Economists have always agreed that entrepreneurial activity is critical to economic growth and prosperity. The creation of new organizations is a driving force of social and economic development, and in the New Economy, it is more critical than ever, because new organizations not only catalyze economic growth, but advance new technologies, redefine products and services, and in some cases, create entirely new industries. From “New Growth Theorists” such as Princeton’s Paul Krugman and Stanford’s Paul Romer to Harvard competitiveness guru Michael Porter, academics also agree that for a country to prosper it must have the kind of business sector innovation typified by entrepreneurial activity.

Entrepreneurship is finally regarded as a legitimate vocation in the professional world. No longer are entrepreneurs regarded as loners, non-conformists and radical risk takers who have a vision that they can build an empire from their garage workshops. The efforts of identifying a market need, conceiving a product or service concept and assembling the resources to present the offering to the market represent fundamental skills that are viewed as valuable in both emerging business ventures and established corporations.

The true leaps forward in the New Economy are going to come from people thinking and acting in entrepreneurial ways, says Rotman Dean Roger Martin. He sets out here to de-mystify entrepreneurship and explains why at the Rotman School, the goal isn’t to teach entrepreneurship, but to provide students with a systematic method for thinking in ways that consistently produce success, whether in a small startup or a corporate environment.

by Roger Martin
All across the U.S., billionaire entrepreneurs have sprung up to take their place in the pantheon of American heroes, causing productivity and economic growth to surge ahead of all economies worldwide. Meanwhile, bureaucratic Japan is sliding backwards. There’s no doubt about it - in the New Economy, the true leaps forward are going to come from people thinking and acting in ways that we think of as “entrepreneurial”. So we’d better establish and clearly understand what “entrepreneurial” means.

The traditional way to define entrepreneurship is as something “mystical”, a special, innate ability to combine creativity, insight, and out-of-the-box thinking with a unique brand of courage, clairvoyance, inspiration, and bravery. If that were so, business schools would stop trying to teach entrepreneurship and instead focus on recruiting students who already demonstrate this special mystical gift. Recruiters would design tests to detect early “entrepreneurial” tendencies and create attractive compensation packages to lure those people early in their careers.

This feels a bit too fatalistic for me. The main problem is in the way we apply this out-moded mystical definition. It reminds me of Tom Wolfe’s observation in “The Right Stuff”.

---

**Do Entrepreneurs Need Business Schools?**

Not everyone agrees with Dean Roger Martin that creative thinking can be taught at a business school. When Robert Young, chairman of Red Hat Inc., spoke at last year’s “Psychology of Leadership” Forum, he had this to say:

“The problem with traditional business schools, as near as I can tell, is the success track that these kids are on all the way through. They come out with a sense that they know things about the world that the rest of the company doesn’t, and that attitude can be very self-defeating. I didn’t go to business school. The key difference between a traditional liberal arts education and a more functional education, whether it be business or engineering, is that the liberal arts students really have to focus and think in different ways, because there are no absolute truths in the arts. What is the absolute truth of history? Of literature, or art history? There are none, but rather a multitude of tracks you can take, of ways to think about issues and subjects. In business and engineering, there are known truths. If you drop something it’s going to go down, not up. And if a company doesn’t make money, it will fail. In these fields, you study in order to learn and understand known, accepted truths. In an arts education, however, you’re effectively learning how to learn.”

—Robert Young (BA ‘76) Chairman of Red Hat Inc., Speaking at the Rotman School’s October 1999 “Psychology of Leadership” Forum

---

**Student Entrepreneur: Dr. Yuri Sokolov**

Dr. Yuri Sokolov is proof that the connection between business and technology is alive and well at the University of Toronto. A Part-Time MBA student, Dr. Sokolov and his colleagues have invented a groundbreaking device that tests the hearing of newborn babies and young children more accurately than ever before. “Vivography” senses the faint sound waves that originate in the inner ear, and for the first time ever, measures the responses in real time.

“Hearing loss in newborns often goes undetected for several years, leading to serious impairment of brain development and language acquisition,” explains Sokolov. “Therefore, universal newborn hearing screening is considered critical. Vivography allows for non-invasive testing of the child’s inner ear, so that doctors can detect hearing problems faster and more accurately than ever before.”

Dr. Sokolov adds that the technology has secondary uses as well – for instance, it can be used to monitor the inner ear’s status during acoustic-nerve surgery and for detecting noise-induced hearing loss.

