

Address by Rector Mark Waer on the occasion of the official opening of the 2012-2013 academic year

REGIONAL AND INTERNATIONAL NETWORKS AS A QUALITY PREREQUISITE FOR EUROPEAN RESEARCH UNIVERSITIES

As international institutions, universities are inevitably compared to one another at the global level. This usually occurs on the basis of the notorious 'rankings' and although the criteria used in them are often unclear, unreliable or irrelevant, these rankings never fail to provoke reactions from the media and policymakers. Consequently, the question is posed time and again by many on the European continent in general and in Flanders in particular as to whether the quality of universities should or could be increased by switching to an Anglo-Saxon model of academic excellence. This model is generally characterised by a strict selection of the best students and professors and by numerical concentration – read: rather small, well-funded universities. This system could be described as 'excellence by selection'. Proponents point to the American 'Ivy League' universities or, in Europe, to Cambridge and Oxford as shining examples. The success of this system is attributed to talent concentration, which leads to synergies and the added appeal, for sponsors and top researchers, of being part of a 'quality elite'.

While this characterisation may carry some weight for sponsors, it is less clear whether the research excellence of 'elite universities' is derived primarily from synergisms between brilliant minds or whether, alternately, they are simply the result of bringing promising and proven talent together in one place.

In any case, if continental European universities wish to take inspiration from the Anglo-Saxon model – including strict selection and frequent refusal of students at an early stage of their development – they must ask themselves whether such an approach is in fact acceptable and necessary to our model of society. This is debatable. Perhaps there is another, better path to creating excellent universities, distinct from the example set this Anglo-Saxon model. We might call such a path, in the words of Michael Crow, the charismatic president of Arizona State University, 'excellence by inclusion'.

For sociological and linguistic reasons, KU Leuven's student population has in the past been drawn from a limited regional recruiting area, namely, Dutch-speaking Flanders. However, our university has recruited extensively within this constrained area. Given the university's philosophical and religious world view, Catholic secondary schools have preferred to 'steer' their students to the Catholic university, and in large numbers.

It is not unlikely that this reality – a regional but also extensive recruiting effort – has ultimately contributed to the university's international quality.

International quality is best undergirded by objective figures. Using the SCImago database, which in the last three years has catalogued more than 80% of the total world scientific output produced by more than 3,000 universities and scientific institutions over the past five years, we can identify a list of high-quality 'comprehensive universities' that offer degree programmes in a wide range of

academic disciplines and deliver high-quality scientific research. Concretely, more than 20% of a given university's publications must appear in the top 10% of the respective discipline-specific journals to qualify as 'comprehensive' and 'high-quality'. Based on these criteria, KU Leuven falls in immediately behind Oxford University, Cambridge University, University College London and Imperial College London on the list of comprehensive European universities. That is, immediately behind universities with a rigorous student selection process and budgets several times the size of that of KU Leuven. KU Leuven's position in Europe is confirmed by its recent success in securing grant funding within both the FP7 programme and the European Research Council system. Here, too, KU Leuven placed immediately behind the four British universities.

We can therefore conclude that a university that allows all students with a secondary school diploma to enrol without a selection process *and* that relies on a rather limited regional recruiting area is nonetheless capable of achieving international excellence despite relatively modest funding. That is a remarkable statement, and one which contradicts what has hitherto often been held up as conventional wisdom, namely, that only through strict selection and increased funding can we lift ourselves to the international top.

Let us look into the possible explanations for this and address how they can be applied in the further development of a sustainable quality strategy for our university.

