

# PREFACE

University leaders have clear responsibilities for addressing the needs of the moment, such as making key appointments, securing the resources required by their institution (not only financial, but also human in terms of faculty and students), and managing these unusually complex institutions. But they also have responsibilities for preparing their institutions for an increasingly challenging and uncertain future. Science and technology continue to advance at an accelerating pace across a broad front, e.g., artificial intelligence, big data, brain research, human gene editing, etc., with important implications for the fundamental missions of the university, learning and scholarship, as well as research. Modern transportation and communication are compelling universities to view their opportunities and responsibilities increasingly on a global level, particularly in scholarly activities. Rapidly changing demographics, associated with aging populations in developed economies and the needs and aspirations of young populations elsewhere, will challenge both the traditional missions and responsibilities of established institutions. Moreover, the rapid changes which are taking place are modifying the way people work, think, learn, communicate, exchange and/or trade, and are rewarded.

Although all the innovations we are witnessing are rooted in the results of the fundamental research done in Research Universities and independent research labs, Higher Education institutions do not adapt automatically to the profound changes brought by these innovations. They have to be responsive in acting intelligently and decisively to adapt the way they accomplish their missions to avoid becoming obsolete.

The changing environment of university action as succinctly described above, combined with the observation that Higher Education institutions are slow to change, motivated the planning committee to focus the Colloquium 2017 on “The Future of the University”. To make these considerations more specific, 2030 was set as a target date, roughly a decade ahead.

The planning Committee invited more than 20 university leaders, the great majority of them at the helm of Institutions ranked among the 100 best of the World, located in North America, Western Europe, China, South-East Asia and Australia. High ranked representatives of two global industries, one traditional and one disruptive, also participated in the meeting to provide a different point of view and some input from the culture of business. Moreover, to clarify what is really going on in frontier research, the organizers invited two participants who are highly renowned specialists in their discipline to give in Glion for the Colloquium an introductory presentation of the breakthroughs taking place in artificial intelligence (language machine) and in life sciences.

Participants were invited to write a contribution related to the general theme and more specifically on the implications of scientific and technological progress for teaching and learning, research, governance and leadership. But, not very surprisingly, many papers prepared for the Colloquium and the discussion in Glion revealed that University presidents from the West are also very preoccupied by the fact that the changing world in which we live and where universities are active is suffering a deepening divide between those engaged and taking advantage of the modern world, and those who do not have access or reject these innovations and are, therefore, increasingly left out. If the regional disparities tend to diminish at world level thanks in particular to the rapid economic development of many Asian countries, social inequality is rapidly increasing, as well the feeling among the “have-nots” that they are victims of the new world and have nothing to say. A growing proportion of the population is unsatisfied and frustrated, and is increasingly inclined to blame the elites, leading political or economic organizations, the political and economic system, as well as higher education and research. This deepening social divide explains the rise of nationalistic and populist political parties, the growth of “fake news” and the growing difficulty of dialogue.

University leaders are becoming aware of these new developments, conscious that their institutions should not only be responsive to changes in society, but are also responsible for finding social as well as technical solutions to today’s problems.

The 20 chapters assembled in this book clearly reflect this *prise de conscience* brought into the discussion in a couple of papers prepared for the Colloquium and by many participants in the discussion. The missions and responsibilities of Universities are becoming even more delicate and complex. Higher Education institutions have to prepare students for a world and a labour market which might well be very different in ten years’ time and therefore will also have to retrain a much higher number of students all through their lives. They have also to continue performing in frontier research as it will remain the main source of innovation crucial for the competitiveness of national and

regional economies. But they will have, more than before, to contribute to solving societal problems such as climate change, clean energy, peace, social cohesion, less unequal income and wealth distribution and the pre-eminence of truth and scientific methods. If universities are part of the problem, then these institutions are obviously in a key position to be part of the solution, providing they focus a greater part of their efforts on these threatening societal difficulties.

The chapters are arranged in four parts: missions and responsibilities, resources, leadership and governance and the Future of the University in a Polarising world. The conclusion will focus the attention on the necessary change of paradigm.

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