered problems in crucial areas. An example: in the 1970s, water pollution became a societal issue. Science provided the research and tools, politics made the decisions, and afterwards we got clean watercourses with thriving rivers once again. That is very important, but today there is also the realisation that a very complex policy area like the environment requires a holistic approach.

This complexity is strongly felt. By 2050, we need to create a circular economy that protects and restores biodiversity, with carbon neutral and sustainable use of raw materials. Circular economy, biodiversity, CO_2 reduction, etc.: these are priority choices with a very complex scope! We have to rethink our entire society.

We have barely begun to implement the important European Green Deal, and other priorities are already becoming urgent. Global Health is also high on the agenda, in a crisis that also catapults many other policy issues to the foreground, such as rethinking production chains (and thus adjusting the free market), or rethinking notions such as GNP and fiscal policy.

1.3. Neutral scientists?

In these complex issues, the relationship between science and politics is scrutinised. Take a look at the COVID-19 pandemic again. In every country, there are tensions between experts and politicians, with a lot of friction, because this situation has not yet been resolved. In any case, there is a widely shared consensus that experts should provide information while politicians make decisions. There should not be a government of technocrats.

Provide information, yes, but should scientists also not *advocate* when they are convinced of something? And should they not, from their conviction, also *warn* people? It reminds me a bit of what the British constitutionalist Walter Bagehot wrote about the British monarchy in 1867: it cannot impose or enforce anything itself, but it does have 'the right to be consulted, the right to encourage, the right to warn'. Professors are not kings at all but there are similarities at play in the advisory mechanism. The scientist can be consulted, he can urge and thus advocate certain choices, and he can also warn.

As far as confidentiality is concerned, the situation is quite different! The king is shielded and is not allowed to express his opinion to the outside world, for then he could be discredited and deposed. How different is the scientist! He may end up in a storm.

Secrecy is not exactly what we are aiming for either. As a rule, our research is public. The major societal challenges we are consulted on are also the subject of societal debates in which we also participate.

Here are some golden rules for the researcher. One: only speak publicly on matters concerning your field of expertise. Two: combine the most precise answers possible with the

art of diplomacy. Three: avoid public partisan affiliation if possible, as this can create the appearance of bias and thus undermine the assessment of the value of your research. The university must therefore keep its distance from politics.

2. The university and politics

Our society is based on democracy, human rights, and freedom of expression. This corresponds to a certain type of university, which is different from that in, say, Iran or China. Thus, at Belgian universities, scientists can take any point of view, both in their research and in the public forum, on nuclear power plants, organic farming, fossil fuels, public transport and traffic flows, poverty policy, migration, euthanasia, and so on. That is why the rainbow flag really should fly alongside the European, Belgian and Flemish flags: it represents the recognition of diversity in society, in all its forms. This is one of the foundations of the Flemish, Belgian and European educational systems.

Are there no limits to the scientific practices in our universities? Definitely. Firstly, the human rights test applies, as it was developed by the Flemish Interuniversity Council at the request of the five Flemish rectors in 2019.[2] Researchers and policymakers are confronted with human rights issues: in collaborations in a particular country, with a partner university, with individual researchers. The crucial point here is the following: we do not apply the human rights test at the level of a country or a regime, but rather at the level of potential and current partners and activities within university cooperation. The human rights charter adopted by the Flemish universities thus starts from the basic principle that the human rights test is applied project by project. The nature of the institution may also play a role in deciding whether or not the project presented is given the green light.

An action group can take a stand against a country, but 'the university' does not (except in the case of a legally imposed boycott). It is not the role of our university to adopt such points of view. UAntwerp is not a political action group or party; it is not an activist organisation. Our pluralism does, however, expect societal questions to inspire lecturers and students in classes and beyond, in the context of academic freedom. They formulate views and opinions in their own name.

Only the rector can speak on behalf of the entire university. They do so, of course, within the contours of the university's mission and vision, which the Board of Governors oversees. Therefore, it is only logical that the rector of Antwerp, both for the university and for society, strongly emphasises community building from an inclusive attitude in which diversity is seen as an added value and in which, within the limits of the law, there is room for all opinions and religions. After all, this is in line with the concept of 'active pluralism' as stated in the basic mission of our university.

So when it comes to the foundations of our own society, the university can sometimes assert itself. In this context, the five Flemish rectors very exceptionally take a joint stand. In any case, it is always a matter of careful balancing.

[2] https://vlir.be/nieuws/mensenrechtentoets/ (info in Dutch)

Let me summarise. Science is not value-free, science is searching and the problems are complex. When scientists are consulted, they not only provide information, but they can also advocate and warn.

The university they work at is not value-free either. In Flanders and Belgium, it is built on the deep foundations of our democratic society.

Now all of this also raises questions about the overall decision-making process in which we participate. What place do we occupy in this, given the special relationship between science and politics?

We are witnessing not only a changing world but also a changing decision-making process, with more and more actors from various groups taking responsibility. There is a word for this: multi-level governance. So which actors play a role in this systemic change?

3. On systemic change

3.1. Universities and research centres

When we talk about 'the scientist who advises', we are actually talking about entire teams, in universities and research centres. In the face of major societal challenges, cooperation and interdisciplinarity are more necessary than ever.

At UAntwerp, we have strengthened the interdisciplinarity in education by introducing university-wide, interdisciplinary courses; we must continue along this path. Our faculty structures sometimes stand in the way of more interdisciplinary research; let us get rid of those obstacles as much as possible. Structural development is also crucial for a strong interfaculty level. Institutes such as IMDO and USI are important testing grounds that can grow into fully-fledged interdisciplinary players in the university organisation.

