



## **The Deep Blue Sea: Challenges and Opportunities for Higher Education and the World**

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### **Abstract**

*The problems which beset higher education today reflect change and uncertainty, inequities, demographic imbalances, generational, economic and ideological conflicts in a world where communication is at once immediate and unreliable. The solutions lie in the pursuit of cutting-edge science and new technologies, moving the frontiers of theory and solving social, economic and moral issues through curricular redesign that embraces the global and the interdisciplinary.*

*Universities must be recognized not simply as producers of qualified employees but as the creators of the world's leaders who will contribute new concepts and positive solutions to the many problems we face today and those graduates will encounter in the future.*

When sailors hung from the mast to repair the devil, the longest seam of the boat, they might easily have fallen into the sea. They had to caulk the vessel which would otherwise sink, but they risked drowning while making the repair. Today, when we look at the problems facing education, we have the luxury of choice. Universities are, however, like large ships and turning them about is not an easy task. Change usually requires a special context which can either be a significant infusion of capital (a rare occurrence in my experience) or a paucity of resources (a periodic reality). At all times, change requires strong leadership and a commonly shared vision.

Higher education faces a number of problems today. Funding, or lack thereof, is a major concern but is not the fundamental issue. Indeed, it is an impetus for change. Universities require funding to operate. Costs increase and the willingness of the public to pay generally decreases. This is, however, only the symptom of the real issue. In fact, lack of funding can be a motivating factor driving the resolution of underlying issues. The basic problems are societal and international: the clash of generations, the widening gap between the rich and the poor, growing environmental concerns, the lack of balance between ethical and financial stability and short-term gains and long-term sustainability, the conflict between liberal and conservative cultures, the inability to ascertain facts and truths buried in masses of unorganized data, information and the nearly universal ability to broadcast large amounts of information or misinformation at an extraordinary speed.

Fluctuations in the birth rate around the world result in nations with massive youth unemployment or the inability of a small generation of youth to cover pension costs for

seniors. Generational goals and cultures differ as do priorities. This tension underlies the other issues and can only be resolved through education and dialogue. Solutions, like problems, will necessarily be international. Migration is currently viewed in some countries as a problem but it has been and continues to be, a means to resolve unemployment, poverty, unhealthy living conditions and clashes due to cultural misunderstandings. Tragic tales of boat people risking all for a better life abound, along with stories of successful immigrants enriching their adoptive countries.

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The problem of (mis) information is not new. Take for example the “country,” Poyais. In 1820, MacGregor, a Scottish adventurer, sold land, titles and licenses for exclusive rights in this non-existent country to his fellow citizens who gave him all their possessions and embarked on an adventure that turned out to be certain death on the coast of Central America where, unlike the “information” in the advertisements and self-interviews MacGregor published, the water was **not** pure; streams did **not** have chunks of gold and diamonds for the gathering; the absent native population did **not** speak English and adore the Scottish; and, most significantly, there was **no** settlement. Similar scams exist today and are not limited to major corporations or financial high rollers. The internet democratically offers anyone with a real or fake persona and an address, the opportunity to publish a scam. One individual can generate solo enormous quantities of opinions and (mis) information. The more frequently incorrect data or information is repeated, the more it takes on the air of truth. Only a well-trained mind will question the veracity of reports spread in social media and in printed documents. A person schooled in ethics will discern the moral issues behind the stories.

Montesquieu said that successful democracies depend on an educated population and a free flow of information. He little imagined that the free flow of information might be submerged by the flow of misinformation. Democracy fails and the tyranny of the propagandist prevails, setting the stage for social unrest and even violence. When Orson Welles’ work was read on America’s radios on the eve of Halloween, in 1938, it included false news reports that Martians had landed. Across the country, people panicked, hid in their basements, and armed themselves, taking the “news” very seriously indeed. Today it seems quite humorous. Yet even now hoaxes and jokes are played out on the internet. Every day some people believe false proposals sufficiently to offer their bank account numbers or to send money. The schemes are numerous and clever, albeit lacking the literary merit of Orson Welles (or his inspiration, H. G. Wells).

Those concerned with the environment call into question short-term gains when their effect on the future is negative. People need employment and want to enjoy the fruits of their labors. On the other hand, if the result is desertification and the depletion of non-

renewable resources, then a conscious and well-researched examination of the situation is required. Research would ideally lead to a compromise which would preserve employment while reducing negative effects on the environment. In addition, the general public must have access to research in a comprehensible format. When there are passionately articulated opposing views on a matter, each referring to various studies, the public needs to have the ability to interpret the data. Once more, the value of education is apparent.

Conflict among different philosophical tendencies affects every corner of the world. What occurs in the furthest reaches of the globe is universally accessible within hours. Not so long ago, people emigrated and never returned to their homes. Today people travel easily and rapidly. When we travel, we know what to expect as we have read or seen images of the destination. We see images of natural disasters and crimes as they take place. While the element of surprise has been reduced, the question of responsibility has expanded. How can we turn our backs on suffering elsewhere? How can we judge and condemn others when we have lost the security of a simple, black and white moral lens? The proliferation of details renders simple judgments complex. And we ourselves become anachronisms as we sift through masses of data with the knowledge we earned in classrooms of the past, books of history and our own experience which is, in a world of rapid change, out-of-date as soon as lived. We are, in a sense, the past living in the present veering inexorably toward the future. Just as one masters a difficult computer program, it will be replaced by another. Just as one begins to understand the reasons for civil wars and uprisings around the globe, they shift locus and focus. When we map out major cultural, linguistic and religious groupings, we discover that all are composed of a multitude of regional, generational or socio-economic subsets, dialects, sects. By the time we capture the variations, new groupings will evolve or spontaneously generate themselves in a kaleidoscopic array of ingenious patterns heretofore uncharted.

