

The University and scientific research

Preamble

We meet again under the caring eyes of our Lady of Seeds, the Lady of ever fulfilled engagements, the Lady of the everlasting harvest...

The Lady of hope, of generous blossoms and fruits; the Lady of perseverance, of undoubted yields...

The Lady of generosity that turns the soil into greeneries and rain into fruits; our Lady that grows the seasons into a calendar of promises and harvest;

The Lady of that human effort that developed from picking to planting, from passive consumption to innovative control; needless to say, she is the Lady of all human efforts. What is cultivation except for a symbolic paradigm of the human work, any work? The human being may have domesticated matter to transform it into artificial limbs for his working body; he may have domesticated it to furnish this world he seals with his signature; be it is management and facilitation that bring about the best of resources, be it coordinating the richness of variety within the cohesion of unity or education that transfers from a generation to another the legacy of knowledge and the blessed arrogance capable of defying and developing any heritage.

Our Lady of Seeds is thus the Lady of labor... and the achievements of our year, those of all our years, will lie down at Her feet year after year during the month of May when we celebrate our accomplishments, accountable of what remains, following her loving path that shows us what to do for the coming yield to be richer and sweeter.

We sought for our university to adopt its years of existence as the criteria for its ambition; therefore, every year that passes raises the ceiling of ambition going from crawling to walking to running to flying towards what it may become, or let me say, towards what it should and deserves to become.

With its new specialties, new branches, numerous new students and publications and more involvement and participation in local, regional and international alliances, the University strives to promote its other missions, namely scientific research, without which all university campuses will only become tombs for the intellect or memorials carrying its name.

Inspired by the parable of talents, we have worked assiduously as individuals and groups, in full solidarity, on optimizing our capacities, though without any illusions about our real potentials and limitations namely those imposed on us by the country situation and scarce

resources that are depleting because of emigration and waste. A country like Lebanon cannot compete with the first world countries as far as scientific production is concerned, and the Antonine University cannot compete with older sisters. But it is “digging where it stands, deeply digging” as Nietzsche puts it; it is fully exploiting its resources and potentials, investing into the maximum of serious legal ambition for which it has to draw a path with clear milestones and objectives.

Consequently, the speech of the current year is tackling the issue of scientific research perspectives in our university.

We will rely on a conclusive plan that departs from the problematic of epistemological and logistic research in general, to get deeper into the research policy of the Antonine University in particular, browsing through the majority of practical research articulations and material along with academic and human conditions.

1- Paradoxes in scientific research

The series of epistemological research revolutions and counter-revolutions has shown that tensions and challenges that philosophers and scientists have tried to out pass in favor of lax empirical method ideas for one part or some reductionist rationalism for the other, are not exterminable. This is the secret for the dynamism and evolution of sciences. Among the most important tensions for a scientific research to take into consideration:

A- Science between meditation and intervention

The scientific research concept currently balances between two big trends crossing the epistemological works that have characterized the twentieth century. First, the return to the empirical method, not only in the sense of passively meditating nature, but as well in the sense of existence transcending the intellect and the danger of the latter isolating itself in the ivory tower of its production. The second trend is the one that criticizes the imperialism of nature over the knowledgeable self in the empirical method; it considers that scientific research is based on “provoking the phenomena” it studies, looking at them from a theoretical point of view which enables it to question them. If empirical proponents are right in considering that experience is the only source of scientific truth, nature in the mind of their contesters only answers the questions we evoke to it and to ourselves.

B- Between the Descriptivism and the explanatory approaches’

The main characteristic of the 17th century scientific revolution is the passage of natural sciences from the language of the How that is full with cultural and subjective confusion and projections to the language of quantity i.e. the language of objectivity and precision. It is a passage that Humanities will try to follow later on as well, starting the nineteenth century, while attempting to get some scientific legitimacy.

