Foreword

I have this feeling and understanding, like a ‘Verité de La Palisse’, that throughout the history of humankind, in all domains of life, speaking of individuals or institutions, it has not been the ‘strongest’ (individual or institution) that necessarily survived, but rather the one that proved to be most adaptable to changes... I am sure that you, reader, have already identified that this speculative and (for some) probably arguable statement is inspired in the studies of Darwin about the evolution of species and has been disseminated (not by Darwin) in relation with the evolution of species. For me, the underlying idea serves as introduction to my short text and to my conference. Indeed, the issue for the talk, that will be limited in scope to Governance and Management of Universities, is structured in these three points/questions – (i) how do we characterize our contemporary days? (ii) what challenges are ahead of us, embedded in our present reality? (iii) How can we, or how should we tackle them, what should we do to adapt to times?

Reading the past

We should not put ‘memory’, the lessons of the past, aside. This means to think about the question - Are these challenges of today so different from those that our ancestors had to face over the past, say, two hundred years? Independently of recognizing the tremendous pace of development that we are going through, as I obviously recognize, it is important to have a ‘memory’ and keep in mind the type of progress and the shock/clash of progress in society, in institutions and individuals along the times.

The 1st industrial Revolution (~1750-1850) associated to James Watt (1736 – 1819) and the steam engine1, represent the days when, possibly for the first time known, machines replaced hand powered tools. What a shock it has been. And then we identify the 2nd industrial Revolution (~1850-1930), the age of the steel2, with locomotives and steam boats allowing for goods to be ‘massively exported around the world’ as it is commented in some writings about those times, or a period where Europe ‘changed dramatically’, experiencing ‘rapid changes of social and economic patterns’.

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1 Rector of the University of Porto, Portugal; a short description of the University is provided as annex to this text.
2 https://www.britannica.com/biography/James-Watt
3 http://www.britannia.com/history/euro/1/4_1.html
Speaking of those days, it has also been written, and rightly so, that the Pasteur’s breakthroughs (1822-1895)³ ‘revolutionized the world as it was known’, or that discoveries of Thomas Edison (1847-1931)⁴ ‘changed the world for ever’. And similar sentences for the discovery of penicillin by Alexander Fleming (1881-1955) and how it also ‘revolutionized’ the health area.

Then, of course, in the area of communications, the first public radio broadcasting in 1910, or the transistor, that revolutionized the field of electronics, first patented by Julius Edgar Lilienfeld in 1926, but really only brought to practice in 1947 by John Bardeen, Walter Brattain, and William Shockley (Nobel prize winners in 1956)⁵.

Many other examples could be given about ‘times of dramatic changes’. Indeed, many other quotations of the past with the very same words that we use today to characterize contemporary life can be found in the literature.

**The World today**

So, with this background in mind, let me ‘go back to the present and to the future’. If we look to the trajectories of changes along the past 200 years, yes, we note that the derivative has increased significantly over the past 40 years or so. I take the end of the seventies, and particularly the last decade of the last century as a reference time for very significant changes, for the identification of the 4⁴th Revolution⁶, that is clearly not only industrial.

Main driving forces? For sure social understanding of education, progress in science and technology and the cycles of world politics, the latter having changed much along the last quarter of the 20⁰th century due to the influence of science and religion.

Speaking of Education, there is a clear understanding that the shout ‘Education is a Human Right’, very much promoted by UNESCO, through the ‘Education for All’ Movement⁷, initiated in the World Conference on Education for All in 1990, in Thailand, represents a major milestone⁸.

About progress in science, I have identified above some examples of the past, linked to research in the health and the communications areas, with tremendous impact in our lives. For a reason. Recent developments in these very same areas are especially responsible, though of course not exclusively, for this ‘revolution of the present’. The developments in the health area experienced by the end of the last century were responsible (together with public policies, of course) for the sharp increase in the expectancy of life and this has clearly put in question the social system in Europe and elsewhere, as it was organized. About ICT (Information and Communications Technology), the known and felt progress in this wide field, as we go wireless with unforeseeable end and consequences, is of course

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³ https://en.wikipedia.org/wiki/Louis_Pasteur
⁴ https://www.britannica.com/biography/Thomas-Edison
⁵ https://www.aps.org/programs/outreach/history/historicities/transistor.cfm
⁶ https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/
⁸ http://unesdoc.unesco.org/images/0009/000975/097552e.pdf
influencing all areas of our life. And politics, with the fall of the Berlin Wall in 1989, has led to all social, political and economic consequences that we are feeling today, not foreseen at the time, having strengthened, accelerated, this reality of the Global World open to the market economy. The social paradigm has changed, with serious consequences of political and social instability, as we all see today, every single day.

