Public Knowledge

In 1902, in the 'steel city' of Sheffield, a pamphlet was circulated that called on all workers to donate one penny for the benefit of the planned University of Sheffield. The pamphlet listed six reasons to do so, the most prominent of which were 'The university is for the people' and 'The university will make the highest level of education accessible to working-class children'. It was therefore in everybody's interest – even the poorest labourers – to make a donation, since they would be contributing to their children's futures.[1]

Just a few decades earlier, while furious workers were destroying the industrial looms that threatened to make their profession obsolete and render an entire generation unemployed and surplus to requirements, the call for new universities in a number of provincial cities went out, starting in Manchester in 1824 and continuing until the beginning of the 20th century.

Sheffield University was one of the last of these 'new universities' to be built in the England. For a long time, Oxford and Cambridge had been the only universities in the country. While the academic credentials of 'Oxbridge' were beyond doubt, the *civic universities*, also known as *red brick universities*, sought to fulfil a different role in society: the connecting of academic knowledge and education with the city, local industry and the regional population. These universities - which were usually housed in buildings made from red brick, hence the name - weren't just located in the cities, they *belonged* to the cities. These were not isolated campuses, where students from far and wide were sequestered, but were instead located close to home,

so students could continue to live at home. `While Oxbridge had kept the Industrial Revolution firmly at arm's length, the new universities had been founded right in the heart of these industrial cities to meet the demand for better education and high-level knowledge.

Your own university was the answer to society's increasing complexity. Today, we are once again facing a radical shift in attitudes towards work and society due to technological developments, and comparisons to the Industrial Revolution are frequently made. The question is whether we can still be inspired by this 19th century English solution powered by explicit public ambition.

In addition to training the new generation and conducting scientific research, universities have another public responsibility, defined by the Rotterdam-based sociologist Willem Schinkel as: 'knowledge management and the establishment of public knowledge'.[2] As a public institution, the university's role is not only to share knowledge with its students, but also to get involved in society, which use that knowledge to enrich itself.

We can only conclude that the university has been very successful in its mission to educate students, as the student population has grown by 68% since the year 2000. Furthermore, according to the conclusions of the Rijn Committee, the performance of researchers in Dutch higher education institutions is excellent[3]. However, the public duty of universities extends far beyond just the students who are taught there and the staff who work there. In this lecture, I would like to concentrate on what is perhaps the least discussed public function of any university: the establishment of 'public knowledge' – knowledge that is created in the university and then finds its way into the outside world to make a positive impact on society. How exactly does this process work? And

what role does the development of the internet and the digital revolution play? To answer these questions, I will take a historical perspective and illustrate the changing role of public knowledge over the course of the recent centuries.

The 'publication strategy' of universities today developed gradually from the course set by the natural sciences in the 17th century, when 'modern physics' was born.[4] At this point, speculation and philosophy made way for observation and experimentation. Telescopes, thermometers, autopsies, trepanation and other new methods exponentially expanded humanity's capacity to investigate and describe reality. However, the introduction of new instruments and methods meant the question 'What is reliable knowledge?' was urgently in need of an answer. This led to the development of new 'legitimation procedures' to safeguard the reliability of new knowledge, such as public experiments and scientific journals. These two types of 'publication' allowed other academics and members of the general public to learn about the new findings and see them demonstrated 'in the flesh'. However, one undeniable downside of this amazing explosion of knowledge was that it was no longer possible to be an expert in every field and specialisation had become unavoidable.

In the two centuries that followed, it was not only the amount of available knowledge that grew spectacularly, but also the reach of the various media that published this knowledge. Investigative journalist Walter Lippman lamented: If even I cannot manage to remain well-informed about all of the subjects on which I am expected to have an opinion, bearing in mind that attempting to do so is of the utmost importance to me, how expect the average citizen to do so?'[5] In the first half of the 20th century, Walter Lippman, investigative journalist, author, and founder of a newspaper, dedicated the lion's share of his professional attention to the questions 'What knowledge do citizens in a democracy require in order to form an opinion?' and 'How to effectively communicate expert knowledge to the general public?'.