Galileo's discovery stating that nature's book is written in numbers has raised mathematics to the level of the universal scientific language and made measurability the only equivalent to the scientific knowledge. Thus, natural phenomena will not become sciences unless they translate into quantity; being able to measure a phenomenon impossible to quantify till then in numbers became like discovering a new scientific continent.

But this same revolution is far from being ultimate. Both last two decades of the twentieth century have seen a comeback of the concepts of uniqueness and narration, to the How (concepts that had been absent from the scientific dictionary for some centuries) with what is called "narrative methodologies", i.e. a methodology that recognizes the limitation of the example of abstraction and mainstreaming that is adopted by the classical epistemology and that goes towards a new criteriology where the number is of no cognitive value we are used to¹.

C- Between the I and the us

It is doubtless that the image of the scholar in his ivory tower is still present, not only in the collective conscience, but also in scientific areas as well, like theoretical physics and mathematics; but the main shape of the scientific research is shifting to become a team image now. This is why research centers and universities are the ideal places to discover and invent. It is right to say that the long bibliography lists that are attached nowadays to scientific articles, and that are sometimes longer than the article itself, can be replaced by the owner of the key idea that comes to the individual far from the institutional frame... maybe De Gaulle was right when he said to a minister who asked him to increase the budget for scientific research to allow him increase the number of researcher: "Researchers? We have enough of them, we need finders!" in other words, if it is true that the dynamic of discovery is not subject to the rules of organized research and ideas only come to geniuses where they are... then, doesn't the concept of team work become a veil for the individual genius that operates in the numerous hands of others?

Didn't Helmholtz say that inspiration only comes while he is strolling in the mountain? Doesn't everybody remember that the chemical formula for fuel was found by Kekulé while he was napping besides a stove, or that the major discoveries of Poincaré used to appear while he was in bed in the morning or while on board of a bus?

¹ I. Stengers, **Le pouvoir des concepts**, Paris, La Découverte, 1989.

But at the same time, it remains that the first sense, alone, is not a discovery, it is the start of a discovery; this is why it needs some hard and accurate work to be tested and proven. This is where the “discovering- I” needs the “us” to be the scientific group.

Resorting to the ‘us’ does not only come from the necessity of proving or testing, it comes from the necessity of going on.

Thus, research is like the tide, between the ups of testing and the downs of theorization, each one being the stake of the other; it is a dialectic relationship between the individual and the group, between intuition and evidence, between meditation and intervention, between ignoring peculiarities while looking for commonalities that allow abstraction and listening to the purport of the peculiarity where it belongs, seeing to the richness of existence facing the reductive classical sciences. This is why it is the farthest from the dogmatic scientism and is the best exercise for the brain and morals aiming perseverance, integrity and cooperation.

2- Our university research strategy

A- Facing difficulties

The Antonine University has attempted since its foundation to stay apart from any Higher education that may in reality be limited to some elaborated secondary education, or education relying only on transferring knowledge in a passive non innovative way; this was carried on despite the many difficulties, among which:

- The scarcity of material and human resources, the economic situation of universities, and especially newly founded ones which can't allocate a significant part of the budget to scientific research.
- The lack of pre-university teaching in developing the necessary skills on which are generally built the scientific research competences. This obliges Higher education establishments in Lebanon to develop the basics of these competences, namely linguistic competences and basic knowledge,...

Despite the promises and the slogans, we all note the challenges our Higher education system faces in sustaining its mission as the producer of knowledge and research facing the level of competences that pre-university teaching provides. This fact calls for a review of the entire educational system as well as the level of the official examinations.

- To this, we may add the weakness of sciences in our society in general, and the absence of any national priorities in that regard. The number of scientific publications is so scarce compared with other publications as well as the number of scientific programs in comparison to entertainment and marketing on local TV

stations. This reveals to what extent speech and consumption cultures have dominated our societies and our public address.

