

**Transcript of a  
LECTURE ON HIGHER EDUCATION**

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I am obliging to a kind request to give a more formal lecture on the role of universities in development, the economy and society. I am certain that this is not tailored for a university in Africa; for that we'll have to work with the HERANA project that Nico Cloete from the Centre for Higher Education Transformation is leading and will have to see more data.

Simply, to start, I think that if we take seriously the notion that we live in a global knowledge economy and in a society based on processing information – of course that's what universities are primarily – then the quality, effectiveness and relevance of the university system will be directly related to the ability of people, society and institutions to develop. In the context of a technological revolution and in the context of a revolution in communication, the university becomes a central actor of scientific and technological change, but also of other dimensions: of the capacity to train a labour force adequate to the new conditions of production and management. Universities also become the critical source of equalisation of chances and democratisation of society by making possible equal opportunities for people – this is not only a contribution to economic growth, it is a contribution to social equality or, at least, lesser inequality. Something else is the university's ability to develop new cultures; that is, to be the source of cultural renewal and cultural innovation which is linked to the new forms of living which we are entering. Finally, universities also have been dramatically affected by technological change itself – being an institution that processes information, its own information and communication technologies are affecting deeply the functioning and the culture of the university, sometimes without the full knowledge of what is happening and without controlling these processes. Yet, in spite of all these challenges, all these possibilities, all these opportunities for the university system, in many cases universities continue to be corporatist and bureaucratic, defending their own interests – particularly in terms of the professors – and extremely rigid in their functioning in terms of their administration.

To try to understand the processes of change, you will allow me to take a long perspective and remind you of the different types of universities that have appeared throughout history, and that combine in our experience. I think it is useful to see the universities as fulfilling different functions which are accentuated in some universities at some moments of history, but that to some extent constantly combine and re-combine, and that depend on the emphasis on the function. Hence my notion of the university **system** – not just universities – because different units provide different functions and the whole system has to combine these different functions.

As we know, historically, universities started largely as producers of values and social legitimation. All the major universities in the world started as theology schools: Bologna, the first one in Europe, and then Cambridge, Oxford, Harvard, Salamanca, Sorbonne ... Take any of the major universities, they were all first theological schools which, in fact, were producers of values and social legitimation. Other non-religious universities played a similar role in producing, for instance, imperial values in the case of some of the major universities, of justifying domination, justifying western superiority in the colonial world.

The second function, and I would say in historical terms equally important as the production of values, was selection of the elite – establishing a social stratification in society and making sure that the elites would go through the selection functions in some of these universities. This function is extremely important both then and now. The Ivy League institutions in the United States, or the *grandes écoles* in France, or Cambridge and Oxford in England, are *somewhat* better than other universities, but not so much better to account for the fact that 90 per cent of the elites that govern the business and the polity of the countries come from these universities. So, the selection of elites is extremely important, more so than the other functions.

Then the third function, also a historical sequence, was the training of the labour force. This saw the emergence of the professional university – particularly important in the schools of medicine, law and engineering, and engineering schools which were critical for the development of industrialisation as training institutions. Examples include the polytechnic, the School of Lausanne (one of the top engineering schools in Europe), or Caltech as a pure engineering university in United States, or Imperial College to some extent in England.

There is a different type of university which is the science university which is not any of those that I mentioned before. This is the university in which the primary function, the emphasis, is on the production of knowledge, of scientific knowledge. This is a very late invention that took root in the German universities of the second half of the nineteenth century. Humboldt was the first one that assumed the role of science production as the primary function of the university. In the United States, it was only taken up much later and the first university to copy the German model was Johns Hopkins – not Harvard and not MIT. In the United States, universities that were the so-called Land Grant universities, public universities, also developed as science-based universities but with application into society; for instance, Berkeley started basically as an agricultural school, or Michigan which started as a mining university. So the fourth function is science, but science to develop certain specific industries that were very important for the country.

Fifth then, in historical sequence, are the universities that I would call generalist universities, universities that came to elevate the level of education of the population at large, bringing in to the universities at least 20 to 25 per cent of the propertied classes. These were the universities that after World War II developed in France, in Italy, in Spain, in Latin America

and then in Africa after their independence. 'Everybody should be able to go to university' was the thinking, and it was important to keep the other functions in relatively separate institutions, not to be overwhelmed by mass education. That is what happened in all these countries. So every country developed systems in which the elite would be formed differently, in which science will be produced differently. In the case of Europe they separated the research centres from the universities and created the national research centres, and so on. So this type of university is what I call the mass teaching university: not to provide training but to provide degrees, which is different as degrees grant access to the labour market and then allow graduates to be trained in their jobs.