Although Lippmann primarily focused on political developments, this description also accurately illustrates the relationship between experts and the public when it comes to science. To what extent, Lippmann wondered, were the up-and-coming media of the age (especially radio, but also the written press) capable of reliably informing the public of the most important political developments around the globe? As a renowned journalist, he was forced to conclude that the media were constantly wrestling with two – in his view – conflicting demands of information provision. On the one hand, you had the public demand, i.e. widespread availability and distribution of information, while on the other, you had the complexity demand, i.e. accurate and comprehensive reflection of the facts. In Lippmann's opinion, the mass media of his day were extremely well-equipped to fulfil the former demand, as circulation was wider than ever before and you could easily reach a huge number of people with just a simple message. However, he also believed that they were ill-equipped to meet the demand for accuracy and complexity. The stories in newspapers and on radios were always hampered by length restrictions and simplification, so the reports were never quite adequate.

Lippmann obsessed for decades about how best to deal with this unavoidable distortion. As it was seemingly impossible to be well-informed in all areas, Lippmann considered setting up special 'intelligence bureaus': a class of experts who would inform and educate the public about all kinds of issues and ultimately be responsible for cataloguing, compiling and translating this information into knowledge that is relevant to the general public. Or 'knowledge managers', if you will.

With only a little exaggeration, you could even say that the 20th century was the century of the intermediary. Myriad mediating bodies sprang up between experts and the public: knowledge institutions, think tanks, press officers, journalists and communications experts, each of which had their own institutions and their own standards of professionalism.

However, in today's 21st century reality, only a few of these intermediaries are still standing. In *The Game*, Italian writer Alessandro Baricco analyses the consequences of the digital revolution. What does it mean for humanity that we are increasingly merging with our screens and smartphones and spend more and more of our time in a parallel digital world? It's a dizzying history of digital technology and how it has transformed our experiences, our perceptions and our thoughts over the last 20 to 30 years. We all watched it happen, and yet it all seems so far away. As Baricco explains, every smartphone owner has all the information in the world at their fingertips, can communicate with every other human being on the planet and can share their opinions with a huge audience. This has resulted in unprecedented levels of emancipation and an obliteration of old elites. 'The unavoidable consequence is that a substantial number of people have a growing belief that they can do just fine without the opinions of experts or insiders (…) After all, upon discovering that you can easily do without your travel agent, why wouldn't you assume you can get along just fine without your doctor?'[6]

The main feature of the digital revolution is its abolition of the intermediary layer and people's new-found ability to cut out the middleman. The supervisory role of the institutions that have traditionally relayed this knowledge to the public is wasting away. Travel agents, publishers and the music industry are no longer guaranteed their time-honoured raison d'être: YouTubers manage their own channels while customers book their own flights and hotels. The key feature of the start of the 21st century has been the increase in horizontal relationships, with the public choosing their own holiday destinations and their own music.

But what about scientists? For now, it would appear that they have managed to stay out of the firing line. Although the assault on the intermediary layer has already begun – i.e. on scientific journalism and the knowledge institutions – trust in science in the Netherlands remains as high as ever, according to a recent report by the Rathenau Institute.[7] However, the general public is no longer waiting eagerly in the wings to watch the latest scientific experiments or hear the latest research findings. The image of the expert conducting extensive study and then publishing his or her findings either in writing or via an experiment is outdated. The model in which scientists provide ready-made knowledge that they simply publish and then the public freely debates its consequences and meaning – referred to by Bruno Latour as the diffusion model – is no longer applicable. Nowadays, the public gets on board at a much earlier stage and plays a part in setting the knowledge agenda. The previously distinct and impregnable dividing lines between the various stages in the process (research – debate between academics – publication – debate among laymen) have been blurred.

Public knowledge immediately becomes disputed knowledge as the general public browses through the data itself regardless of whether or not it has been academically verified. This means that academics are increasingly having to defend their ideas in the public arena rather than in the lecture room or from the lectern.
(The movement in recent centuries is comparable to the role of politicians: in the 19th century, they spent the majority of their time giving account to their peers in parliament, in the 20th century they also had to deal with press conferences and journalism, while in the 21st century, politicians not only do press conferences and TV talk shows, but even appear at music festivals!)