Nevertheless, this didn't prevent the university from prioritizing research as one of its major concerns. The university concretizes this objective by mostly:

B- Scientific research in university curricula

It goes without saying that universities are asked to promote researches and motivate researchers as well. Thus, it is of great importance to establish some necessary strategies to introduce training to the research techniques in the curricula, not only as image curricula that work on drawing some problematic, launching some explanatory hypothesis and examining it; indeed, such a theoretical exercise, when applied to integrated knowledge, does not have the same educational value as the real research, because the failure of a scientific test is the same as the denial of a theory: it is the first and most important scientific criteria.

Not respecting this fact has led many defenders of the research methodology to change the student university research into pure summaries described by Adnan Al-Ameen as "thoughts and meditation" or into an analytical and critical presentation of some ready-made cognitive acquisitions.

Our choice in this context is summarized as follows:

- Involving the students in the faculties research projects, starting with documenting missions then moving to statistical missions; this implies that they prepare the raw material for the research to be launched, in order to develop or amend it, till reaching more thematic missions of the research process: participating in setting some hypotheses, innovating the means to test and scrutinize them and thinking of practical implementation through which it is possible to invest in a theoretical discovery.
- Selecting the research work given to students in a way that they encompass pending and open problematic issues, i.e. to pass from the virtual research to the real research.
- Structuring the study decisions in order to gradually improve the research competences allowing knowledge gain in an organized methodical way, then developing the capacity of criticizing the knowledge and scrutinizing it and finally defining the problematic and the future horizons that a scientific discovery opens...
- Developing team research work skills on methodical, organizational and ethical relation levels.

- Include:
 - a- Scientific research ethics, especially those pertaining to intellectual property rights, quotation rules and scientific integrity in general.
 - b- Lebanese official legislations pertaining to this issue in comparison with legislations in the developed world.
 - c- The values and criteria of the scientific community in curricula of Higher education establishments as an essential part of developed scientific and technical rehabilitation.

Added to the objectives stated subsequently, the intellectual background upon which are formulated these curricula and that must be taken by teachers as an inspiration source for their work on the content of their educational material and their methodology of teaching and guidance. The most important elements of this background are the conviction with the necessity of insisting on the historical aspect of sciences and knowledge, i.e. their relativity and non finality in parallel with strong confidence in the brain and its capacities.

This parallelism is not an easy equation that doesn't need proofs; rationalism is always subject to diverting towards extremism and becoming dogmatic; and it is only natural that when acknowledging the relativity of knowledge, it leads to an agnostic relativism that destroys sciences while destroying truth and mind. This is why educating students on this intellectual enthusiasm, known as dialectic rationalism is a pillar for habilitation on scientific research. But above all, it protects the university system against itself which tends to stereotype the intellect and search in some particular paradigm that end sometimes in crippling the innovative capacities of the students; this is why Einstein used to consider that the genius of Faraday comes essentially from him since he wasn't enrolled in an academic curriculum!

In fact, every stage of science history is ruled by a standardized paradigm that defines the scientific nature, curricula and the nature of problematic; it is derived from a scientific achievement that has transformed into a research school as it was the case with Aristotle Physics, and Ptolemy's Almagest, Newton principles and Lyell Geology. It is the nature of "paradigms" to open wide ways to satisfy the curiosity of researchers for long time; this is why the educational institutions adopt them and raise them to the level of methodological and researchers ideals but, at the same time, they may cripple the mind capacity to go beyond them. These are as well examples that enable the student to become a member of the scientific society if he/she succeeds in them. But those whose researches are built on paradigms stick to the same criteria and rules in the scientific practice, and they rarely contradict each other, or let's say that their theoretical differences are limited to partial disparities that remain within the one paradigm². The

² Thomas Kuhn, **La structure des révolutions scientifiques**, Paris 1983 (1970), Champs Flammarion, trad. Laure Meyer.

real or significant discoveries have always occurred out of the ‘orthodox’ paradigms, which gives the epistemology of the word “rupture” its real value.

So, the problematic is then in the way of training on research by matching between the strictness of adopted methods and the awareness that those methods are moments to overcome in the course of sciences.