One explanation may be that talent is less scarce than we think. Sociologists like Richard Sennet convincingly emphasise this point. His viewpoint suggests that, when given adequate guidance and patience, a large portion of the talent that does not register in an 18-year-old's entrance examination score can still blossom later on. If we turn young people away through the use of entrance examinations, we deny them their personal growth and deprive society of their talents. Not everyone fits the mould of the early bloomer for which entrance examinations are so often written. Young people with other personality traits or an alternative growth rhythm fall by the wayside. And including these students does not necessarily need to be expensive or inefficient. The costs of higher education in Flanders remain below the Lisbon norm and are certainly no higher than those incurred by countries with a tradition of student selection. The statistic that approximately half of Flemish university students fail in the first year is often cited as an argument against the system of widespread acceptance of first-year students. These figures indicate a very limited view of overall study efficiency. In our own student population, we see that over two thirds of university students obtain a bachelor's diploma within 5 years, and of those who do not, an additional half go on to obtain a degree at a university college. In total, 5 out of 6 students obtain a post-secondary degree either from a university or a university college. Orientation tests can certainly further increase the efficiency of this system. Initial entrance exams, however, are probably not very effective when viewed from a global societal standpoint: they carry the disadvantage, as mentioned previously, of instilling a negative view of society and, often, an anti-excellence mentality in the minds of many rejected prospective students.

For these reasons, entrance examinations should only be administered in degree programmes in which, due to limited resources (e.g. medicine), selection is inevitable. And this selection is probably

best postponed until after the bachelor level to account for the high variability in maturity and social malleability of eighteen-year-olds.

Recruiting in a limited (language) area need not necessarily be seen as a handicap. That was the view voiced by the Dutch physicist Robbert Dijkgraaf in a recent radio interview (Klara, Babel, 13 June 2012) following his appointment as Director of the Institute for Advanced Study at Princeton. He stated that the overall scientific strength of Dutch universities can be explained by the fact that The Netherlands and Flanders – as linguistic minorities squeezed between German, French and British cultural dominance – have historically always had to exhibit a great international openness to mobility. A similar phenomenon might explain the high achievement of many Jewish scholars and artists: they too have often been historically dominated and – still more – threatened, necessitating a strong international orientation and intellectual mobility.

In addition, a regional recruitment base is not incompatible with a strong international orientation. This quickly proved to be the case for our own university when its second rector, Professor Roger Dillemans, took the initiative in 1986 to pen a ‘Magna Carta Universitatum’, which went on to be signed two years later by 430 European universities. The document laid the groundwork for the ‘Bologna Declaration’ in 1999, which was adopted by 29 countries and in turn led to the redrawing of the European higher education landscape. KU Leuven has always wholeheartedly supported this process. It is therefore not surprising that the summit marking the tenth anniversary of the Bologna Declaration was held in Leuven.

KU Leuven’s strong international orientation is also evident from the fact that it – once again according to the SCImago database – belongs to the group of universities with the highest percentage of publications (52%) resulting from international cooperation spanning national and linguistic boundaries. Furthermore, KU Leuven has experienced a marked upwardly trend in the number of international students (nearly 20% at the bachelor level, and nearly 50% at the PhD and postdoctoral level) as well as in the number of newly appointed non-Belgian professors: of the professors newly appointed in the last 10 years, 25% obtained their Master’s and PhD degrees at a university other than KU Leuven and 15% had a foreign nationality. More than half of our professors carry out a foreign academic assignment of more than one year at some point in their academic careers.

While being situated in a metropolitan city can be advantageous for international top universities, the reverse is not necessarily detrimental. Indeed, many excellent universities are located in small towns. This both encourages internal contacts within the university itself and enriches the social, political and economic space in the vicinity of the university, where the university is considered an important knowledge partner and economic engine. For modern universities, close societal contacts are essential as sources of inspiration and as so-called ‘knowledge bridges’. They clearly constitute an essential element in scientific and academic creativity and innovation.

In the 2012-2013 academic year, we celebrate the ten-year anniversaries of two organisations that have made and continue to make significant contributions to the regional embedding of university education and research, inclusion and international competitive excellence.

