

Honorary Doctor of Science Convocation Address

June 5, 2005 10:00 a.m.

Dr. John C. Polanyi, winner of the 1986 Nobel Prize in Chemistry and a University of Toronto Chemistry Professor

I was a pretty ordinary student, rescued from obscurity by an exceptional education. Education, somebody remarked, is what remains after you have forgotten what you learnt. It is more a way of thinking, a set of values, that derives from home and from school.

The values of this institution will always be with you. This is my first time here, so you will be surprised to learn that your university has already influenced me.

When I arrived in Canada to take up my job as a lecturer in chemistry at the University of Toronto, I was befriended by two legendary alumni of United College, graduates (and fugitives) from the institution that gave birth to your university, who had relocated to Toronto. They were Harry Crowe and Ken McNaught, both individuals of conscience; people who had a vision of a fairer and more peaceful world, and the courage to believe that the vision could be realized. They have both passed into history. Not by chance, their place in my esteem and affection came to be taken by yet another graduate of this place, your president, Lloyd Axworthy, who I am happy to see is alive and well.

What is it about this place that continues to make it influential in my life, as in yours?

It is its liberal and activist tradition, in tune with the one in which I was fortunate enough to be nurtured at home, and then again as a scientist.

Does the inclusion of science as a liberalizing influence surprise you? It shouldn't.

Consider what scientists do. Simply put, they try to make sense out of what they see, and then bravely use that to make sense out of what they cannot yet see. It is a process called 'discovery', and it depends on a belief in the power of reason.

It is worth recalling that scientists are not the only ones who speak of 'discovery'. The same term is used in law, to describe the marshalling of evidence before a trial. In law, too, it is an essential step toward understanding.

Neither in science nor in law is this a mechanical process. It is more fundamental than that. Discovery in both contexts draws heavily on one's values. Here is a simple example of 'discovery' in which we can share. Looking around us at this patch of land called Canada, what do we see? What most of us see is a community enriched by its cultural differences, and enabled to live in peace through the application of rules. These rules may change over time, but they are enforced at a given time. That is how we avoid conflict.

The process of discovery requires that we apply this way of thinking to the wider world, where at present we see confusion. For this we need the vision of a discoverer.

You could see the contemporary confusion exemplified in a sort of morality play staged at the United Nations headquarters in New York over the past few weeks. A committee of the U.N. has been debating the future of the Nuclear Non-Proliferation Treaty, which will determine what sort of a world we live in -- a world awash in nuclear weapons, or a world in which nuclear weapons are controlled and ultimately eliminated.

The United States, wisely, would like to use the treaty to prevent Iran from building such weapons. But, unwisely, the U.S. would like to retain the freedom to extend and develop its own nuclear might.

What happened in New York last week was an act of sabotage. Far from applying this 35-year-old restriction on nuclear proliferation to Iran, the U.S. allied itself with Iran in undermining the treaty.

This preposterous outcome was due to the fact that the U.S., under its present regime, is trying to live by two conflicting sets of rules. One is the rule of international law symbolized by the United Nations, which the U.S., to its great credit, played a major role in establishing. The other is the right of the mighty to act as they wish, unconstrained by law.

We owe our domestic law, sometimes verbatim, to the Romans of 2,000 years ago. They applied it to all, except to the arbiter of law, the emperor. This is how it was possible for the emperor Caligula to appoint his horse to the Roman senate. Today, however, domestic law, in principle and frequently in practice, applies even to prime ministers and presidents.

It does not require the imagination of a scientist to see that our future hinges upon marshalling public opinion to extend the rule of law to the powerful everywhere. Huge progress has already been made in establishing proper international practice, though this progress is belied from time to time by the spectacle of an emperor attempting to appoint his warhorse to the United Nations.

Today, international law spells out the right of all to live with dignity and without fear. It is endorsed by the vast majority of the world's nations and people. With every passing year it becomes harder, therefore, for nations to flout these laws. But, along with law, we need the willingness to enforce it. Thanks to the United Nations' recent assertion of the 'Responsibility to Protect' (an international declaration initiated in Mr. Axworthy's time as Canada's foreign minister), the resolve to intervene on behalf of international law abroad is stronger today than ever before. At times, it can be so strong that we must be vigilant it is not abused by misguided invaders, as was the case in Iraq. Here again we must insist on action that is legal, not arbitrary.

We are clearly in the process of discovering a new world. For this we shall need courage and perseverance.

I have been trying between the lines in these remarks to stress that discovery, whether in science or any other field, goes beyond observing to creating.

Science, as I have hinted, is not a value-free activity. It is performed by a community with strongly-held beliefs. Belief, in the first place, in the existence of truth -- truth which outlives the truth-seeker. Truth which then imposes obligations on the scientist and citizen to talk, to listen, and to defend the rights of others also to pursue the truth. Those are the obligations not only of a scientist, but of a scholar in any field, and therefore, by extension, obligations on any thinking being.

That responsibility lies equally on you, our newly-minted graduates arrayed here in your priestly robes. As the inheritors of the proud tradition of United College and the University of Winnipeg, we depend on you to defend reason and compassion.

In so doing you will enrich your own lives, and make both this fellow-graduate and your alma mater proud.

I wish you joy in doing so.



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