

Protect independent and public knowledge

A concise version of this speech was delivered by Rector Magnificus Karen Maex in Dutch on 8 January 2021 during the Dies Natalis.

1. Independent public knowledge: the role of libraries, monasteries and universities

In the year 48 BC, the celebrated library at Alexandria was destroyed by fire. Its vast collection of manuscripts, maps and drawings was reduced to ashes. This disaster continues to capture our imaginations even today, almost 21 centuries later. Although it was in the Greek city of Athens that western academic knowledge first flowered, Alexandria was the first centre to develop a scholastic culture. Its library was less a repository of writings or collective memory, than it was a gateway for thinkers and philosophers from a range of traditions. Since the inception of libraries, preserving knowledge and making it widely available has been their core purpose.

In the Middle Ages, monastic communities played an important role, taking on the laborious task of writing and copying out texts. But monks did not limit themselves to just copying, they also adapted texts to their times. In doing so, they played an active role in the development of knowledge. Over the course of the 12th and 13th centuries, monasteries lost some of this responsibility to universities. Students and teachers gravitated to cities like Bologna and Paris. The amalgamation of the guilds for students and teachers gave rise to the education guild, 'the *universitas*', which represented their shared interests.

The *universitas* model quickly spread and universities came to occupy a central position as places of independent knowledge, research and learning.

With the introduction of printed books in 1455 and subsequent proliferation of texts both old and new, libraries played an increasingly prominent role. As

both the sheer amount of knowledge and possibilities for its dissemination grew, large new public libraries began to emerge.

As well as gathering and disseminating knowledge in the form of texts and books, university libraries were also concerned with gathering existing and new writings and furnishing them with context, notes and cross-references. Existing knowledge was thus meaningfully integrated with new knowledge thanks in large part to university libraries. Or, to put it another way: university libraries not only connect and disseminate knowledge, they also facilitate and generate it. They perform a fundamental and determining 'networking function'. This function is all the more important in our current era with new societal challenges are coming to the fore, interdisciplinarity gaining in importance, and unexpected and surprising insights providing new perspectives on existing fields. Insights, in fact, such as those provided by our new our honorary doctor Jan Potempa on the link between oral health and Alzheimer's ^[1].

2. The new role of private players

The historical importance of the organisation of knowledge over the centuries has been discussed and analysed at length by McNeely ^[2]. In addition to the importance of acquiring and preserving knowledge, McNeely emphasizes the importance of the various players in the knowledge system.

Since the 1980s, the pre-eminent role libraries held during the era of paper has gradually been eroded, initially by the development of advanced knowledge systems in commercial publishing. Instead of owning works in their collection, as in the days of printed editions, now university libraries only have licences granting rights of use. Publications on university research in effect have to be 'bought back' through

subscriptions to expensive journals in order to make them available through university libraries. That means publishers get to decide who has access to knowledge.

This has enabled commercial academic publishers to gain the upper hand. What makes this especially worrisome is that their role is limiting that of libraries as free and open arenas for research.

Open access is bringing about yet another shift. Publishers are responding by seeking alternative ways to retain their power and profit margins, such as by charging for open access publications in renowned journals or for impact analyses.

In the closing chapter of his 2008 book, McNeely sets out the future as follows: 'It merely remains to be seen whether the Internet will continue to embody the laboratory's most powerful technological contribution to the knowledge society or enable online communities to become the germ of an entire new institution of Knowledge' [2, p. 269].

Certainly, the independent gathering and sharing of knowledge that advanced science and scholarship for hundreds of years now needs effective translation for a digitised future. A future very different to what has past, with digitised publications, books and – most notably – research data. In principle, researchers make their research results and data publicly available within the framework of the open science initiative mentioned earlier. Research data is, however, both oxygen and raw material for further independent research. It is continually being tested and probed. It presents a snapshot, incomplete, that can be reused in myriad ways and subjected to many kinds of analyses. Digitisation has explicitly handed even more power to private companies, particularly when they also gain control of research data. What does that power entail? And, more to the point: How should a knowledge system be structured in response? That is, to protect its independence?

3. The power of technology

Technological developments in knowledge access leading to shifts in power among the players involv

nothing new. It was no different in the past. The advent of printing provided a major impetus for the spread not only of knowledge, but also of power. The printing press was a weapon. 'When Stadtholder Willem III embarked from Hellevoetsluis in 1688 to claim the British throne, not only munitions were brought aboard but also a printing press with a supply of lead letters and unprinted paper on which to print proclamations for the British people,' notes Marita Mathijsen in de Volkskrant [3].