Firstly, KU Leuven commemorates the ten-year anniversary of the founding of the KU Leuven Association. In the context of the Association, the university and twelve university colleges resolved to work together closely around the so-called 'academisation' of the university colleges' long-type degree programmes and work toward the further development of a high-quality and more integrated higher education area. KU Leuven has always seen the Association as a part its social mission while at the same time viewing it as a strategic opportunity. In striving to help Flanders evolve in the direction of a highly developed knowledge society, the Flemish government has asked the universities to assist the university colleges in the academisation of their long-type degree programmes. The aim of this effort was not only to strengthen the level of knowledge of these degree programmes but also to stimulate research of a more applied nature as well as research that is closely integrated into the university colleges' respective regional, sociocultural and industrial contexts. In this way, the well-known 'translational linkages' are strengthened through intensive cross-pollination between knowledge-driven research on the one hand and applied research on the other.

Furthermore, a wider regional distribution of academic degree programmes at the university college campuses across Flanders aspires to contribute to a much-needed second democratisation wave in Flemish higher education. Due to manifold sociological evolutions, in recent years eighteen-year-olds are choosing more and more to enrol at institutions of higher education nearest to home. This phenomenon is especially pronounced among young people from less affluent social circles. The Association's regional gateway to higher education offers access to a well-developed, integrated and high-quality academic network that provides all young people with optimal opportunities and unhindered access to a wide range of academic degree programmes, even if their initial choice about what to study was limited or less than well-considered. Addressing this latter phenomenon has been a particular strategic priority of KU Leuven. One could argue that KU Leuven's broad recruitment base, which has historically been rooted in a particular sociological (read: Catholic) world view, meanwhile emanates from a structured network with an emphasis on quality, a smooth flow across various degree programmes and an international reputation. The recently finalised integration decree provides the necessary legal basis for the integration of the 'academised' university college degree programmes into the university proper, which will take effect at the beginning of the 2013-2014 academic year.

The second ten-year anniversary we celebrate in 2012 is that of the official establishment of the League of European Research Universities (LERU) in July 2002 in Leiden. This took shape with the signing of a Memorandum of Understanding by the leaders of LERU's twelve founding universities. LERU's central task was to evolve into a network of tone-setting European research universities dedicated to high-quality education based on fundamental research, and this in an increasingly competitive and international world of research.

The LERU concept was originally conceived in April 2001 when a number of European rectors met during the centenary of the Association of American Universities (AAU), an organisation with similar objectives but a much longer existence. The AAU was the product of the fact that universities in the

United States have historically enjoyed less legal protection, prompting its strongest universities to unite together to defend their rights and institute a sort of 'accreditation *avant la lettre*'.

The idea to establish LERU also built upon an initiative of the deans and leaders of the medicine faculties of Cambridge, Oxford, Leiden and KU Leuven to develop a network of universities with strong traditions of medical research and clinical training. This group commissioned a bibliometric study from which to derive selection criteria for candidate universities. A meeting was then organised in February 2002 in Leuven at which the twelve universities with the strongest scientific profiles according to the bibliometric study agreed in principle to found LERU, which was formally incorporated two months later in Leiden. They also agreed that the key mission of LERU would be to stimulate fundamental research and exchange best practices. KU Leuven offered to house the LERU secretariat and LERU was established as a non-profit organisation under Belgian law a few months later. The former vice-chancellor and rectors of Oxford (Sir Colin Lucas), Leiden (Professor Douwe Breimer) and KU Leuven (Professor André Oosterlinck), respectively, formed LERU's first 'Coordinating Group'. Former KU Leuven Vice Rector of Research, Professor Herman Vanden Berghe, was appointed the network's first Secretary-General. In the ten years that followed, LERU, using the original candidate criteria, expanded its membership to include another ten European universities with strong research reputations.

The history of LERU's founding clearly illustrates that KU Leuven has played a central role in the emergence and development of LERU from the beginning. This is not only a clear sign of the university's strong international orientation but also has allowed the university to solidify a privileged position – via biannual rector conferences and various work groups – in the quickly evolving landscape of international research-intensive universities.

