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reat leaders, in business and elsewhere, think differently. Where others see impenetrable complexity and tough trade-offs, they see ways to create novel solutions to tough problems. This is at the root of Roger Martin's theories behind Integrative Thinking, a term that the dean of the University of Toronto's Rotman School of Management has turned into a buzzword through his savvy self-promotion of books like his recent *The*

Opposable Mind, and a seminar series featuring his interviews of high-profile business leaders and thinkers. Now trademarked by Rotman, Integrative Thinking has fuelled the rise of what was once merely a serviceable Canadian MBA that largely populated Toronto's financial district into a highly regarded program that gets mentioned in the same breath as the likes of Yale, Stanford and Kellogg. If the world of business education can have celebrities, Roger Martin is Canada's biggest.

Behind Martin's luminary status, though, are efforts to make Integrative Thinking more than just a marketing slogan; he wants to leave a lasting impact on how the next generation of business leaders are educated. And in this cause, Martin has a secret weapon: a slightly built, sharp-witted



THE GOAL OF ROTMAN'S **MIHNEA MOLDOVEANU** IS TO CREATE A NEW BREED OF

BUSINESS LEADER

THE THINKER

by Andrew Wahl

and mirthful Romanian-born intellectual engineer named Mihnea Moldoveanu.

Some call him an enigma, others refer to him affectionately as “crazy Mihnea,” (pronounced Mi-KH-naea), but Martin calls the 39-year-old his most important thinking partner. “Academia is all about standing on the shoulders of giants,” says Martin. “He points to the giants’ shoulders and says if you stand here, and take these things that they’ve thought about, you can probably see further. He helps enormously ground what I’m thinking about in the academic traditions.”

Moldoveanu does much more than that, too. A classically trained pianist, poet, and founder of Redline Communications (**TSX: RDL**)—a promising wireless communications equipment company where he is still hands-on chief technology officer—he provides much of the academic rigour that underpins Martin’s theories. By drawing upon an astounding knowledge of research in everything from cognitive psychology to analytical philosophy and even neurobiology (not to mention his master’s in mechanical engineering from the Massachusetts Institute of Technology), he is able to connect Martin’s real-world business observations to academia.

“He’s an incredible cross-disciplinary synthesizer of all that stuff,” says Martin. “He is an unbelievably well-read guy, way more well-read than I am.”

Moldoveanu describes himself as an epistemologist (one who studies the nature and scope of knowledge), with a lot of training in applied mathematics. As director of the Marcel Desautels Centre for Integrative Thinking, a research institute founded in 2002, Moldoveanu leads Rotman’s effort to further the study of how business leaders think—and how the next generation can learn to think better. “The mind naturally thinks, but 95% of what we do and think is relatively automatic,” says Moldoveanu. “The question is, can you recognize that automaticity, identify the automatisms that are counterproductive, and re-engineer those that are counterproductive in order to change your own thought patterns? If I can make a student’s way of thinking literally just .01% more productive, in terms of a compound rate of return over the course of a 40-year managerial career, I get to many, many more orders of magnitude above where they would have been.”

As Martin approaches the end of his two terms as Rotman dean in 2010, his legacy will in large part hinge on Moldoveanu’s efforts to make thinking a legitimate part of an MBA education—right alongside finance, marketing and organizational behaviour. “You learn various facts and fictions and principles associated with every one of these disciplines, but what does your mind do?” says Moldoveanu. “Because after

all, the facts and the rules and laws on the associations and irregularities of business that you will have picked up only have a half-life of two to five years. So that means after two to five years, if you haven’t picked up any significant cognitive or affective skills, your MBA education is obsolete.”