The twenty-first century generational divide is not solely based on the normal power struggle of youth and the less-young, or technological proclivities and training but on economic issues. Access to lucrative employment, the ability to dream and to hope that some of these dreams might actually be realized, the freedom to explore the globe which lies open before us in the pages of our daily newspaper, the liberty to develop self without overwhelming responsibilities are all unattainable for vast numbers of youth today. A student from a refugee camp reported that he was one of 4 people in a camp of 400,000 who was allowed to leave. His siblings have no way out and expect him to support them for the rest of their lives and his. If we cannot offer people a way to solve their problems, through education and hard work, they lose all hope and it is from such despair that acts of terror are born. When we limit access to education we limit access to hope. The number of brilliant deductions and imaginative solutions to problems the world has lost is tragic. It is as if we had the key to happiness but left it out to rust and then were amazed when it would not unlock the door! For centuries philosophers have written about universal education. For decades the United Nations and UNESCO have published literacy goals. Much progress has been made but much remains to be done. We have not satisfied basic human needs or achieved primary levels of education for the majority of the world's citizens. We despair of the task which is indeed formidable. In the meantime, higher levels of education are not universally possible even in the developed world. Much is said about the cost of higher education. Less is said about the cost of limiting education. Yet we know that societies with well-educated populations are rich not only in ideas but in extraordinary cultures and strong economic development.

Universities serve the world's population and do so in the face of major challenges. They must adopt an agenda which will support the students enrolled today, equip them to find their places in the world of work while making them good citizens who understand social issues, good governance, and who will make positive contributions to their communities. They must think globally, support thought and research which will develop new technologies and push forward the frontiers of theory. They must give the lessons of the past to the students, equip them for a changing present and contribute to the sustainability of higher education and the world through advanced research. They must do this with a relatively small budget, one which is ever stretched as the balance between access and quality, pure and applied research, and the creation of new fields of research which must exist along the traditional and extremely valuable core of knowledge all vie for funding.

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We must thus choose wisely how we invest our funds and our time. Universities are regionally located and structured in departments and institutes, centers and Faculties. At the same time, we want them to be globally oriented and to function across disciplines. Universities are funded with a view to support the existing, local economy. Yet we need new enterprises that employ innovative technologies to grow wealth. Above all, universities must be seen as problem solvers, as agents of the change that they will make with great difficulty themselves.

Interdisciplinary institutes can be created to respond to current social needs and to educate graduates capable of working in fields which may not even exist today. Resources and their management are a major issue: energy, fuels, food, water, land, natural resources like forests and population could all become the fields of international and interdisciplinary study. Take water for example: the history and politics of water as a means of life, livelihood, transportation, security, the biological and chemical science of water as a part of every organism, the physics of flow, the engineering of dams and dykes, national and international law and policy, the influence of water on population size and cultures, the role of water in religions, in legends, symbols, art, music and literature. Students could obtain a well-balanced, general education while developing a specialization that would enable them to work in a variety of fields, to pursue specialized studies and to make a significant contribution to society. Since all the issues named are global, the curriculum would necessarily be so as well. By bringing people from different cultural backgrounds together to look at an issue of this nature, we can be sure that new ideas will arise. The energy of the oceans' waves might be harnessed. Nanoscience of the oceans may permit the mining of minerals from the sea waters and life might be as possible under the seas as on other planets. If we can make the deserts flower, then we can manage to turn tides to advantage without nonetheless causing environmental havoc.

The issues of technology and human life and the question of big data analytics and application to the development of sound policy and good governance, offer further examples

of worthwhile academic pursuit. Once we map issues, sort and attach significance to information, and establish hierarchies of knowledge based on sound values and good judgement, we can make sense of the human condition and find a logical way out of the maze in which we currently find ourselves. It is ironic that the abilities we have acquired through technology and the possibilities we have created, by amassing information, cause anxiety, fear and inequity. Big data should not be relegated to mathematicians and actuarial scientists. They must be joined by philosophers, experts in management, artists, scientists and policy experts. If we do not figure out how to organize big data usefully and responsibly, it will simply submerge us in a mass of meaningless detail.

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The incredibly massive and the infinitesimally small will be the fields of opportunity for science and philosophy. We will find solutions where we have not sought them before and we will learn to recognize opportunities which were staring us in the face. To educate students to see what has not yet been seen and to seek to understand that which appears without reason, is our task today. We can only achieve this when we break down the silos and barriers to thought within disciplines and institutions. We cannot succeed alone. The world must be our classroom and we the eternal scholars, learning from each other and our students.

If education and hope are the keys, perhaps the only ones we have, to making the future better, then we need to believe in their power. We must never stop believing in education and in educating ourselves. We must drink daily draughts from the springs of knowledge. By so doing, we will find meaning and hope for others and ourselves.

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