Although there are undoubtedly many other ways for universities to approach internationalisation – by establishing satellite campuses abroad or concluding bilateral agreements with foreign universities, for instance – participation in a highly interactive, well-organised network of excellent universities remains an exceptionally effective internationalisation tool. In such a network, all partners are able to exchange information, advice and best practices in a direct and friendly manner. The network also provides a basis of trust upon which bilateral or multilateral cooperation can take shape between universities or their respective faculties and research groups. In addition, thanks to the combined reputation of its members, it is becoming more and more clear that this highly interactive network is increasingly able to influence European policymakers and/or function as an interlocutor for similar organisations elsewhere in the world. The LERU network appears to be an ideal tool for allowing our university to focus squarely on its own local and regional development while at the same time maintaining very close contact with the most important developments in the quickly evolving university world.

Over the centuries, universities have evolved from loose organisations of groups of scholars and their students to structured knowledge institutions. This was facilitated by phenomena such as government regulation and funding, societal accountability and structured internationalisation. We must continue to ensure that the basis of the university's creativity is secured, particularly through

very inclusive, autonomous, trust- and continuity-based and internationally-oriented research and education communities. In this complex reality, there is doubtlessly an essential role set aside for high-performing regional and international university networks.



Excellence by inclusion
through inclusion of
excellence and of societal
interaction



Academic Excellence by inclusion and through inclusion of excellence

1. The Leuven paradox (the Belgian, the Flanders paradox)

SiR (Scimago) World Report (2012, period 2006-2010)

- 3 290 institutions with > 100 publications
- > 80% worldwide research output
- Scopus data base

Comprehensive Universities with excellent scientific output
(citation > 1.5, 'top 10 journals' ≥ 20%)

Worldwide

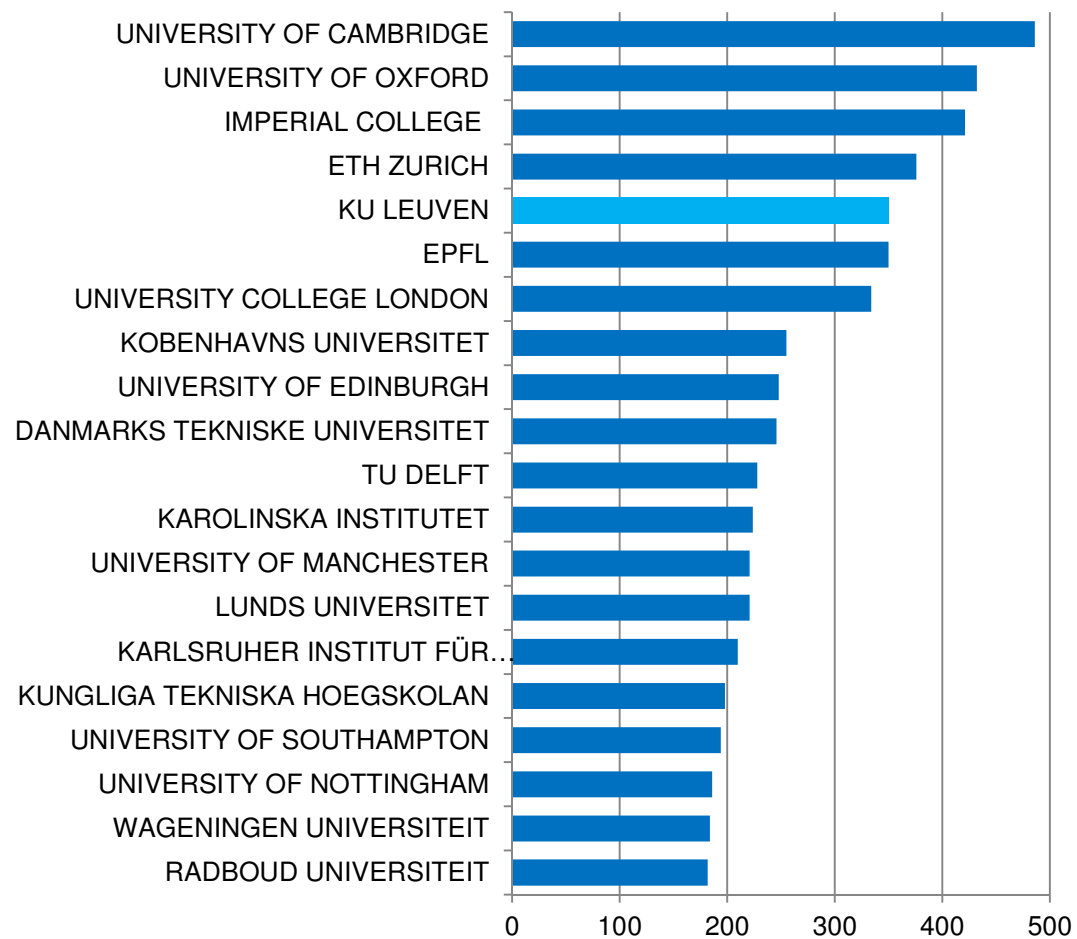
1. Harvard University (74 000*)
6. Stanford University (39 000)
7. UCL
9. Oxford University
10. Cambridge University
15. Imperial College
30. KU Leuven