An unintended consequence of present-day digitisation is the surging power of large tech companies. Like the 'market masters' of old, today's platform companies decide who gets access to information, guide interactions between users and convert those interactions into data [4]. This impinges on academic sovereignty and goes well beyond the 'publishing function' originally vested in a large number of firms.

Our honorary doctor Shoshana Zuboff [5,6] zeros in on this by way of three questions: 'Who knows?', 'Who decides?' and 'Who decides who decides?' Answer these questions and the conclusion is clear. Moreover, she asserts, the power balance has become so skewed that it is virtually impossible to resist: we have no choice but to conform.

Those who don't are finished.

And so private companies continue to enlarge their role while the public character of our independent knowledge system is further eroded.

But that's not all.

In addition to supplying data storage and search functionalities and information gathering, those same companies also play a considerable role in steering wider public discussions. In doing so, they draw no distinction between scientific information and, for instance, political or other interests. And, just as in other sectors, their consolidation of functions and buying up of other businesses is leading to a concentration within the market [6, p. 123].

This concentration of power among tech companies

can also impinge on the autonomy of university research in other ways. An important European Commission report ^[7] warns that by interlinking information services, research publishers may indirectly come to wield tremendous influence on universities' strategic policies ^[8]. For instance, on decisions around staffing policy – through the systems used to recognise and reward scientific research – and even on choices about what is researched. Compared to the big tech firms, publishers are of course relatively small players. Many researchers now use Google Scholar to find their h-index, Google Docs to collaborate with colleagues, Google Dataset Search to track down research data and Amazon cloud services to do calculations and store data.

This gives commercial players a huge amount of influence on virtually all aspects of research and education as originally forged in the universitas in the days of the first libraries and universities: on research results, on access to knowledge through teaching, publications and books, on interactions among university researchers and on how we search for information. But where the university library was neither a monopolist nor out for profit, things are different now.

And there's another crucial element that requires special consideration. Aside from advancing knowledge, universities also offer environments where young minds are developed through debate and interaction in a public knowledge space. In a debate ^[9], Klein, Zuboff and Brown reflected on how platform companies are narrowing the public sphere for interaction and narrowing our personhood, which in turn impacts our self-determination: 'The capacity for self-determination is understood as an essential foundation of many of the behaviours that we associate with critical capacities such as empathy, volition, reflection, personal development, authenticity, learning, goal accomplishment, impulse control, creativity and the sustenance of intimate enduring relationships' ^[4, p. 306]. It is vital therefore that we do not relinquish control over our method of study as well.

With the rise of platform companies, interactions between teacher and student are also changing due to new learning environments and productivity tools. How these environments and tools are shaped and how student and teacher data are gathered and processed is informed not by academic values but by commercial objectives. The upshot is that the platforms themselves become a driving force in how society is structured. Although there is thankfully growing concern about this kind of 'governance by platforms', it is still not enough.

4. Independence and a level playing field in the new knowledge system

The academic world in Europe is characterised by independent university education and research that go hand in hand with a climate of open discussion, supported by the universities' public character, the diversity of their disciplines and the diverse perspectives and backgrounds of their students and staff. Universities have always sought to maintain a level playing field with other players, with other public institutes – scientific or otherwise – and with industry.

If universities are to fulfil their mission, it is vital to act now to explicitly define and guarantee their intrinsic values. After all, we as a society have come a long way in how we organise knowledge: from monasteries with cloistered expertise to university libraries that make scientific knowledge widely available; from a focus on books and journals, to a conduit for content digitised and consolidated by publishers, to a knowledge system for the 21st century. In order to be able to implement the strategic agenda for universities in a future-proof manner, a plan and policy will have to be drawn up by the European Commission, a policy that is geared to the far-reaching transformation that lies ahead. Only then will universities be able to continue in their centuries-old role of independent education and research to increase knowledge, strengthen society and work with industry to generate greater innovation.

A recent European Commission report offers a look at what the next ten years could hold for European universities ^[10]. Though it contains many useful proposals and though digitisation features prominently in the report, it completely ignores the drastically changing ecosystem in which universities now operate and how this is affecting their mission of independent education, research and innovation. This digital transformation in fact requires a repositioning of the academic world and its mission, laying down clear rights which recognise that universities have their own public task. What will it take for them to continue fulfilling this mission? And what must we do to ensure that the added value provided by platforms and data companies serves universities in their public role?

5. Digital University Act

The European Commission is attempting to curb the influence of platforms in the service sector by means of a Digital Services Act ^[11]. For example, the European Parliament has called for companies to provide transparency about algorithms and to respect user rights ^[12].