After eight years, it’s time for Moldoveanu to step out from behind Martin. At the beginning of April, Oxford University Press will publish *The Future of the MBA: Designing the Thinker of the Future*, a dense 160-page treatise that embraces the major critiques of higher business education, and proposes a single vision for how a new kind of MBA school can develop high-value decision makers. While the book is co-authored with Martin, Moldoveanu’s name appears first, and it’s written in his own “unitary voice,” as Moldoveanu puts it. It will not be a bestseller—but that’s not its purpose. While Martin wrote *The Opposable Mind* to be a popular business book, *The Future of the MBA* is directed at business-school deans and university administrators—“people who think about the future of education,” as Moldoveanu puts it—and is written in the kind of theoretical framework of academic literature, replete with citations. (He’s currently working on a more accessible version, with the working title *Diaminds*.)

For Moldoveanu, none of this is merely an academic exercise. He derides what he sees as a preponderance of business academics who subsist on publishing in what he calls *The Journal of Irrelevant Research*, as well as those who teach just for the “high clapometer readings,” (although he proudly states that half of second-year Rotman MBA students elect to take Integrative Thinking courses,

of which he teaches three). Not only does he practice what he preaches, while managing the complex research and development process of wireless broadband base stations at Redline, but he thinks all future business leaders have to be ready for anything. “The knowledge landscape of the 21st century—the things that you will have to know how to do—has become a lot denser, it has become a lot more confusing, and it has become a lot deeper, all at the same time,” says Moldoveanu. “So if you’re going to be a high-value decision maker, your personal learning algorithms better be damned smart and damned fast. You’d better be able to go deep into a knowledge domain and come quickly out of that knowledge domain at will, in order to be able to navigate this landscape of complex mental objects. And if you cannot do that, you can be a great silo kind of person, but it’s not clear to me that you can have a line management function.”

Moldoveanu’s own personal learning algorithms are, indeed, damned smart and damned fast. He got a jump-start, born into a charmed life under the Romanian dictatorship of Nicolae Ceaușescu, to an electronics engineer father working at the Central Institute for Telecommunications Research, and a mother who was an attending physician at Romania’s elite

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hospital. Those positions put Calin and Adina Moldoveanu in good standing with the regime's senior officials, and allowed them the rare privilege of travelling together to Greece in July 1979, while Mihnea and his six-year-old brother remained in the care of their grandparents, who had already raised them to a large extent. Mihnea, then 11, knew his parents would not come back. The plan was for the two boys to eventually join their parents in Canada, but no one knew how much resistance Romanian officials would put up. As it turned out, they shipped Mihnea and Andrei to Greece the following January. Two months later, the family of four landed in Toronto, with about \$100 to their name.

Calin soon found work, Adina began the long process to be recertified as a doctor, and the Moldoveanus settled uneasily into the genteel poverty of the lower-middle-class in suburban Toronto. "Emigrating here was emotionally disastrous," says Moldoveanu, who was not as close to his parents as he was to his grandparents. With an East Bloc education that meant he was about six grades ahead of his peers, school held little interest for the adolescent. Instead, he sank himself into training to be a classical pianist. But after five years, he determined he'd never be able to put in the work to be a Glenn Gould or Sviatoslav Richter, and abandoned that path.

Moldoveanu decided to follow in the footsteps of his mother and become a neurosurgeon—but soon after arriving at MIT in 1986, mechanical engineering drew his focus and he eventually completed both undergraduate and master's degrees. He continued to search for his place, however, starting PhDs in plasma physics, in management at MIT's Sloan business school, and took Harvard Medical School classes in anatomy and pathophysiology in preparation for a PhD in biomechanics. None of it stuck. The disciplines either lacked sufficient complexity to engross him, lacked the hard proofs of math, or they were too disconnected from the real world.

Where he landed was at Harvard Business School, working with the founder of its Entrepreneurial group, Howard Stevenson, as a research associate trying to apply information theory to organizations, an area that remains a focus now, particularly in regards to verbal exchanges, such as meetings. "The kinds of distortions of information that come from simultaneously manipulating your feelings, your expressions, your words, your thoughts and even your sensations all at the same time, is vast," Moldoveanu says. "I think people need help, especially CEOs, to understand the nature of the information distortion—how do you know that what is being presented to you as fact, or as friend, or as opinion even, is something you can make your bets on? How many bits of real, dependable verifiable and actionable information can I extract from you in a conversation? If I was to sit down and measure that for our meetings, I would end up with a very, very low number—0.2 bits? And yet orga-

nizations have meetings all the time."