Europe

1. UCL (36 000)
2. Oxford (35 000)
3. Cambridge (34 500)
4. Imperial (31 000)
5. KU Leuven (24 000)

* Total number of publications

European projects FP7



Bron: EWI, Departement Economie, Wetenschap en Innovatie, versie 04.09.2012

KU LEUVEN

KU Leuven: societal mission

■ Student recruitment and budget

	Stud (undergrad)	Budget	Endowment	Stud./Staff
KU Leuven	40 000 (18 000)	0,7 b Eu*	(pm 0,9 b Eu dedicated)	20
Cambridge	20 000 (12 000)	1,5 b Eu	2,7 b Eu	5
Stanford	15 000 (7 000)	4,1 b USD	16 b USD	8

- *
· 50% for Research
· 75% competitive
· 30% non-governmental
· Registration fee: 550 Eu! (= 3%, Stanford 20%)

2. The selection paradox

- Richard Sennett
- 50% first grade failure vs 70% bachelor success
- HE in Belgium: 1,6% GDP!

3. The 'inbreeding' paradox

- 65% 'inbreeding'
- The 'ETH and Ambev story'

4. The 'Village' paradox

- Robbert Dijkgraaf
- Open spirit
 - International experience: > 90%
 - International publications: > 55%

Requirements for excellence by inclusion

1. Growth environment (democratisation education)
2. Entrepreneurial spirit and societal interaction:
the LRD and UH story:

UH: 2011: > 900 clinical studies!

KU Leuven: research valorisation

- LRD: Leuven Research and Development
 - First continent. Eu TTO (1972)
 - 70 FTE, 1 250 contracts/yr
 - 1 300 investigators
 - 165 m Eu year budget
 - 110 m Eu 'industry related' (50% IP related, 50% contract base)
 - 10th world wide position
 - 500 active patentfamilies (> 80% exploited)
 - 100 spin offs (70 in last 10 years)
 - 3 000 local employees
 - 2005-2010: 5 m Eu LRD invest.; 500 m Eu raised
 - Licensing:
 - t-PA (Genentech)
 - Viread (Gilead)

American universities Licency Fee incomes 2011

	Name	2011 Licency Fee incomes USD
1	Northwestern University	191.541.162
2	University of California System	182.049.620
3	Columbia University	146.319.455
4	New York University	142.202.157
5	Princeton University	115.206.000
6	Massachusetts Inst. Of Technology (MIT)	76.120.000
7	University of Washington/Wash.Res.Fdn	67.362.185
8	Stanford University	66.797.246
9	University of Texas System	65.359.377
10	UW-Madison/WARF	57.730.000

83.339.955 KU Leuven

Source: AUTM Licensing Survey FY2011

KU LEUVEN

Requirements for excellence by inclusion

3. Democratic organisation (research freedom)
4. Bottom-up research policy starting from broad basis: no top-down 'selection' of centers of excellence
5. Excellence systems: the 'VIB model', the 'IMEC' model
6. Creative community:
 - 3T: Talent, Technology, Tolerance
 - Small city
 - Culture environment (the 'KAUST' story)
 - Value oriented
 - Network (alumni, triple helix)
7. Excellent primary and secondary schools