Researchers and lecturers have not been waiting around for such reforms. They seek each other out and are already bringing together their fields of expertise on important and complex societal issues from the bottom up, across all disciplines. For example, as rector, I am proud of and grateful to the many colleagues who have provided us with a climate action plan. Another good example of interdisciplinarity is the recent book *Van klimaatverandering naar systeemverandering (From Climate Change to Systemic Change)*, in which colleagues from all over reflect on this topic.[3] Indeed, it is about systemic change!

3.2. National governments and monocausal issues

National governments are, of course, also important players in the landscape of multi-level governance. In the European model, they play a crucial role in the development of a country's infrastructure, the core elements of which are public order and security, as well as sectors such as education, health care, social security and culture. Following the COVID-19 pandemic, countries will start to invest more in strategic economic sectors, such as the

[3] *Van klimaatverandering naar systeemverandering. Een veelzijdige blik op een complexe globale uitdaging [From Climate Change to Systemic Change. A multifaceted view on a complex global challenge]*, S. Vicca & A. Crabbé (ed.), UPA, Brussels, 2021.

production of medicines or basic services like electricity.

Now those are all fairly monocausal issues, and that is where the democratic model with its political parties comes in. Of course, you need a clear state structure for that, and as far as that is concerned, we are not particularly spoiled in Belgium... In any case, universities are well-placed to advise the authorities in all of this. Just as study services of political parties do.

3.3. Multi-level governance and multi-causal issues

Clustered multi-causal problems such as biodiversity, CO_2 emissions, pandemics or refugee flows are of an entirely different order. Solutions can only be provided through international cooperation, at every level. We are, of course, looking at political actors such as Europe, the G7, the United Nations, and so on.

But other actors also play a very important role. Here are a few examples from the colourful world of multi-level governance. Who is active on the construction site of our future?

First, there is the international network of scientists. Deciding how to handle the COVID-19 pandemic might have divided countries internally and externally, but you did not see this division among scientists. Virologists, infectiologists, bacteriologists and whatever techniques they used, they found each other almost immediately in a global network of knowledge exchange in which great consensus was maintained. International knowledge networks are now driving policymaking.

Similarly, economic experts across countries established the euro currency and steered European economic policy, overcoming the banking crisis of 2008 and, most recently, the COVID-19 crisis, leveraging what they have long advocated: the introduction of European bonds.

Companies are also powerful national and international networks with great expertise. The mind shift in the business world over the last five years has been enormous. The difficult-to-grasp umbrella term ‘sustainability’ is considered at every level. The fact that companies are making this move has a lot to do with the expectations of both their staff and their customers.

Just as scientific networks can fundamentally contribute to solving the wicked problems, so can the business world, because they are a huge player. Pressure from below is also an important factor.

The latter leads us to the other end of the spectrum with other important players who can help tackle the clustered problems.

The globalisation of the world is at a turning point. Take a look at the long production chains and the just-in-time management of stocks: this is inherent to the globalisation of the free market, but the COVID-19 pandemic showed that we must organise the world in a completely different way.

Moreover, in recent years, the realisation has grown that global problems can also be solved decentrally. I refer to Elinor Ostrom, who was awarded the Nobel Prize in Economics in 2009 for her analysis of governance by commons. She showed that global public good can be created with local, decentralised solutions. The success of such decentralised solutions is contagious, in that other regions are increasingly opting for them.

What we see emerging is the upgrading of smaller clusters, which is indicative of some form of deglobalisation. I am thinking, for example, of societal ecosystems: a complex set of coherent interactions in a given area without clear boundaries.

Let us take the region of Antwerp. How big is it actually? If you take health care as your focus, then this region has a reach of some 1.2 million people – deep into the Waasland region, towards Brussels, as far as the southern Netherlands. This coincides with the scope of the University of Antwerp: among the ranked universities of excellence, you have one university per one million inhabitants worldwide. So there is a broad region of Antwerp, a coherent area in many ways, with fluid boundaries. In this kind of ecosystem, private actors, companies, knowledge institutions such as universities and colleges, groups and actors from civil society, together with the urban authorities, can achieve a great deal, developing their own regional ecosystem into a climate and people-friendly region, in which, for example, energy is exchanged, in which we redesign the spatial planning with mixed forms of living that bring together young and old, thus bringing together the many fields of expertise present in a large project of co-creation. Such a model also increases the democratic legitimacy and support for the choices that are made.

It is an ecosystem in which the urban level will become even more important. There, decisions can be made quickly and have an immediate impact. In such a network, UAntwerp also has an important role to play, and we are taking on that role, as the driving force of the region, in order to focus on Flanders, on Belgium, and on the rest of the world. Help shape the future – that is what our university stands for!

The new world is facing major challenges, where good interplay between science and policy offers opportunities for global solutions. That policy takes shape in politics, but also on many other levels, such as international scientific networks, the world of business and industry, or the many ecosystems that develop from the joint effort from below. Universities and colleges have a big role to play in all of this. But this applies even more to the students. Because the world of tomorrow is their world. And they are young people who, with a set of fresh eyes and an aversion to cynicism, are absorbing knowledge and developing insight, soon to spread their wings out into the world and take on responsibility.

Dear students. Congratulations on the start of this academic year. ‘Congratulations’ also means ‘good luck’. I wish you a fantastic year, full of wonderful and rich experiences in a world that is also much more than knowledge and science!