It is of course true that we live a 24/7 economy, from East to West, with Europe in the middle, with a sharp increase in global competition. We communicate in real time. Businesses are easily delocalized, because, also, the digital communication is supported by the very significant improvements in physical transportation – we fly East at midday, to work directly early next morning in what was known before, but not anymore, as the ‘other side of the world’.

But, let us dedramatize, bringing again statements of La Palisse! We live today times of changes... as others have lived, before. We simply have to be up to the times... as others had to be, before.

Universities are, more than any other area or business, in this game, for the simple reason that we have the ‘knowledge’, we are the main producers of the ‘knowledge’ that supports all this evolution.

Yes, we are under pressure and have to cope with multiple challenges. Is this new? I do not think so, it is simply different and we are working with the constraints, threats and opportunities of our world, as it is today. And, we shall succeed.

**Challenges for the universities**

The next issue is that of the challenges that we face in the universities. To start with, the scope of our mission is of course much wider today than it was not so long ago. And also the dimension - here in Portugal, we have today something like 10 times more students and staff than we had 45 years ago.

Those were the days where Education was centered in the professor and in the classroom, and the main (and almost only) reason to justify the existence of universities (higher education institutions), this picture being naturally different from country to country, depending on the stage of development of each country.

Today, the issue of teaching shifted to student-centered learning, we speak of ‘autonomous’ classrooms in a model of education progressively without borders, or better saying ‘without borders externally and without walls internally’. Significant pedagogical issues are at stake as never before in universities and Faculty must be prepared to give an answer to this new demand – the offer of education, the model of learning, issues that I shall revisit below.

Those were the days where research was essentially driven by curiosity, with predominantly monodisciplinary research groups, with limited external networking.

Today, much of the research is driven by contracts and associated to pre-defined targets. The recognition that knowledge is mainly produced in multidisciplinary environments is (slowly) leading
to organizational changes (this important point will be obviously retaken below). In Europe we are pursuing the creation of the ERA (the European Research Area).

Those were also the days where Education and Research were the only two accepted or recognized pillars of the university mission.

With the sharp increase in the demand and with the rising costs of the functioning (namely of the competitive functioning), the pressure of the society and governments for accountability (in several forms) has increased significantly. Of course that this means that we pay a price, possibly a too heavy price in... bureaucracy, rules and paperwork, an issue that I shall also retake below. They want to feel that universities respond to what they understand to be the needs of the people and want to see those goals embedded in the mission of universities. They rightly want universities to respond for the results of the students. They want to see shorter term results of the investment in research, with impact in the economy.

Independently of some of these issues being very controversial, particularly those related to the discussion of ‘what are the educational needs of the society, thinking of future jobs (which jobs?)’ or ‘what are the driving objectives of research’, we have today a well identified and recognized third pillar of the university mission, known as the Third Mission, where major social and economic issues are included, such as the social dimension for the universities and the valorization of knowledge in its several complementary forms of promoting entrepreneurship, protecting intellectual property and launching startups, besides of course the relevant promotion of culture, the basis for the *Alma Mater* of institutions, and promoting sports.

It is a fact that universities today must be open in very clear terms to society, as never before, and must offer students increasing means for holistic education.

**A political dimension – mobility, coopetition, funding**

A more political dimension has to be brought into the discussion, with three issues – mobility of students and staff, cooperation & competition of universities (*coopetition* we say) and the model of funding.

For reasons of the instruments made available by ICT, together with the progress in the long distance transport system and with the borders of the countries more and more open, the World is actually ‘shrinking’.

European politicians of the seventies/eighties of the last century anticipated the future, felt this need to promote critical mass in Europe, integration of cultures and the dialogue of civilizations, and they created this model to promote academic mobility, mainly of students, and to promote cooperation, firstly within Europe, but also thinking of the World.
This was (and is) the Bologna Process⁹, today, 18 years after the first agreements, the result of the political will of 48 European countries, that led to the creation of the European Higher Education Area (EHEA) in 2010, that promotes worldwide mobility and cooperation mainly through the different versions of the ERASMUS programme and that is pushing for the development of the ERA.