At the same time as he was pursuing his doctorate at Harvard in the fall of 1994, Moldoveanu also began to explore starting his own company. He'd been sketching out business plans for years, but had never taken the plunge. In January 1995 he finally did, with Hefaistos Inc.—a play on Hephaestus, the Greek god of technology and metallurgy. With initial investments from Stevenson and Stevenson's nephew by marriage, Philippe de Gaspé Beaubien III (then heir to the Montreal media company Telemedia, and now head of its remaining venture business), Hefaistos pursued an opportunity that Moldoveanu spied in making ADSL modems with standard digital signal processors that were poised to tumble in price. Moldoveanu built a core R&D team in Markham, Ont., north of Toronto, and commuted frequently from Boston. But like its namesake, Hefaistos was lame—it had underinvested and couldn't keep up with the competition.

Everything began to change in 1999. On a trip to London as part of research Moldoveanu was conducting as a post-doctoral fellow at Harvard, he suffered from a sudden spate of powerful heart arrhythmias. "My heart, just for a period of five seconds, would stop beating altogether, blood would drain out of my head," he says. Shaken, he returned to Toronto to consult with his physician mother. "I was in bed three weeks, she pumped me full of all kinds of medicine

that put me into an incapacitated state," he says. "I decided to find my own cure for arrhythmias." (And he has: "I've learned to control them, by anticipating them and intervening at just the right

time. I know what kinds of hormonal states bring them about: fury, rage, panic, cold, hunger. And I know what to do: breathing exercises, start some physical exercise, could be as little as squats, or running around the room.")

He also decided to stay in Toronto, to focus more on his fledgling business, which was soon reborn (and refinanced) as Redline Communications, and had turned its attention to the emerging market for wireless broadband.

But in the spring of 1999, he went for an interview with Roger Martin. "We immediately clicked," says Moldoveanu. "We're both Year of the Monkey, and we're both fairly mercurially tempered. But we also clicked intellectually. He thinks in terms of mental models, I think in terms of mental models and algorithms. It was a bit like a match made in heaven." At Harvard, Moldoveanu had tried to start ("one doesn't just start things at Harvard, one attempts to start things," he notes) the Center for Applied Thinking, which was trying to make psychological research both more philosophical and applied, and

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so he was drawn to Martin's attempts to get people from different disciplines to collaborate more coherently on business problems. "I brought a lot of the theoretical, epistemological and computational apparatus for thinking about how does the mind of the CEO really work, when they are confronted with these real world problems," he says. "And he brought a real sense of how these problems really manifest themselves in the corporate world, and the vision of turning the Rotman school into a Top 10 school worldwide, spearheaded by this agenda of Integrative Thinking."

That agenda is now his, too. He teaches four courses, including one called Learning to Learn, which he describes as an effort to "get students to think about thinking while thinking, and develop a language for thinking about their own thinking." It's not about rules, but giving them heuristics for patterns of thinking. For example, one course is structured around the student applying standard methods of social sciences like psychology or economics to closely examine a behaviour of their own, and trying to change it. "Instead of my telling you what social science says, I'm going to teach you what social scientists do," says Moldoveanu. "They would build a model of it, and then they would try to change the behaviour intelligently, by changing bits and pieces of the model." The underlying theme of many of Integrative Thinking courses, he says, is finding ways to "increase people's ability to distance from their own thoughts, their own emotions and behavioural patterns, and increase their analytical focus so they become modellers of their own behaviour."

It might sound just a tad flaky for a supposedly top-flight MBA school, but Martin says Moldoveanu has a cult-like following, with many of his students taking all three of his second-year courses, even though they get just 10 electives.