In the future, academics will increasingly take on the role of publishers of their own knowledge and they must therefore develop the skills that this demands. In the current situation, in which academics still have the public's trust but the intermediary layers are eroding, it is vital that academics get more involved in the public debate. Furthermore, the question of 'how can this knowledge benefit the public' is going to be increasingly integrated into the research itself rather than determined at the end of the journey. If the knowledge diffusion model – in which public debate of knowledge only begins once it has been extensively academically validated – is no longer applicable, then

it would be advisable for academics to guide their research on its journey and move alongside their results as they enter the public debate.

Nowadays, the internet not only functions as an emancipator, but also as a manager of our collective knowledge – previously one of the university's public responsibilities. After all, is there anything in, say, Bologna's library that can't now be found online? Quite the opposite, there's so much *more* on the internet! We, the people, have direct access to an unimaginably vast quantity of knowledge, or at the very least, data. Climate models, crime statistics, demographic data, medical information: data, data, and yet more data. You can find everything online. But does data equal knowledge? I don't believe so.

In my opinion, the best illustration of the disconnect created when you mistake data for knowledge is Maxim Februari's 2017 novel *Klont*, in which the self-proclaimed and widely acclaimed digital technology expert Alexei Krups attempts to examine the full impact that big data, and unknown algorithms, have on our lives.
'I became fascinated by the realisation that humans, who slowly developed over millennia and refined themselves into knowing creatures, had managed to relegate themselves to the status of known creatures within just a couple of decades.
I stared mesmerically at the text on the screen and realised that the text on the screen was mesmerically staring back at me.

I wasn't speaking any more, as the great philosopher Martin Heidegger would have said, I was being spoken.
I wasn't doing any more, I was being done.'

Just like in Sheffield, the best way to respond to major technological developments involving huge social impact is to invest in knowledge. I'll say that again: *invest in knowledge.* Not to cut back on it, as consecutive cabinets have increasingly done and the current cabinet also plans to do. What makes this even more distressing is the false dichotomy between the sciences created by the recent Van Rijn report, which

increases investment in some branches of science by taking from others. Rather than driving wedges between the natural sciences, social sciences and humanities, major technological revolutions require us to blur the boundaries between them. As the American democrat and philosopher John Dewey warned, 'the combination of "good science" and "bad metaphysics" renders the human self an unnaturalized and unnaturalizable alien in the world.' Once again, see Februari's novel.

A few weeks ago, on the Dutch TV show *Zomergasten*, Maxim Februari said that 'beauty is a human right'. To this, I would like to add that access to knowledge is also a human right, one which all of humanity strives to acquire.[8] Data can stand alone, but knowledge requires coherence, interpretation and meaningful connection. Let's leave these duties to the universities in order to ensure that as well as being known creatures, we also remain knowing creatures.

Noten

1. See (among others) *The soul of a university; why excellence is not enough*, C. Brink.

2. 'De publieke taak van de universiteit', (The public function of universities), W. Schinkel

3. *Wissels om; Rapport Adviescommissie Bekostiging Hoger Onderwijs* [Switching tracks: Report of the Advisory Committee on the Funding of Higher Education], p.13

4, See (among other publications) *'Tussen toegang en kwaliteit. Legitimatie en contestatie van expertise op het internet'* [Between access and quality: legitimacy and contestation of expertise on the internet], N. Marres & G. de Vries, in *De publieke dimensie van kennis* [The public dimension of knowledge], WRR V110, H. Dijstelbloem and C.J. Schuijt (eds.), SdU Uitgevers, The Hague, 2002

5. *The Phantom Public*, W. Lippmann, p. 10

6. A. *Baricco*, The Game, p. 81

7. *Vertrouwen in de wetenschap 2018* [Trust in science 2018], Rathenau Institute

8. *dixit* Aristoteles