Sokolov received his PhD from the Institute of Physiology of the National Academy of Sciences of Ukraine in 1986. In 1997, while working at the U of T’s Institute of Biomedical Engineering, Sokolov applied for and received the first-ever Heffernan/Co-Steel Innovation Scholarship, which is offered jointly by the Faculty of Applied Science and Engineering and the Rotman School to post-graduates (ie: those who hold a Masters or PhD) who want to work over two years to develop a novel idea from inception through to commercialization.

“The Heffernan/Co-Steel Scholarship is an excellent opportunity to combine technological developments with commercial studies. Because of it, I learned about the importance of coupling technical research and development with market research and writing a business plan – all the things you need to know to bring a new product to market.” After auditing a few courses at the Rotman School, Sokolov decided to enroll in the Part-Time MBA program in 1999 to get the world-class business skills he needs to run his company, which is called Vivosonic (www.vivosonic.com). He says that the Rotman School’s integrative approach to thinking across the functional disciplines “is crucial for anyone considering a startup.”

---

**Now Hear This!**

Dr. Sokolov applied for and received the first-ever Heffernan/Co-Steel Innovation Scholarship, which is offered jointly by the Faculty of Applied Science and Engineering and the Rotman School to post-graduates (ie: those who hold a Masters or PhD) who want to work over two years to develop a novel idea from inception through to commercialization.

“The Heffernan/Co-Steel Scholarship is an excellent opportunity to combine technological developments with commercial studies. Because of it, I learned about the importance of coupling technical research and development with market research and writing a business plan – all the things you need to know to bring a new product to market.” After auditing a few courses at the Rotman School, Sokolov decided to enroll in the Part-Time MBA program in 1999 to get the world-class business skills he needs to run his company, which is called Vivosonic (www.vivosonic.com). He says that the Rotman School’s integrative approach to thinking across the functional disciplines “is crucial for anyone considering a startup.”

---

**Student Entrepreneur: Dr. Yuri Sokolov**

Dr. Yuri Sokolov is proof that the connection between business and technology is alive and well at the University of Toronto. A Part-Time MBA student, Dr. Sokolov and his colleagues have invented a groundbreaking device that tests the hearing of newborn babies and young children more accurately than ever before. “Vivography” senses the faint sound waves that originate in the inner ear, and for the first time ever, measures the responses in real time.

“Hearing loss in newborns often goes undetected for several years, leading to serious impairment of brain development and language acquisition,” explains Sokolov. “Therefore, universal newborn hearing screening is considered critical. Vivography allows for non-invasive testing of the child’s inner ear, so that doctors can detect hearing problems faster and more accurately than ever before.”

Dr. Sokolov adds that the technology has secondary uses as well – for instance, it can be used to monitor the inner ear’s status during acoustic-nerve surgery and for detecting noise-induced hearing loss.

Sokolov received his PhD from the Institute of Physiology of the National Academy of Sciences of Ukraine in 1986. In 1997, while working at the U of T’s Institute of Biomedical Engineering, Sokolov applied for and received the first-ever Heffernan/Co-Steel Innovation Scholarship, which is offered jointly by the Faculty of Applied Science and Engineering and the Rotman School to post-graduates (ie: those who hold a Masters or PhD) who want to work over two years to develop a novel idea from inception through to commercialization.

“The Heffernan/Co-Steel Scholarship is an excellent opportunity to combine technological developments with commercial studies. Because of it, I learned about the importance of coupling technical research and development with market research and writing a business plan – all the things you need to know to bring a new product to market.” After auditing a few courses at the Rotman School, Sokolov decided to enroll in the Part-Time MBA program in 1999 to get the world-class business skills he needs to run his company, which is called Vivosonic (www.vivosonic.com). He says that the Rotman School’s integrative approach to thinking across the functional disciplines “is crucial for anyone considering a startup.”

---

**Now Hear This!**

Dr. Yuri Sokolov is proof that the connection between business and technology is alive and well at the University of Toronto. A Part-Time MBA student, Dr. Sokolov and his colleagues have invented a groundbreaking device that tests the hearing of newborn babies and young children more accurately than ever before. “Vivography” senses the faint sound waves that originate in the inner ear, and for the first time ever, measures the responses in real time.

“Hearing loss in newborns often goes undetected for several years, leading to serious impairment of brain development and language acquisition,” explains Sokolov. “Therefore, universal newborn hearing screening is considered critical. Vivography allows for non-invasive testing of the child’s inner ear, so that doctors can detect hearing problems faster and more accurately than ever before.”

Dr. Sokolov adds that the technology has secondary uses as well – for instance, it can be used to monitor the inner ear’s status during acoustic-nerve surgery and for detecting noise-induced hearing loss.