"When you walk around the halls of Rotman, Mihnea stands out," says Scott Rutherford, a former student who graduated from the school in 2001, and after five years as a management consultant with McKinsey & Company, is now returning to conduct research work with the Desautels Centre. "He's an enigma, that's said many times. Most students don't have a clue what he's talking about in their class. Mihnea can be intellectually impenetrable, but either by the conviction with which he carries this stuff,

or just his ability to enrich most topics of conversation, he leads people to believe that there's some real meat here. That encourages people to take out their dictionaries and put a bit of extra effort into those classes with him." For Rutherford, his single Moldoveanu course was his most thought-provoking at Rotman—and the one that most resonates today in his work as a consultant.

But even those students who don't buy in to Moldoveanu's theories come away with respect. Jad Yaghi, a 2007 graduate and now a Toronto-based consultant with the strategy consultancy Monitor Co., took two Moldoveanu courses despite deep (and lasting) skepticism that Integrative Thinking is anything more than a buzzword. He still credits him for learning to be more experimental with how he interacts with colleagues and clients. "I may not agree with many of his concepts today, but I definitely learned from him. He challenged my beliefs and pushed my thinking," says Yaghi. MBA schools are supposedly training people to be managers, but Moldoveanu contends that for the most part, the skills that really make managers effective are woefully underdeveloped. "People just stumble into management," he says. "They get exposure to the language of business, and they stumble into meetings." Meetings are where managers do their most important work, according to Moldoveanu, who estimates that one will attend some 40,000 in his or her career. "Let's say you make about 10 significant contributions to each meeting," he muses. "That means you commit about 400,000 meaningful speech acts in the course of your managerial career. That is what you're producing as a manager. You're producing better interactions; you're a human interaction engineer. The question is, how do I cultivate those skills? There's no training in business schools to do that."

Moldoveanu turns the theoretical into practices at his other job, as CTO of Redline. He continues to design the wireless broadband technology platforms of the company, but that also involves a lot of human interactive engineering, too, as he knits together the efforts of disparate technical teams—radio frequency, software, chip design, digital design and analogue design. "How do you integrate all of these disciplines together and all of these modes of discourse? It's not only different ideas, but the ways in

which they talk are different. And what happens is, if you don't engineer an interaction in just the right way, you have contempt."

Balancing two full-time jobs is no small feat. "I get to pick which 17 hours a day I work," he says. "And then I get to pick which eight hours a day I work on the weekend." Moldoveanu relishes the unique, but still overlapping, challenges of both. "There is a part of me that likes to do things, and there is a part of me that likes to think about things. But in thinking about things in academia, I cannot help but go a little bit further and ask, 'What does it mean that I'm thinking about these things, what is the causal import of this to the world?'"

There is only so much Moldoveanu can do at Redline, as the "pragmatic constraints," as he puts it, of running a business limit how much he gets to experiment with his theories. "The playground of problems at the Desautels Centre is richer," he says, before adding quickly, "I don't rule out starting BlueLine or Greenline."

In Roger Martin and his goals for Rotman, Moldoveanu may have found a more complex problem than engineering wireless broadband technologies, or even building a successful high-tech company in Canada: re-engineering business education in order to produce better leaders. "It's not at all clear to me that graduate education has really come to grips with the 21st century. It's still a mystery to them," says Moldoveanu. "I don't think 'know-how' is ever actually thought of and distinguished from the 'know-what' sufficiently for an era in which general knowledge is freely accessible to all—just go to the web."

But Moldoveanu may have an even more complex problem with which to contend: the workings of his own heart. His arrhythmias have returned in the form of an atrial flutter, which, he says, "is slightly more complicating." Still, on a slightly more optimistic note, he adds, "But I look forward to engineering a solution which I hope is not based on medications." Although his mother is a physician (and soon, too, his brother), he admits to having a "difficult relationship with the profession, to say the least." All medical advances are due to engineers, Moldoveanu argues. "If you just give me access to the diagnostic tools, I'll take care of it." Right after he engineers more hours in the day. ❦