

University of Calgary Convocation Address
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The purpose of my address is to encourage you, as you venture forth degree in hand, to be bold. Bold in personality, bold in vision, and bold in actions. Be bold, and experiment, and don't always follow the beaten path.

The beaten path in business and in life is comfortable but is fraught with mediocrity; if you stay on the well-traveled road, you will work hard to stand still. You will earn a good living because you are a University of Calgary graduate, but it will be a hard fought career, and you won't contribute as much to society and yourself and your family as otherwise might be the case.

I make these statements not just from personal experience, but from lessons from my academic research. My academic research over the past 20 years has been in the field of strategic management – not something I set out to do as a PhD economist, but a destination I arrived at by pursuing hard questions in economics – such as how is wealth created by firms. Economists from Adam Smith on think they know something about how nations become prosperous; but they have done little to develop an appreciation of how firms become prosperous, and go from good to great. There is a well-known economic theory of monopoly, but it's incredibly poor at helping people in business understand how to create value, and it leads to the wrongful suggestion that good business success is bad.

The proper pursuit of profit creates jobs and prosperity. But from where does that enterprise level success come? How does one break out and build something new?

My research shows that it comes more from doing the right things rather than doing things right. What do I mean? I mean that it is important in business (and in life) to figure out what is the next thing that society wants, that customers need, and that they are not currently getting, and that they are willing to pay for. Steve Jobs figured out the opportunity to bring the convenience of digital music via the internet to the world. It took new contributions:

- A new music player, the iPod, with a mini hard drive
- Access to on line music content
- Digital rights management to encourage artists and content owners to make their music available on the internet

Apple Computer didn't just build a new product; it built an ecosystem with content available to make the iPod useful; and it is that ecosystem, not just better products, which has today made Apple the most valuable company on planet earth – more valuable than energy giant Exxon-Mobil.

Which brings us to the energy sector, which is important here in Alberta. The rules for wealth creation are the same, whether it's the internet, agriculture, or energy. It's deceptively simple to think of wealth in the oil business coming out of the ground, but it really does not. Venezuela has great oil sands too. But it is

relatively poor and will remain so because the Venezuelans cannot figure out how to bring technology, finance, and management together to create value.

Wealth doesn't come out of the ground. It comes out of the mind, out of new technology, out of intellectual capital, and depends on strong property rights and good public policy. Intangible assets, knowhow and especially entrepreneurship have always been at the core of wealth generation, even in the natural resource sector

But back to doing the right things versus doing things right. Your education here at Calgary, if it's like education at UC Berkeley (which is where I hold a faculty position) and at other top schools, tends to help one understand better how to solve problems and do defined tasks. How to optimize. How to be efficient. How to implement best practice. This is all very important, but is not enough to generate success anymore, if it ever was.

Today the best companies know how to operate reasonably well. You will not be a path breaker by being good at operations – but you will be a valued employee, and that's ok.

But to create something distinctive and special that leaves its mark on Canada and the world you must go beyond best practices and invent something new and better – not necessarily a new device or product; it might possibly be a new way of doing things, or a new business model.

But how do you do this? A special frame of mind is required. One does it by “sensing” a new future, and by “seizing” that opportunity. It's not just about “sense making” – which is experiential learning. It's also about sizing up a future that no one has yet seen or experienced. It's about creating the future. It requires what I call dynamic capabilities.

But how does one find new opportunities, and create capabilities?

In my view, opportunities are everywhere and nowhere at the same time. There are several ways you can sneak up on them. Three are paramount:

1. Stay curious.
2. Go a bit off the beaten trail in your career;
3. In conjunction with (2) you embrace mistakes; and let me tell you, making mistakes isn't a bad idea. It is not disgrace; that is, if you know how to learn from mistakes.

Mistakes are often the source of new insights, at least if your mind is prepared. The American inventor Thomas Edison's discovery of the light bulb – and the light bulb is now the most common icon for a new idea – was not a single flash of brilliance as so many people think, but the result of a strategy of repeated testing and failure – until the carbon filament emerged and could burn for 13.5 hours; then 1200+ hours. It took approximately 700 tries and as Edison put it “ I discovered 700 things that did not work.”

Clearly there was a payoff to tenacity by Edison and his team. And it was a team. It wasn't just a lone inventor.

Of course, one should not pursue failure for its own sake. One needs to be smart about failing; and one needs to learn along the way. Alistair Pilkington kept working for years in the UK on the float glass process – and couldn't get rid of the bubbles in the glass – until the spout sending molten glass from the bath of molten glass broke, and clear glass has flowed ever since, dramatically cutting costs and improving the quality of glass worldwide.

So it's important not to be afraid of mistakes. But it also helps to have some idea of where to prospect once one is off the beaten trail.

Is there a compass one can employ? I believe there is. You prospect for new business ideas only with a good sense of customer problems, or of "user needs" to steer your inquiries. A new franchise concept for fried chicken may not be it; but there may be pay dirt when emerging technology meets emergent needs – say with energy storage.

Making good decisions thus requires a good decision process:

- i. Identifying the problem/opportunity,
- ii. Frame the issues,
- iii. Collect intelligence,
- iv. Make inferences,
- v. Decide/act

Summing it up, I guess I'm saying that failures/errors/mistakes are not something to be afraid of. Errors are not falls from virtue. They can be embraced, and learned from.

As Pasteur once put it, "chance favors the prepared mind." The prepared mind is a well-educated one; it's not a defensive one; it's not one that is always right. Even Einstein made 20+ mistakes – most of which he eventually corrected himself. Secondly, if you are ready to take a risk, do it in an area that aligns with a customer need.

The beauty and relevance of all of this is that you are still young enough to make mistakes – and recover and learn from them. As expertise grows, there is sometimes in some people a tendency to devalue mistakes. Less time is spent learning; more time harvesting; and more time being right. Trade on your recklessness while you shall have a bit left – but trade on it smart. You are not out to win a Darwin award for a really dumb act!

The message here is that it's ok to be "edgy". Mavericks should be welcomed, not scorned. They are always risking a little of themselves, and that is one way that new paths forward are discovered for all.

What I'm saying isn't all that profound, but if understood can give us all a better chance of learning from each other. Artists are especially good at being edgy, and trying new things. They have to! They accept that mistakes are necessary to find the pathways to success. Indeed with art, failure is the norm – and given that

the costs of failure in art are low, “failure” should be expected. It’s often true in business too. Failure, not success, is the norm.

Finally, how do you build the resilience and learn from mistakes! Superficially it usually feels better to win than lose. So how do you steel yourself? First, get comfortable in your own skin. Second, laugh at yourself. Third, fail with grace. Fourth, understand that you and others around you are gaining from your mistakes.

Indeed, negative knowledge - knowledge of what doesn’t work – is often quite valuable, and can help steer others down productive paths too. Shrinking ego and deflating hubris is something else good mistakes should also bring about – and these are good developments too.

Much of what I have outlined finds support not just in recent work in strategic management and behavioral decision theory, but also from the “greats” of the past. Abigail Adams, wife of the second US president John Adams, stated that “the habits of vigorous minds are formed in contending with difficulties. Great necessities call out great virtues.” (1774) She would have agreed that mistakes are often difficult to contend with; but those that tried would be the better for it.

That great Canadian and inventor of the telephone, Alexander Graham Bell, said “don’t go forever on the public road, going only where others have gone. Leave the beaten track occasionally and drive into the woods. You will be certain to find something you have never seen before”. And your former prime minister, Lester Pearson, was onto it too when he said “failures are made only by those who fail to dare, not by those who dare to fail”.

Go forward, and be amongst those who dare to fail.