**Out of Turmoil and Conflict Comes Opportunity for Change**

Jack M. Wilson, President   
University of Massachusetts

at Kent State University   
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Greetings President Lefton, University Trustees, professors, parents, distinguished guests and especially, graduating students. I am honored to be here with you today and to have been asked to address you as you celebrate this rite of passage from students to fully contributing members of your professions and our society. I graduated from Kent with my Doctorate in 1972 –after spending five of the best, and most interesting, years of my life here.   
  
That was a time of turmoil in the world, at Kent, and on all campuses, just as today is a time of turmoil. Then it was the Vietnam War, an economic downturn, and a profoundly shifting social structure in our country. Today there are wars in Iraq and Afghanistan as well as the most severe economic turbulence since the great depression. Campuses are part and parcel of this world. You feel this pain clearly, just as I did.   
  
It is a good time for reflection. The sixth century Chinese philosopher Confucius claimed, “By three methods we may learn wisdom:   
First, by reflection, which is noblest;   
Second, by imitation, which is easiest; and   
third by experience, which is the bitterest”  
  
It is precisely in the midst of turmoil that the world goes through the most dramatic changes –the Revolution, the Civil War, and the Great Depression come to mind. Look past the pain toward a vision of how this world will change, because you, and your generation, WILL change this world, as surely as my generation did. We did some good things and some not so good things. We gave the world the internet and subprime mortgages. We made the world more tolerant and generated the most partisan politics imaginable. We gave television hundreds of channels –and put reality TV on most of them. I am counting on you to do a better job!  
  
When I graduated from Kent, there was essentially a zero probability that I could enter a job in my chosen profession of teaching and research. Nevertheless, I decided to finish my Doctorate in spite of this –primarily because I was driven by the personal satisfaction of achieving a lifelong dream -and not because of any career prospects. I felt that I would get the PhD and then start a construction company –another lifelong interest of mine.   
  
As it happens, I defied the odds and got a university position –one of the very few in 1972. One of my close friends got his PhD in biochemistry and did not get a job. He followed my back-up dream and founded a construction company. Today he is a multi-millionaire living in a palatial estate looking over the Atlantic Ocean.   
  
I believe I was the lucky one, but there are many paths to success –stay flexible and do not get discouraged.  
  
And then there was the war. And the protests. And the tragedy.  
  
You –like me – are graduating at a time when things look less than promising. And yet I am confident that you –like me – will prevail through the time tested recipe of persistence and patience. When I was a student, I thought it was all about brilliance and creativity. Today I know that both of those are important, but that without persistence and just the right combination of patience and impatience, brilliance and creativity do not prevail.  
  
There is much to celebrate today for what you have achieved in earning your degree. Your ability to contribute to the global knowledge economy is greater by far than it would be without a degree. Your earning potential, on average, will be 50 percent greater than if you had only a high school diploma, and the rate of unemployment for you will be about half that of those who have only a diploma.   
  
You are also undertaking this transition at a time that may seem daunting to you. There is reason for trepidation, but there is also reason for hope. Winston Churchill said, “A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty.” By this measure, you are entering a world where the ground is fertile with opportunity for optimists.   
I can put myself in your shoes, though, and remember that it can be difficult to maintain optimism. I was here at Kent State on May 4, 1970 as a graduate student and though I don’t want to dwell on that experience today, I do want you to know that the events of that day seemed insurmountable for each of us personally and for this institution.   
  
My own place in the world at that time was complicated. I protested against the war on campus and in Washington D.C., but my education was supported by a Department of Defense grant to the Liquid Crystal Institute -the abolishment of which was one of the non-negotiable demands of the anti-war protestors. We were not doing anything to help the defense effort and none of our research was classified. We were simply inventing the liquid crystal displays that are now ubiquitous. But my acquaintances in the protest movement were ready to believe any of the many rumors.  
  
I lived in two incompatible worlds. When I went to Washington DC to protest, I would spend the nights on the streets and in the mall chanting and listening to protest speeches. By day I would put on my suit and tie and sit down in congressmen’s offices to convince them, or their staff, that it was time for us to end the Vietnam War.  
  
When the shooting happened, it wrenched our understanding of the world to such a degree that it seemed like we might never recover—but here we stand today. We have gone on with our lives and have become wiser for our experiences and stronger. Kent State University remains strong with good students, great faculty, and world class research. It is an economic beacon of hope for the region and the citizens.   
  