“Academics sometimes say that they fear the frustration of future scholars if exposed to the limits of the truth they deal with³”, but it is necessary to frame scientific education within an epistemology that explains to them the fact that discovery is passing from an incorrect idea to a less erroneous one and that truth, if not this eloquent faith token, is a historical saying that changes and transforms. This is why it should not frustrate them, take them to the relativism, or agnosticism but instead to a real scientific spirit which is aware that research is a daily resistance of the prejudgment attraction, even the scientific one, as well as mental unconscious habits and tendencies to abide by the prevailing ideas... It is a permanent attempt to look at existence with new eyes, and have the courage of asking the question “Why not?” for what may seem to the public sense as impossible or absurd.

Instead of frustrating them, this truth that calls on them to contribute in building it, has to mobilize their determination. It is doubtless that consecrating this mentality will have positive repercussions not only on scientific research and productivity but also on our students’ vision of the universe and their approach as to the ideas, convictions and dilemmas in all fields of life.

C -Publications

Publications are considered as the measurement of scientific research, it is the bridge towards recognition and communication; it is a critical issue for big research establishments where the principle of publish or perish prevails. Scientific publications issue comes, as well, at the upfront of the criteria adopted to classify Universities. This is why our university aims at following what it had started in this context:

C 1- Our University this year launches “**Pertinence**” magazine for multidisciplinary scientific research, in view of the following objectives:

- Encourage common researches among faculties and various departments like pioneer researches supervised by the faculties of Public Health and Engineering, or those common between the Faculty of Public Health and the Institute of Physical Education, in addition to the studies prepared by the faculties of Business Administration and Advertising.

³ Valérie Marange, « Les outils de la pensée »._ Joël Roman, **Chronique des idées contemporaines**, Paris, Bréal, 1995, p. 584.

- Mainstream the benefit of the university production in scientific and professional researches; the first contributes to broadening the knowledge and the second to offering new techniques with direct results in the field of professional practice.
- Pave the way for scientific publications to students of Higher education level and provide them with samples of researches; especially that training on research is one of the most important objectives of our University education as already stated.
- Link our researchers based in Lebanon with the international scientific world; the magazine being a medium between university graduates and the most important scientific publications.

C 2- This magazine comes in addition to the “the Magazine of Musical Traditions in the Arab and Mediterranean Worlds” (**RTMMAM, Revue des Traditions Musicales des Mondes Arabe et Méditerranéen**), an annual scientific periodical dealing with music which gathers an international jury of academicians from Sorbonne, Paris X, the French National Center for Scientific Research (Centre National de la Recherche Scientifique) and the Antonine University that drills on studying the live musical traditions and (or) the old one within both Arab and Mediterranean worlds – as well as other nearby areas – from an analytical musicological perspective that is alimeted by the variety of specialties and is integrated within a project to create a global and general musicology for traditions in the world, which is the result of a close academic cooperation between the High Institute of Music at the Antonine University and the Music and Musicology Faculty in Paris Sorbonne (Paris IV).

C 3- The Faculty of Theology and Pastoral studies at the Antonine University publishes as well a periodical research document entitled “**Ourho**” (the path) that traces the different tracks of research in this faculty that has very audacious academic choices starting from the adoption of Arabic as a research and expression language that benefits by the biblical and living languages to produce an authentic theology in Arabic. It also went as far as considering the dialogue of faith with the others as a main pillar for understanding its Christian mission.

C 4- National and political issues are also research subjects; we have reserved for them the series “**Watan**” that aims at transferring the national concern from consumption and mobilization slogans to the level of academic studies and linking the daily politics to some essential issues resulting from it instead of following partial events, describing them or getting influenced by them with biased and occasional emotionality.

C 5- Let’s not forget the series “**Ism Alam**” (Proper noun) which is an honoring series that we have started this year as a tribute to the Lebanese philosopher Nassif Nassar and that shall become a yearly periodical that gathers valuable studies about the most important Lebanese

intellectual figures in the modern Lebanese times. The philosophy of the magazine is based on considering that the best way to pay tribute to a thinker is to meditate his production, i.e. to look at the ways to make it fruitful and develop it.