Sokolov received his PhD from the Institute of Physiology of the National Academy of Sciences of Ukraine in 1986. In 1997, while working at the U of T’s Institute of Biomedical Engineering, Sokolov applied for and received the first-ever Heffernan/Co-Steel Innovation Scholarship, which is offered jointly by the Faculty of Applied Science and Engineering and the Rotman School to post-graduates (ie: those who hold a Masters or PhD) who want to work over two years to develop a novel idea from inception through to commercialization.

“The Heffernan/Co-Steel Scholarship is an excellent opportunity to combine technological developments with commercial studies. Because of it, I learned about the importance of coupling technical research and development with market research and writing a business plan – all the things you need to know to bring a new product to market.” After auditing a few courses at the Rotman School, Sokolov decided to enroll in the Part-Time MBA program in 1999 to get the world-class business skills he needs to run his company, which is called Vivosonic (www.vivosonic.com). He says that the Rotman School’s integrative approach to thinking across the functional disciplines “is crucial for anyone considering a startup.”
about the way the U.S. military defined “test pilot” in the early 1950s: Pilots came in only two flavours: 1) Dead, if they didn’t have the “right stuff” or 2) ’test pilot’, if they didn’t end up dead, and thereby had the “right stuff”. Similarly, Entrepreneur is a mystical title we award only to those who have already succeeded. When a person attempts to behave like an entrepreneur but fails, we don’t call them an entrepreneur. Instead we refer to them as a “failed businessperson”.

“Entrepreneurialism”, I would posit, isn’t a singular or predictable way of thinking or acting, but a badge we pin on the successful. The definition is represented by the chart, right. On the left are failed businesspeople. On the right are either successful executives — who ply their success in a big firm, or entrepreneurs — who often ply their trade in a small firm or startup.

Thinking of entrepreneurship as a ‘badge of honour’ bestowed on someone who mystically succeeds won’t help us take the necessary actions to produce these highly valuable people. As Tom Wolfe pointed out, the mystical “right stuff” definition got many pilots killed as the military tried to figure out whether they had ‘it’ or not by putting them up in an experimental aircraft.

As a business school, we’re told again and again that we need to encourage students to be more “entrepreneurial”, but we won’t be likely to succeed if entrepreneurial is just another word for successful. So the question for us isn’t “how do you teach entrepreneurship”, but “how do you provide students with a systematic method for thinking in ways that consist-

Collaborating with Sokolov on the scholarship project were Xinde Li, M.Sc., Dr. Hans Kunov, Professor Basil Kalymon, Franz Schuh, and at an early stage of the project, the late Prof. Paul Madsen. His Advisory Committee included Faculty of Applied Science and Engineering Dean Michael E. Charles, Professor Safwat Zaky, Dr. J. Stefan Dupre, Ron Fournier, Michael Koerner, Rotman Professor of Organizational Behaviour Harvey Kolodny, and Dr. Gerald Heffernan, president of G.R. Heffernan and Associates, who is now chairman of the board of Vivosonic. Sponsors included the Natural Sciences and Engineering Research Council of Canada (NSERC); Dr. Gerald Heffernan; and the University of Toronto’s Institute of Biomaterials and Biomedical Engineering (IBBME).

Vivosonic is taking its technology global, having participated in several recent international events, including the International Congress of Audiology and the International Conference on Newborn Hearing Screening. It’s only a matter of time before hospitals and children around the globe are benefiting from Vivography’s diagnostic capabilities.

Sokolov says the Rotman School played a key role in bringing his company to fruition. He is very thankful to his Part-Time MBA classmates “for their support, interest, discussions, and great advice,” and especially to Professor Kolodny, who helped him develop his business plan and is now a director of Vivosonic.
tently produce success, especially in a small firm or start-up environment?"

Many people, especially entrepreneurs themselves, say that business schools can’t teach entrepreneurship because the truly innovative, creative thinkers are that way for mystical reasons that can’t be taught. They’ll cite the fact that courses in entrepreneurship consistently fail to produce graduates who are themselves capable of entrepreneurial thinking for the same reason: it can’t be taught.

The Rotman School is here to debunk that notion. We agree that the business school fraternity often fails to produce “entrepreneurial” graduates, and that right now, going to business school seldom helps you to be entrepreneurial. But that’s mainly because most business schools aren’t teaching the right things. In essence, they accept the outmoded mystical proposition and default to admonishing students to be entrepreneurial and providing case studies outlining the actions of successful entrepreneurs.

To encourage entrepreneurship we must dig one level deeper from examining what successful entrepreneurs do and ask: How do entrepreneurs think that allows them to take the actions that produce the unique successes that we come to label as entrepreneurship? If we simply taught students to mimic the actions of entrepreneurs, that wouldn’t be very entrepreneurial would it?

