2009 Spring Congregation

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20 May to 5 June 2009

Madam Chancellor, [Honorary Degree Recipient], Distinguished colleagues, honored guests, members of the UBC graduating class of 2009.

Well, it is quite the day for you graduates. After countless hours of toil and trouble, as the witches in Macbeth would likely describe a university education, you are crossing the finish line. Congratulations!

Today is a day of celebration, of course, but in my experience, both as a student and as a professor, graduation is also inevitably a time of reflection. It is one of those moments in life when we are almost *forced* to ask ourselves "why"? Why did I sink all that time and money – or my family's money – into my education? Why did I choose the major I did? Why didn't I work harder – or perhaps, why did I work so hard? Many of us also confront that ultimate question: why am I here and what should I do with my life?

For a few minutes, I want to explore what underlies all those "why" questions, the even bigger question of human motivation.

Why do we humans choose to do what we choose to do?

Now, of course, there is a pretty big assumption buried in the way I phrase the question, that humans have choices; that we are not simply genetically programmed to respond in particular ways to specific stimuli; or that we are not purely the sum of processes of social construction. As a professor, I want to believe that humans can learn, can be affected by what they learn, and can change as a result. Otherwise, I am not sure why any of us would be here today. But this is an assumption.

More interesting, I think, is a second assumption in my description of human motivation as at least partly a field of choice: that motivation can be multifaceted, that there is likely to be no single explanation for why we humans choose to do what we choose to do. I have been thinking about this issue of mixed motivations over the last year because I have been reading a number of fascinating accounts of the life and work of Charles Darwin, one of the most influential people in human history.

As many of you will know, this year marks the 200th anniversary of Darwin's birth and the 150th anniversary of the publication of that brilliant and radical work: *On the Origin of Species*. Two "why" questions have long preoccupied Darwin's biographers: why did Darwin move forward so strikingly from a pre-existing general theory of evolution to the more specific and powerful theory of natural selection; and why did Darwin wait more than 20 years from his first insights to the publication of *On the Origin of Species*? The potential answers tell us much about the complexity of human motivation.

On the first question: why was Darwin able to leap to new insight, there are at least two seemingly competing explanations. The first is obvious: he was a brilliant scientist who since childhood had trained himself into the habit of minute observation. Apparently as a young boy Darwin would spend hours studying the life of beetles. As Adam Gopnick describes in his moving book *Angels and Ages*:

> ...the young Charles was once so engrossed with collecting beetles that he put one in his mouth to leave his hands free to search for others. The beetle turned out to be of the kind that emits a strong acid in its own defense, which it did in young Charles's mouth. The boy hardly seems to have cared.

Later he spent some five years on the famous *Beagle*, travelling around the coast of South America and on to the Galapagos Islands, observing compulsively and collecting incessantly. So Darwin was, it seems, the ultimate empiricist, relying on what he actually saw to generate hypotheses that he later tested through further observation.

But lest all the scientists become too comfortable with my description of Darwin's method, it turns out that there is another strong explanation for Darwin's ability to generate new insight: his personal moral commitments. One of the definitive biographies of Darwin was published in 1991 by Adrian Desmond and James Moore. It was quite uncontroversial. But this year, the same authors caused a storm of controversy by publishing a new book called *Darwin's Sacred Cause*, in which they argue that although Darwin was a great observer, he started his pursuit of scientific truth motivated by a great cause: to end the slave trade. The claim is strongly supported, first by Darwin's lineage. Both his family and that of his wife, the Wedgwoods of pottery fame, were well-known anti-slavers.

Darwin was also deeply affected by his encounters with a former slave while Darwin was a student in Edinburgh (where, by the way, he dropped out of medical school). Finally, it may be that the voyage of the *Beagle* was not important only for Darwin's accumulation of finches, but also because it exposed him first-hand to slavery and reinforced his family-fed morality. Consider this quote from his journal:

> To this day, if I hear a distant scream, it recalls with painful vividness my feelings, when passing a house near Pernambuco [in the mangrove swamps in Brazil], I heard the most pitiable moans, and could not but suspect that some poor slave was being tortured, yet knew that I was as powerless as a child even to remonstrate.

Desmond and Moore provocatively conclude that the theory of natural selection, far from being the result purely of tough-minded observation began "with the abolitionist belief in blood kinship, a 'common descent' of all human beings." The observation happily confirmed the hypothesis generated outside the framework of scientific inquiry.

Similarly on the second question of why Darwin took more than 20 years to publish his findings, two seemingly competing explanations

emerge. One, the most obvious – the most self-interest driven – is that Darwin was afraid of being punished by the Victorian elite of which Darwin was a very comfortable member. Darwin knew that his theory of natural selection would generate intense resistance, and he was not particularly courageous. A second explanation is more intriguing. Darwin's wife, Emma, was a devout religious believer. He loved her dearly, famously describing her as "the most interesting specimen in the whole series of vertebrate animals".

Darwin was also to a remarkable degree for his time, a family man. It seems that Darwin may have delayed publication of *On the Origin of Species* so as to spare his wife heartache and to save his comfortable family from the disruption that controversy would cause. His own agnostic views were strongly held, but he may have had the courage to suppress them to protect the ones he loved. Interestingly, Darwin's religious doubts, and his tough idea of the survival of the fittest, seem to have been prompted not only by a hard-headed commitment to empiricism, but by another powerful emotional motivator: the tragic death of his beloved daughter, Annie. He was

too distraught to attend her funeral and he could not bring himself even to mention her in later years.

No doubt, Darwin can fairly be described as a brilliant empiricist, a scientists' scientist. But he was also morally engaged, kind-hearted, and profoundly committed to his wife and children. What, then, motivated him? I think that there can be no simple answers, not for Darwin and not for any of us. For you graduates today, I find encouragement in this conclusion.

As you try to answer all those "why" questions, especially the big one: "why am I here"? don't even try to find a single response. You aren't here for one reason. You don't have to identify the only thing you should do. You don't have to choose to do things in a pre-established order. Your great contribution right now might be in loving your family, in helping a friend. But twenty years from now you might just be changing the way we look at our world.

And here is more encouragement, not just for today's graduates, but for the university itself. We all have different contributions to make in

understanding the earth, life and society. If Darwin's biography and work teach us anything, it is that simple explanations of phenomena are likely to be wrong, or at least incomplete. Darwin was both an empiricist and a moralist. He was both cautious and courageous. If one of the central figures of science can only be understood in a social context, perhaps we should stop arguing about the relative merits of one discipline over another. Perhaps scientists and humanists need to work harder to learn from each other; that is the very reason that we are all thrown together in the university.

In a fabulously challenging book called *What Science Offers the Humanities*, UBC professor Ted Slingerland, himself a scholar of Chinese thought, argues that the natural world and the world of human cultures cannot be radically separated as fields of study. Emotions and rationality may both have physical bases. The brain is part of a physical body, and not a disembodied site of something called "mind'. Just as we may not be able to fully understand the theory of natural selection without understanding religious belief and without understanding the anti-slavery movement in 19th century

Britain, we can't understand Darwin without understanding scientific method and the power of empirical observation.

Think about what that means: you are all graduating in a discipline, but you have the opportunity to learn more throughout your life, by expanding your horizons outside what you have already studied - - and your contribution may be greater for it!

Love those around you, commit yourself morally, learn through careful observation – and one of these days, perhaps you'll know why. Thank you.