Master class: The Human Factor, Open Science, and the Knowledge Revolution

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Good afternoon. It is my privilege to share this graduation with everyone.

15 Minutes of Selfishness

Esteemed deans, members of the board, officials, guests, and above all, graduates: This is your moment. Take the 15 minutes of glory that one must always set aside to savour one's achievements. Fifteen minutes of happiness and joy for your accomplishment. Share it with family and friends, wave it at your not-so-close friends, and savour it in silence by yourselves. Later you will update your résumé, revalue the skills you've acquired on the job, or use everything you've learned to begin a new, challenging phase. But this moment is unique and non-transferable. Be selfish when you enjoy it and when you share it.

The Future is Now

The future has been coexisting with us for years. Those "worst-case" scenarios and apocalyptic visions recurring in diverse cultures, from the Mayan to the pre-Columbian, which include Zarathustra, Nostradamus, Confucius, and Rapa Nui, have been a reality for the last twenty years. And the future is technological and interconnected. Technology and the Internet manage to uncover the best and the worst of human beings. They allow monitoring, evaluation, and control of peoples' lives with examples such as the metro in Shanghai, China, which rates users' civility using facial recognition and point cards. This is the seed of a broader phase aimed at schools and the street: an Orwellian nightmare already described even before electronics, in none other than that same Orwell's book, *1984*. Published

almost 70 years ago, its future is already our past. From James Cameron's film *Terminator* to the tales of Isaac Asimov, the stories of Jules Verne, the novels of Terry Pratchett, the harmony of Pythagoras' spheres, or Stan Lee's superhero comics, many authors in diverse genres and arts have described the future, almost always fatalistically.

As you can tell, I'm making sure I properly cite all references in case a tutor submits this speech to Turnitin and finds indications of plagiarism.

Technology permits humans to accomplish the unthinkable, with its unarguable input used for both good and evil. In a world defined by binary code, where there is only black and white, left or right, correct or incorrect, and where we are systematically pushed into polarized positions without any greyscale, technological automatization conjugates that *binary character* as no other does, since binary is its native language. The tracking indicators, professional skills, and individual challenges possibly faced by a machine are either met, or not. The fuzzy logic defined by Łukasiewicz and Tarski in 1920, already a century ago which allows a margin of error in correctly interpreting a specific objective, seems to have no place in our society's thinking. For example, in artificial vision, it is easy to understand that if someone sees reasonably well but needs glasses to focus, they are not blind. There is a margin for nuances between adjustments to sight and not seeing anything at all. However, that margin seems to be ever more difficult to maintain in daily life. We are increasingly pushed towards radicalization in our thoughts and the resulting actions. We can be or not be, but it seems impossible to progress halfway, to be defined during the process, to evolve until we reach a point that might not be 0 or 1 (as in binary), or on or off like a light switch, but rather somewhere in the middle, perfectly valid and necessarily customisable. In that context, the colour gradient between the two extremes proves important. A position that enables analysis, positioning, action according to personal convictions, context possibilities and needs, and the evaluation of accomplishments.

Open Education, Open Science

Studying and learning provide many things, but above all, they must provide that analytical criteria and an opening of intellectual horizons. Studying must mean learning, and learning must mean evolving. This is the precise opposite of bracketing, enclosing, dogmatizing, categorizing, or locking up ideas and their actions.

By definition, Science and Education must be open. Open Education, Open Educational Resources, and Open Science allow an unprecedented degree of exchange of content and ideas. That someone may study almost infinitely via the Internet, freely accessing resources provided by various authors in diverse formats, with the proper licences for use and operation well defined and adhered to, suggests a milestone in the knowledge revolution. Any person can produce and share; anyone can read and reuse; anyone can comment, discuss, and generate a network of people, content, and layers of information and synapsis between educational elements, which is hardly graspable in a limited time. We all have the ability and the responsibility to be authors and readers, critics and contributors, doers and spectators. We can all openly learn, openly teach, openly research. Open Science is a logical, supportive movement born of human altruism that finds an affordable medium to move forward.

Respect for Boundaries

Of course certain agreements, contracts, and parameters are necessary so that some do not take advantage of others' fraternity; we must restrict abuse by real powers, personal or institutional harassment, electronic intoxication, the pervasiveness of social media, the digital gap, the functional diversity that digital pariahs must avoid in this frenzied society. Such digital intrusion is defining not only a generation's character, but that of an entire civilisation.

The Internet and technology suggest great risk as well as great opportunity. And only people, conceived with their greatnesses and their hardships, with their hopes and their regrets, with their ideas and their weaknesses, can provide sense to that great oracle that pursuits us day to day.