It is important to stress at this point that this model requires that (and only will survive if) we succeed in developing the most important value in free, open societies: Trust.

Mobility of students within Bologna requires precisely that we build trust among our institutions. How? By agreeing in a qualifications framework (done), in a system to measure objectives of work and work load (done), in a system of quality assurance (done) and in a system to recognize qualifications (partially done), and also by adopting methods of teaching and learning adapted to the reality of the times, to the expectations of the young generations (in slow, but steady progress).

We have also this major political request of the global world – competitiveness, and this brings in, among other aspects, the capacity of institutions of projecting their quality (to promote trust) and of attracting the required funding.

Starting with quality and trust - how? Ideally through transparent models of quality assurance that are understood and accepted by the different stakeholders. Model that should be developed for the meta-level of institutions, for sectoral groups and for field-specific areas. Rankings are in this issue. As we do not live in an ideal world, it so happens that some of these existing rankings lack transparency and are of limited scope. But, the fact is that they exist and have impact, hence we must take them in serious account. It comes to say at this point that at European level an effort has been (is being) made to develop a model that answers and overcomes criticisms raised by many universities about existing rankings, namely that very negative tendency of reducing quality to a single figure, but indeed this effort is far from having been (so far being) convincing and successful.

And a final note about funding, just to stress that gone were the days where funding was guaranteed by the governments. Direct public funding is diminishing, at least in percentage of the required budgets. The University Management and Faculty, together, must find complementary means to support the activity, to support the mission. We can discuss to which extent this has to be done, but it clearly has to be done, be it through competitive funding, or student tuition fees, or mechanisms of fundraising (namely through Alumni) or by selling services other than those of the regular academic education and research activity.

**Governance and Management**

Some notes, finally, about governance and management of universities in this contemporary environment, reflecting naturally the Portuguese organization.

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⁹ https://www.ehea.info/
The distinction between governance (mainly planning the framework for work, setting organizational goals, setting accountability frameworks) and management (mainly organization and allocation of resources, overseeing day-to-day implementation) is often quite blurred, depending on the legislation in place in the countries.

Two keywords concerning the functioning of universities are: autonomy and accountability. It is clear that quality is part of the accountability requirements. These keywords are embedded in the following statement: ‘universities should accomplish their contratualized mission in a legal environment of audited autonomy’. This is my wishful thinking, not what we have.

With this concept in mind, I come back to the opening questions – which issues are at stake, how can we, or how should we tackle them, what should we do to adapt to times?

The answer about issues at stake comes partially from the previous elaboration: (i) new pedagogical environments, with new offer and methods of education; (ii) new multidisciplinary environments, reshaping internal organization for research; (iii) the Third Mission of the universities – knowledge valorization, entrepreneurship; culture and sports; (iv) the social dimension; (v) internationalization, promoting the institution and cooperation, all over and at all levels; (vi) quality assurance at institutional, sectoral and field specific levels.

University Governance and Management must clearly have these guidelines well present in their political, structural and daily decisions.

What should also be present is that the moment in Europe does not seem to be the best... at least communicationally, bad Winds of Discontent are blowing from all sides: low public financing, austerity, budget cuts, ‘research and education budget in shambles’, ‘universities apparently broke’, too much bureaucracy and brain drain, these are buzzwords of concern that we can read all over.

I add: what about the organizational models and the efficiency of the management system that universities adopt, in Europe, or specifically in Portugal?

It seems to me clear that the continuous increase of costs of running universities has led governments to take political decisions of putting pressure in the universities to fight for funding other than public and as consequence to adopt new more forms of organization, more flexible and competitive in attracting such funding. This is simply recognizing a situation or an assessment of a situation. But it should be noted that university organization is a major issue with main consequences other than in the global institutional financing, such as in the quality of academic education and in the managing of human resources and assets (property buildings, common equipment, etc.)

Portuguese universities are of course subfinanced and we have to fight for increasing such public financing. Taking as reference some central European universities and normalizing for the difference of salaries, we end up with a ratio of up to 1:3 in terms of budget for general expenses and capital investment. There are (very) limited resources for strategic investment. This for example hinders
action to promote scientific jobs and through that to fight brain drain. The dimension of strategic funding is a measure of the level of development of universities. Yet, most Portuguese Universities are by no means broke, as I read about universities elsewhere. Often money exists, but is not available for rectors and deans to incorporate in their budgets. This means that often problems are related to university organization and to the management model, not so much to the resources available.