C 6- We note the research dimension that we wanted to give to this annual speech of the University Rector that has characterized our way of dealing with important subjects like the relationship between Higher education establishments and the political problematic inside university, the theme of this speech and what will follow...

D- Our teachers, between teaching and dedication to research

It is now becoming very common to talk about the relationship between research and teaching. Some systems call for the necessity of separating between both, considering them as two separate activities, each having its own academic and functional criteria and requesting different competences. We tend to say that the sole means to optimize the benefits of some researchers talents is to put them where “they may shine to all that are in the university”, i.e. on the tribune.

This does not mean that we are satisfied with the situation of the Higher education teachers in our country. They are bound to spend the entire majority of their time teaching to ensure their bread and butter, since reading and research is becoming a luxury and it is incumbent nowadays upon the teacher and only him to pay the price for this luxury.

Our choice at the Antonine University is to alleviate teaching hours, ask the teachers to only limit their teaching intervention to inculcating the research spirit to students and to avoid immobilizing their skills in the sterility of repetition and instruction. Our choice is to adopt the researches of our teachers in funding and publishing as well as investing their capacities in research projects that are trans-universities and transversal.

If we look back to the history of sciences, the experimental methodology that is nowadays adopted- at least in its general guidelines- in all knowledge areas and that transferred the human intellect from “the metaphysical state” as Auguste Comte describes it, to the “positive state”, did not start with Galileo as we are used to say... Archimedes had centuries before deduce it in chemistry and Ptolemy in astronomy; so why did the renaissance of physics awaited till the seventeenth century?

Those who have adopted this methodology among the Greek scholars weren't imitated; they didn't have disciples to transform this methodology into a work and research method.

Science historians insist on saying that modern physics is Galileo's baby, not because he has invented the astronomical lens, and not because of his famed trial in 1633, but because he was above all, a teacher at Padova University and he has passed to a generation of colleagues and students his experience and methodology. This is why they say "had Archimedes taught at Syracuse University, the world would have gained a thousand years in development"⁴.

Currently, and despite the presence of many independent or industry-linked research centers, the most significant part of the world research production is conducted in universities outputs that are growing thanks to that wonderful impregnation among generations and fruitful interaction between teaching and research.

E- Possible areas of research

If areas like the molecular physics, astronomy and genetic engineering require huge gatherings and enormous physical and human resources that surpass our possibilities as Lebanese universities in the near future, other research areas seem more accessible and closer to our developmental needs. Namely, biotechnologies, renewable energy, water, food and agricultural resources management, medicine, pharmacy, education... These are all themes organically linked to the developmental needs of Lebanon and the region.

It is doubtless that larger research areas have open borders now to known science, and to each other, and are open in their intersection areas; thus, areas like neuro-education and neuro-economics are of great importance especially that researches in these fields are relatively rare and they are directly linked to the application. This is a new motivation to closely tighten cooperation among specialties at the research level.

At the humanities and sociology levels, our educational, legislative and political needs are very obvious; our strongest need is some scientific approaches to these areas that get us out of the ideological stakes and the import of ready-made solutions.

Maybe the active research activity that is going on at the Center for Languages and Resources (CLER) at the Antonine University is the best proof in this field. It plays a leading role in transferring the language teaching in Lebanon from the instruction method to the interactive method, by finding the best means to benefit by the communication technologies in this area.

F- Coordination among universities

⁴ Allègre Claude, *Dictionnaire amoureux de la science*, Paris, Plon/Fayard, 2005, p. 522

Coordinating among universities at the research level isn't an optional initiative; it is rather among these happy inevitabilities that are imposed on us because of the scarcity of our resources and our close specialties. Thus, it is necessary to reinforce the common work teams that contribute into the maximum benefit from the resources; it is doubtless that what the Faculty of Engineering has started in terms of coordination among the deans of information technology engineering in universities all over Lebanon is to be praised.