The Internet and technology also provide nuances and possibilities, layers for understanding a reality according to personal, group, and social behaviour, or according to data that acquires different meanings depending on how it is grouped, read, shared, and interpreted.

Other Lives, Other Layers

There are undoubtedly other ways of interpreting life. I saw it in my father, who passed away a week ago, every time I watched him sitting in his wheelchair, a victim of a cruel histrionic disease that drained his capabilities without any pre-established script. I remember how he worked for fifty years as a bookkeeper at 3 and 4 jobs at a time in order to support our household and provide for my university career, a first in our family. He still expressed himself, became emotional, *empathized* with his wife and children, in a way that had been impossible to foresee a scant three years earlier. Nobody would say that there is proof of the existence of other worlds, of another type of life, but I found it every time I looked into my father's eyes.

Daily reality is the sum of those eyes, those layers, intelligences, veils, that allow us to see, colour, and taste according to each one's circumstance, moment, event, or spirit. We could cite here the circumstances of Ortega y Gasset, Gartner's multiple intelligences, Lao-Tse's transcendent layers, Galeano's bare feet, or Ibn Arabi's illuminations. All of these are from seemingly diverse cultures – Europe, North America, Latin America, China, and the Middle East –which are in fact very close at heart.

But within each of us there are also other ways of interpreting that life. At each new stage we uncover, or forge, or let pass. Mahatma Gandhi said that we are masters of our silence; we are slaves of our words. We are also masters of our actions and our inaction. Everything defines us. Beyond the pre-set processes, the automatic classifications, the ubiquitous and intimately indiscreet multi-apps on cell phones, there exist personal criteria, that inalienable quality that sets us apart from inert, passive, and complacent beings within our own species. This human factor allows us to apply all our

reason, passion, spirituality, empathy, and so many cardinal virtues to both everyday situations and the most unexpected events.

We like something for many reasons, but it truly becomes a passion despite its drawbacks. We like it "because", but we love it "despite". This quote is not from some brainy author, but from a silly romantic movie, yet the intellect should feed on it. Incidentally, I saw it on Netflix on my mobile phone, thanks to the Internet.

The human factor is something you like, and you love. It is what allows us to differentiate machine automation from each person's personal touch; it lets us bring sensitivity and closeness to active processes that are inanimate or soulless, that a software application, an expert system, or a cold data analysis can execute. We are born with that gift, both as a group and individually. We are persons, souls, intellects, passion, determination, strength, compassion, empathy, productivity, and a thousand greys in between, for good and for not-so-good. It's up to us to know how to use our unique gift for a worthy and dignifying goal, to bring that human essence to the inevitable progress of a digital world, a cognitive and predictive world that, in no time at all, will give us what we need or want at any moment, even before we can feel that need or want.

Human beings offer their components to technological formulas, to the knowledge revolution, applying their unique, non-transferable, inalienable criteria towards a sensible result, towards a sustainable relationship with society and with oneself. Without that element from each person, technological automation surely converts us into more productive beings, but beings who may be somewhat less personal and essentially, somewhat less unique.

And here is where you come in as graduates.

The Graduate as a Human Factor in the Knowledge Revolution

You are the key to this country and to its knowledge revolution. After so many years of suffering at all levels, of peace and peace again, of agreements

and disagreements, the future is today. You are the future now, starting right now. Right after those first 15 minutes of pure selfishness to savour what you've achieved. Action cannot wait. There is no rest for the wicked, as Ozzy Osbourne once sang, so there can be no rest when battling them.

Reinhold Niebuhr, who is quoted in the prayer recited at Alcoholics Anonymous meetings, said: "God, grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference." You have graduated because you have shown the wisdom to know the difference between what could be gained and what could not. You have developed the courage to fight for it, and you have persevered to the end. That same attitude must be applied at each moment in life, that same human factor that qualifies with nuances our thoughts, our relationships, and above all, our actions.

The Graduate as an Improvement Agent

Actions that will improve the country and society. Colombia is spectacular; it is filled with resources, material wealth and, above all, human wealth. It is rich in opportunities to evolve, to advance, to improve together, due to a generous and ambitious people.

In my Colombian students I only find pride in performing well, passion for collaboration and communication, and enormous respect for their peers and faculty. UNIR is yours, and you define in great measure the best qualities of our dear university. Thank you for making the educational community better. Thank you for making UNIR better. Thank you for making me better. Congratulations, in my name and in the whole university's name.

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