We have to understand the new type of multidisciplinary environments required to produce and transfer knowledge and reorganize the institutions accordingly. This should lead to a smaller number of the constitutive entities (Faculties) of the universities, as compared to what larger universities have today. We see this move in many European universities. Also, the new tools available for managing human resources, for monitoring processes and for the university accounting allow for new methods that on the end of the day increase transparency on the overall running of the institution. To adapt to the times, to be competitive in the open world, we have to go through this path of reform.

In this discussion, there are two major underlying values that we should not mix - academic freedom and autonomy. Academic freedom is unnegotiable for all academics. Autonomy is to a large extent also unnegotiable when we speak of academic autonomy (related to, but different from academic freedom), but there are limits when we speak of management. The issue of autonomy in management is of course delicate. We have to decide within the organization what type of autonomy we recognize in each level of activity, otherwise in limit we end up with self-management at cell level, a model that for sure does not lead to good results.

About bureaucracy - it is a burden of modern times embedded in all activities: in daily running with purchases, service contracts and work contracts; in recruitment or promotion competitions; in planning reporting, budget preparation, activity and accounting reporting; in annual exercises of staff appraisal; in periodic exercises of quality assurance. Though these are only (easy) words, for sure management has the obligation of fighting for external and internal review of legislation to minimize such burden. Much easier to write than to do.

**To wrap up**

Universities represent (or should represent) major instruments for changes in society, in their capacity to anticipate and to model the future; they are very complex environments, among other reasons because they are populated by bright young people, because those that have in their hands the main responsibility to produce and transfer knowledge are, by condition of the job, free, open, dynamic, brilliant minds, and they are supported by very robust staff; it is up to the management, certainly that in close contact with the community, to create the conditions for such high level community to accomplish the so relevant scientific, social, cultural and economic goals of the mission.
The University of Porto, whose genesis can be traced back to the XVIII Century, is a comprehensive university, constituted mainly by 14 Faculties, serving more than 30 000 students (~12% international students from more than 140 countries), with ~2 350 Faculty and Researchers and with ~1 600 Technical and Administrative Staff.

The University of Porto has a Foundation status (currently one of the five Portuguese universities with this status). The governance is guaranteed by a General Council and by a Board of Trustees. The management is the responsibility of the Rector, supported or articulating with a Management Committee, the Senate and a Council of Deans.

The General Council is composed of 12 Faculty, 1 member of the Technical and Administrative Staff and 4 students, elected by their respective peers, and by 6 external personalities, without any formal link to the University, coopted by the 17 elected members.

The General Council has the main responsibilities of proposing to the Board of Trustees changes in the statutes of the University, of electing the Rector with his proposed programme of action for the 4-year mandate, and of approving annually activity plans, budgets, activity and accounting reports submitted by the Rector. It has also the major responsibility of fixing student fees, within the legal limits and upon proposal of the Rector.

The Board of Trustees is constituted by five external personalities, without any formal link to the university, appointed by the Government upon proposal of the General Council. As main duties the Board has the responsibility of approving changes in statutes of the University and the general responsibility of monitoring and approving all aspects of management involving financial and physical assets, as proposed by the Rector and/or the General Council. It is indeed the body that guarantees the transparent use of university resources.

The Rector is the high level Body that conducts the university policies, chairing the Management Council, the Senate and the Council of Deans. He represents externally the University.

The Rector chooses and appoints the vice-rectors, the pro-rectors and the Administration Officer. He globally supervises and is responsible for the Rectorate (Rector’s Office) and for the Autonomous Services (Social Services and Sports)

The 4-strong Management Council is responsible for the administrative, financial, human resources and estate management of the institution.

The Senate and the Council of Deans are relevant consultative bodies with whom the Rector articulates and that the Rector consults previously to most management decisions. They ensure the participation of the university constitutive entities in the decision process.

The 14 faculties (constitutive entities) have significant academic, financial and administrative autonomy, including the capacity to choose their Deans.

Research is conducted both in internal research units and in autonomous organizations, non-profit associations, of which the University is the (or a) main stakeholder. Currently 50% of Faculty develop their research activity in 9 such associations.

The University has in place a major cultural programme, namely through its museums and its academic classical orchestra and with exhibitions in fine arts and literature themes. It also promotes significant social initiatives supported by volunteering work.