It is not easy to hold opposing points of view or ideas in your consciousness at the same time, but it is and will be increasingly demanded of all of us as our world becomes more globally integrated. Complementarity or duality appears in many contexts. My own favorite is the concept of yin and yang in Asian philosophy, but it appears in most religions including Christianity, Zen, and Islamic Sufism. Psychology has its cognitive dissonance. Physics tells us of the complementarity of momentum and position, energy and time, or the wave and particle properties of light and matter. Even my research on liquid crystals was confusing to many. How can something be liquid and crystal at the same time?  
  
Progress and enlightenment can only occur when one is willing to consider the possibly of the conflicting ideas. Those who hold to dogmatic views, without conflict, are unlikely to see the truth.  
  
The advances of technology and ideas have a dual and often conflicting nature.  
  
At its best, the internet has the ability to connect communities that want to discuss or work on the issues of the day. This could be science, politics, business, or almost any other human activity. Never in history has the formation of communities of a common culture been so easy to accomplish without regard for location or other obstacles. Scientists can use it to exchange information with colleagues around the world and artists can use it to conduct virtual performances.  
  
Sometimes that can be a very positive experience, but it also has a darker side. Terrorists can use the internet to recruit other angry and disenfranchised people, and jobs can be moved around the world with wrenching consequences for communities.   
  
Globalization has its yin and yang.  
  
We had better stay flexible and persistent to shape the changes in the world. Sometimes our ideas get turned on their head in strange and surprising ways. In the early years of research on evolution, Lamarck hypothesized that acquired characteristics could be inherited. Generations of scientific work resoundingly disproved this Lamarckian hypothesis and for recent generations we have been teaching that it was wrong -and that inheritance is determined solely by our DNA.   
And then UMass Scientist Craig Mello and his colleague Andrew Fire discovered RNAi -for which they won the Nobel Prize in 2006. RNAi or RNA interference was shown to lead to gene silencing. Today this is a billion dollar research industry and it is only beginning to be explored as a therapy to silence genes –oncogenes perhaps among many other undesirable genes. Even more perplexing: it appears that this can lead to inherited characteristics. Could Lamarck have been right?  
  
Today there are some who see DNA in a whole different light. I tend to think of DNA as something that RNA created since it has a bad memory. DNA is very stable. RNA is not. All life requires RNA, but not all life requires DNA. I think of DNA as RNA’s filing cabinet in which it files away patterns of information that it may (or may not) need to draw upon later. RNAi picks and chooses the information it needs -turning on and off the relevant genes to enable the many processes of life. To me RNA is the stuff of life and DNA is a mere memory aid. Many other scientists –perhaps including some of you -would no doubt vehemently disagree. I welcome the debate.  
  
How differently we can think of life since Mello and Fire’s discovery –and we are nowhere near understanding all the implications. The scientists in the audience will be struggling with the implications -just as will the humanists in a very different way. The nurses will likely be delivering therapies for diseases that before the discovery of RNAi did not have therapies to attack the root of the problem. This could include Alzheimer’s, diabetes, cancer, and many other genetic or viral diseases.  
  
While we are busy discovering new knowledge at an historically unprecedented pace and volume, the pressure to protect and communicate these discoveries can sometimes make it difficult to fully realize the true meaning and potential impact of them. From the ethical questions that emerge from RNAi, gene therapy, or stem cells to the social, political and economic impacts of a globalizing economy, we must question the effects of our discoveries and of their applications and engage each other in civil discourse about how we should mediate these issues as a society.   
  
Kent State University and the institution that I lead, the University of Massachusetts, share the mission of creating graduates who are good citizens who seek to improve all of the communities of which we are a part-- whether they are our workplaces, our home towns, our nations or our world.   
  
I speak from experience and from my heart when I say that I know what it is like to step into an uncertain world and feel like nothing is possible –and yet everything is possible. As you head into the next phase of your life, remember that kites fly highest against the wind and boats sail fastest into the wind. Let me assure you…not only is everything possible, anything is possible. You must believe that you can make a difference because, whether you intend to or not, you will.   
Don’t expect it to be easy, but remember Winston Churchill’s very short admonition to the students of the Harrow School: “Never, never, in nothing great or small, large or petty, never give in except to convictions of honour and good sense.  
  
Persistence is the only way forward.  
  
At this, your commencement, I congratulate you for your accomplishments during your University study. The University is not giving you a degree –you earned it. And remember, a university is about more than teaching students. Our most important task is creating alumni. And now –with you – we’ve done it!  
Congratulations!