But this Digital Services Act does nothing to support universities and their independent role in the knowledge system.

There is an important lesson to be learned here from the role universities and libraries have for centuries fulfilled in organising the knowledge system: society needs a guardian of scientific knowledge – a guardian that serves the public interest, based on public values. We need a central space where information can be accessed, found and is widely accessible. University libraries must also be to continue fulfilling this role in a fully digital future.

The added value large platform and data companies provide must not result in them gaining so much power in universities' public space that it fundamentally restricts university operations. To prevent this, universities' independence must be secured separately, so that we can continue to fulfil our teaching and research mission.

I would therefore like to call on commissioners Mariya Gabriel and Margrethe Vestager, along with the national governments, to develop an agenda designed to protect the position of universities in this rapidly changing ecosystem. The Digital Services Act of December 2020 does not address the particular needs of universities. What we need is a 'Digital University Act', aimed at:

1. Public storage and access to research data organised by universities and public infrastructure.
2. Freely accessible university research publications. Open access must not give rise to high publication fees or, worse, to a private company lock-in, whereby universities find themselves trapped in a growing commercial data-analysis industry.
3. Control over digital learning and research tools (productivity tools, learning environments, video conferencing, etc.). These tools should be supplied partly as public infrastructure and partly through collaboration with platform companies, with universities retaining control over the gathering and processing of user data as well as influence on the development of such tools.
4. Access to platform data. The EU should require that researchers and teachers also are given access to platform data for teaching and research purposes. This is crucial for moderating the public space and monitoring public communication.

In a briefing at the preliminary announcement of the 'Digital Services Act' in November, Commissioner Margrethe Vestager^[13] said the following: 'So we can't just leave decisions which affect the future of our democracy to be made in the secrecy of a few corporate boardrooms. That's why one of the main goals of the Digital Services Act that we'll put forward in December will be to protect our democracy, by making sure that platforms are transparent about the way these algorithms work – and make those platforms more accountable for the decisions they make.'

What applies to the future of democracy applies equally to the future of universities and of independent education and research as vital building blocks for the organisation of knowledge. We cannot

simply leave the future of knowledge to the corporate boardrooms.

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[1] Jan Potempa will receive an honorary doctorate from the UvA on 8 January 2021.

[2] Ian McNeely & Lisa Wolverson, 'Reinventing knowledge: from Alexandria to the Internet', Norton & Company, 2008

[3] <https://www.volkskrant.nl/cultuur-media/de-republiek-was-een-natie-die-werd-geregeerd-door-papier-blijkt-uit-dit-fascinerende-boek-b693a991/7>.

[4] José van Dijk, Thomas Poell & Martijn de Waal, 'De platformsamenleving: Strijd om publieke waarden in een online wereld' (2016) 13.

[5] Shoshana Zuboff will receive an honorary doctorate from the UvA on 8 January 2021

[6] Shoshana Zuboff, 'The age of surveillance capitalism, the fight for a human future at the new frontier of power'.

[7] Aspesi, C., Allen, N.S., Crow, R., Daugherty, S., Joseph, H., McArthur, J.T. & Shockey, N., SPARC Landscape Analysis (2019) 5, 50. <https://doi.org/10.31229/osf.io/58ybb>

[8] Aspesi, C. & Brand, A. (2020). *In pursuit of open science, open access is not enough*. *Science*, 368 (6491), 574-577. *The development of the platform economy also calls for changes in how we ourselves work. Which services should and can we develop as a part of the public infrastructure? And for which services will we partner with commercial entities? What conditions will we apply to the use of commercial cloud and information services?*

[9] Naomi Klein, Shoshana Zuboff & Surah Brown, 'Surveillance in an era of pandemic and protest' *The Intercept*.

[10] Policy report (independent expert report): 'Towards a 2030 Vision on the Future of Universities in Europe', September 2020, European Commission, Directorate-General for Research and Innovation. Lead authors: Mark Whittle & James Rampton.

[11] European Commission, *Digital Services Act package: deepening the Internal Market and clarifying responsibilities for digital services* (2020), 4.

[12] Paul Tang (rapporteur for opinion), *Opinion of the Committee on Civil Liberties, Justice and Home Affairs for the Committee on the Internal Market and Consumer Protection with recommendations to the Commission on Digital Services Act: Improving the functioning of the Single Market* (2020) 5, 6.

[13] https://ec.europa.eu/commission/commissioners/2019-2024/vestager/announcements/algorithms-and-democracy-algorithmwatch-online-policy-dialogue-30-october-2020_en

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