We believe that entrepreneurs bring a distinct way of thinking to their craft, and yes, we believe it can be taught. Will everyone be able to learn? No. It wouldn’t be such a precious commodity if everyone could do it. Our aim is to provide the best learning context possible for the would-be entrepreneur. We will judge our success on the basis of whether we produce students who become successful entrepreneurs and, in retrospect, look back at their Rotman experience as a meaningful contributor to their success. More work and study must ensue before we think that we have a clear picture of

---

**Student Entrepreneur: Banu Khurana**

**Mixing Business and Pleasure**

Khurana, an upscale lingerie company founded by Banu Khurana (MBA ’01) and her brother Amit, is carving out a niche for itself with its fashion-conscious underthings, capturing the attention of some major players in the industry: Holt Renfrew began carrying the line in October, and Bergdorf Goodman featured several Khurana selections in its Fall 2000 catalogue. On the media front, the designing duo has received coverage from leading publications such as FLARE magazine, (Toronto Life) Fashion, the U.S. and British editions of Vogue, and Harpers and Queen of London.

“Our products stand out because our lingerie is in sync with whatever is currently happening on the runways,” says Banu. “Most lingerie is designed by an older generation of designers at large companies.” She and Amit decided to focus on lingerie because, “it is somewhat easier to enter the lingerie market and establish a brand name than in ready-to-wear, where we would be facing stiff competition from established companies with much greater resources.”

Armed with a B.Sc. in Psychology from U of T, Banu left her corporate job in 1998 to focus on the business full-time. Shortly thereafter, she decided to pursue an MBA at Rotman. “Fashion is a very risky business, and an MBA forces you to think in a manner that is more pragmatic. Because of my studies, I’ve also been taken more seriously when I approach different sources for financing.”

Both siblings are involved in all aspects of the Khurana business, from designing (Amit is a graduate of Ryerson’s Fashion Marketing program), to marketing, to administration. “We started out by focusing on the American market because their buyers are more willing to take risks on new designers,” says Banu. A presence in the U.S. makes their line more attractive to the fashion press and retailers around the world, she says. “Everyone else waits until you get the American stamp of approval.”

Future plans include making Khurana products available in Europe and the Far East. “We will also be expanding our product line to include items like hosiery.” The duo hopes to have a showroom in New York City by Spring, 2002, to give them a solid presence in a global fashion centre.

“Our goal is to dress the woman who wants lingerie that is of high quality, but with up to the moment, modern styling,” she says.

In December, Banu Khurana received the Rotman School’s 2000 Schulich Award for Student Entrepreneurship. The award includes a cash prize of $5,000.
We believe that entrepreneurs bring a distinct way of thinking to their craft, and yes, we believe it can be taught.

Venture Capital and Private Equity, a new experimental course for second-year MBA students offered for the first time this past fall, examines what Professor of Strategic Management Terry Amburgey calls “the cycle of growth and disillusionment” that has created so much instability in the VC industry over the past fifteen years. “Understanding these patterns — and their impact on investor behavior — is critical for an entrepreneur who intends to receive money from private equity funds,” says Amburgey, who teaches the course along with Sunil Selby, managing director at Trellis Capital Corporation.

The course focuses on the tremendous boom in the private equity industry over the past fifteen years, which has seen the pool of U.S. private equity funds grow from $5 billion in 1980 to about $200 billion in 1999. New records were set in the Canadian venture capital industry in 1999 as well, notes Amburgey. “The amount of capital invested rose to $2.7 billion, and the amount of capital flowing into Ontario-based firms more than doubled to almost $1.3 billion.”

“Venture capital is an important subject for the leaders of tomorrow because it is the catalyst for entrepreneurial activity,” says co-instructor Selby. “A better understanding of the subject will enable leaders to understand its role in the growth of their companies, equipping them to make better decisions on matters such as the amount of funds they should raise, the structures they should negotiate, and the valuations they should accept.”

Sound knowledge of venture capital also contributes to the maximization of shareholder wealth, says Selby. “It improves the ongoing relationship between entrepreneurs and their venture capitalist investors, facilitates strategic decision-making disciplines and corporate governance procedures, and helps position companies for future liquidity through avenues such as public markets or strategic sales.”

“The Venture Capital course offers a strategic perspective to the financing issues, like IPOs, securities regulation and corporate valuation, discussed in more detail in the School’s Investment Banking courses,” says Laurence Booth, professor of Finance. “It furthers Rotman’s goal of integrating learning across disciplines and seeing finance in action.”

Studying a “Cycle of Growth and Disillusionment”