Then lastly is what I call the entrepreneurial universities. These universities centre on the innovation and the connection between the world of science and technology, and the business world. The classic example in this sense is Stanford which deliberately organised itself to be a great scientific university, but at the same time connected constantly to the business world. MIT also moved decisively in that direction, but many other universities in the world – in Singapore, most notably – have been modelled upon this. The notion is an interaction, a very close interaction, between being top in science and technology, but at the same time being able to develop an entrepreneurial system.

Now all these functions are combined in different ways in the entire university system, and one of the key issues is how to articulate these different functions without downplaying one or the other. For instance, it is obvious that not every university can be a research university. But at the same time, every university has to have access to the research centres that exist in the university system for specific purposes and may develop a small nuclei of research linked, on the one hand, to the needs of society and the economy and, on the other hand, fed by the networks of research that can be constructed in the entire university system. Moreover, because we are in a global economy and in a global research system the notion of universities being stand-alone, major research centres is gone. The critical thing is to be in the networks of global production of knowledge, of research and innovation. For that, what you need is to be the best and even the best in every aspect. You need to have a ticket to enter one of the networks; you have to provide something that is not *necessarily* the best in the world but is interesting enough that all the other participants in the global research network of one particular field to want you to be in the network. For this, of course, the internet is crucial. You don't necessarily have to go to other research centres; you can diffuse your results, you can connect, and you can work globally in a global network of research without necessarily having to spend every two years recycling period in another country.

In the current condition of the global knowledge economy, knowledge production and technological innovation become the most important productive forces. So, without at least some level of a national research system, which is composed of universities, the private sector and public research centres, no country, even the smallest country, can really participate in the global knowledge economy. Resources are not forever. What does endure are people with needs, and if you have people and develop people, then you have the most important resource in the form of the human mind. There are endless examples of how betting on the human mind has been decisive for the development of countries. The east Asian countries that were extremely poor after World War II and are now tigers are examples and they all have one thing in common: a very good education system at all levels of the education system based, on the one hand, on the traditional value of education, but also on the investment by government and then later by companies and by private universities in the quality and the quantity of education. Korea, Taiwan, Singapore and Hong Kong all have great education systems and very good university systems and they prioritised

education. Mauritius, I think, is also a good example – you have a direct correlation between the capacity to invest in education and in universities, and not only the level of economic growth but of human development as well, which is fundamental.

In addition, of course, universities have a major role in producing a quality labour force, not only in knowledge but also in terms of the quality of labour. In our type of economy and society the key quality of the labour force depends on its education, and the labour forces' education depends on the educators; in other words, the quality depends on the educators. The educators are those who have to be trained by the universities of quality, without that – even if we build schools, even with laptops for every child – if there are no good teachers, there can be no good education. And that requires all kind of things including the working conditions for the teachers. We often talk about Finland as an exemplary case. What is the most important thing about Finland? It is the quality of the education system and how well teachers are paid and respected in society.

But all this starts with being well trained at the level of the university. Moreover, the type of training that we need these days is what I call 'learning to learn', which is constant re-programation of skills in a constantly changing economy, technology and social cultural environment. So the information is all on the internet, that is why the internet is very important because any information we need is on the internet *if* you know how to look for it and what to do with it. Because we have this capacity, we don't have to implant knowledge in young people's minds that will be obsolete very quickly. Therefore, their ability to constantly recycle the knowledge and the skills for the people requires two things: first, that education is basically creating what I call the 'self-programmable ability' of everybody to change along the lines in many different occupations all through their professional lives; and, second, retraining throughout the lifecycle which can only be done in one way – distance education. Distance education is done through the internet. It can be of high quality and not necessarily at lower costs because it is expensive if it is done well.