We can add to it the “**modern interpretation of the Bible**” project in Arabic that has been adopted in theology and pastoral studies faculties in the Antonine University, Balamand University and Holy Spirit Kaslik University (USEK); it aims at issuing a scientific interpretation, in Arabic, of the Bible, New and Old Testaments that would be at the level of interpretations that are published among the other classics.

The project aims at encouraging authentic Bible studies that we, Levant people, need to have after having freed ourselves from our inferiority complex towards the west; it is a complex that has contributed, besides the absence of serious research references in Lebanon, in transforming the majority of our production in written themes into some covered translations and quotations pretending to be innovative.

The fact that we didn't launch directly the PhD programs or the research centres in a multifaceted and methodical way didn't prevent us from nourishing our students' ambition and orientation in these fields. We provided a higher continuing education in the European and American universities with whom we've signed cooperation agreements. Thus, we delivered the necessary academic scholarships and, to numerous students, accommodation and transportation fees were granted too.

Our almanac includes as well the mobilization of human and pecuniary resources in order to be integrated locally in this expanding environment. This will allow us to scrutinize, with a lot of courage and boldness, the consolidation of the links between the national universities or at least, the creation, in the midst of this academic society, of a mutual centre for research and doctoral studies.

3- Today, and not tomorrow

These are the major titles of our research policy that will broaden and deepen year after year, research after the other. The following steps are considered to be “the applicative decrees” for it:

- Create a specialized council to study research projects and choose what the university will adopt through funding, follow up and publishing, and to draw the university research policy on both medium and long terms as far as research areas, funding priorities and others are concerned.
- Develop research cooperation with other universities, local and international, around real projects through developing cooperation among faculties of close specialties, where coordination between Higher Education establishments prosper in Lebanon and abroad, giving some cognitive production to be proud of, something not limited to seasonal and formal deliberation.
- Adopt published researches according to the international standards as a criterion for the classification and promotion of teachers and encourage them to look for ways to fund their researches.
- Increase the number of scientific classified works at the university library and increase the number of subscription to the biggest research magazines and specialized websites.
- Form a jury panel that works on choosing the studies that the Antonine University Printing House will publish in a way that will be limited to the products of the university family members, this family that has grown in size, specialties and competences, enough to provide some “self-sufficiency” at the publishing level.

Conclusion

Working on scientific research isn't a way to flee our old new political problems; it isn't to hide behind the alleged neutrality of sciences to avoid being biased. It comes in the heart of our determination to evolve in our love for the nation and our attempt to develop it to the reasonable planning level, to the level of major problems and not small incidents. Isn't highlighting to young people the seeds of intellectual genius that lays in them the best we could offer to rescue this country? Isn't assimilating Lebanon to the image of the University of the Arab World, or its Cultural Lung better for it than slogans and statements?

We are keen on having the university contribution to political life and the public debate faithful to the enlightening civilizing mission; may reason, when it becomes the language of the majority, save us from regenerating wars and hard dates that ostentatiously threaten of coming back over our dead bodies and ambitions.

I reiterate my faith in God and our Lady, Patron Saint of our University, I would like to thank all those who work at the university, fathers, vice rectors, deans, directors, teachers and employees for their generosity and their dedication. I greet my dear students who are in the heart

of our efforts and the stake of our success. They have proved, despite all odds, that they are worthy of giving the good example of openness, dialogue and acceptance of the difference.

I cannot forget, on the occasion of the anniversary of our University, those who have founded the university, praying especially for the soul of Father Hanna Slim, who has worked relentlessly to get the University license, and father César Achkar, the delegate of our university at the Council for Coordination among Catholic Universities in Lebanon for many years.

The university is rich in its workers and the prayers of those who have left us to God after having built it on solid rock, worthy of living, worthy of the highest ambitions, capable of the best promises, here, at the feet of our Lady of Seeds, with an ever growing harvest for every year that passes.