Therefore, the role of distance education becomes critical because it allows two things: first, to constantly 'recycle' people all along their professional lives; and, second, to teach immediately the professionals who train the nurses, the rural doctors, the teachers – because the notion that we have to teach children so well so that in 25 years we will have a qualified labour force is self-defeating. Developing countries have to leap-frog dramatically, and you can only leap-frog in education by using virtual education to teach those who are already at work, and if you are already at work there's no other way than virtual education. In that, I personally think that South Africa has a great possibility – you have Unisa and other institutions, but they are not very well advanced in internet teaching. And that's the only way because the other way is so inefficient that ultimately it becomes a burden and results in a lower level education, and there's no reason why it should be lower quality in those terms.

I also would add another possible function of the university which, in our current context, is the production and consolidation of values – ethical values, personal values – and the formation of flexible personalities. What do I mean by flexible personalities? We live in a constantly changing world, accelerating change, so we need to develop pedagogic models that don't give precise instructions about how to behave in life, but instead give the capacity for people to reorganise their lives without being the structure in the constant transformation of the living environment. At the same time, flexible personalities anchor in some values because otherwise they disintegrate. So, we need to train students to have a few, but solid, values. A few principles: don't abuse the other; don't be greedy... A few, solid

principles; not a general civic education system. A few values through *our* example – we have to be the role models. So, a few values and at the same time flexible personalities – that is the ideal combination. This is a fundamental function of the university and it is usually not taken seriously by any university that I know, although some are starting to think about it – particularly in the business schools that have realised that if you don't have ethics in business, you end up doing lousy business and collapsing the financial market.

Universities emphasise an increasing interdisciplinarity. Interdisciplinarity is a bad word in many academic circles and yet this is what our economy, our science, our technology requires these days. Everybody talks about bioinformatics and new materials – all kind of disciplines which are at the borders. Now, why is that interdisciplinarity is so obvious and so difficult? Well, because disciplines are peace treaties between warring factions. And they are so delicate that you cannot start changing departments and changing disciplines, etcetera. So interdisciplinarity is only practiced in some disciplines, for instance, communication or city and regional planning. I always end up in these disciplines simply because I feel freer; I don't have to demonstrate whether I am a sociologist or an economist or a political scientist. But try to recruit a political scientist in a sociology department – no way! Therefore, it is essential that interdisciplinarity is promoted by the university itself. The University of Southern California, has a principle, has a policy, to reward interdisciplinarity: if you are interdisciplinary you get a higher salary – what about that! And there is a special chair for interdisciplinary people, etcetera. This is another critical matter.

Then the notion of public and private universities: experience shows that this is not the most relevant matter in terms of the efficiency of the university. There are great public universities in the world – Berkeley, Michigan, Cambridge, Oxford. In Europe all the universities are public; only some strange marginal universities are private. In the United States there is no real difference in quality. There is Stanford but there is also Berkeley; there is Harvard but there is also the University of Michigan; there is Wisconsin – all equally good. They are richer and more influential in selecting elites, but they are not better. The difference is how bureaucratic a university is, how flexible it is, how managerial it is. Private universities which are bureaucratic, and I will not name names, are in fact not competitive. Public universities that are managed efficiently, as was at one time in the University of California system, can be extremely competitive. So the management part is critical.

The other thing to add is that regardless of the notion of the legal form of the university – whether it is public or private – what is essential is that universities are in the *public interest*. You can be in the public interest and be private. If you are not in the public interest then you become a business and you pay the price for it, for instance, in taxation and in many other ways. So, private or public but in the public interest, and then you can have both government funds and private funds, but on this basis.

Finally the notion of the technological transformation of the university – this is something that has to be tackled seriously. We are already in a system that is hybrid; we are not simply in only face-to-face or only in virtual universities. Even the face-to-face universities are virtual because we work on the internet, we work on email with our students, we are constantly connected. But all this is happening without any real policy, any transformation of the pedagogic method of the university. To introduce the notion of e-learning – not just distance learning but e-learning – as a critical form of our university world in the face-to-face universities is essential in addition to the development of the virtual universities. And all this depends on the capacity of the university to keep its autonomy. Universities are the last space of freedom, relatively, in society and it is essential to preserve not only for scientific

reasons, but for social and political reasons. At the same time we have to *earn* this autonomy and this freedom every day and use it in the public interest, not in the defence of our privileges. If we combine these two things we can continue the tradition that started a thousand years ago – and if not, the pressures of the society will destroy the university as a space of reflection and innovation.