

Once a company hits a winning formula, it tries to exploit it to the fullest. And therein lies the trap. "The problem is, exploitation has diminishing returns. And by focusing on what it already does, the company puts itself at risk of missing new opportunities and avoiding disasters that come from big changes in the environment. The folks at General Motors were focused on doing what they had always done and were almost destroyed by the changes they didn't see coming. They had lots of past data to suggest they should keep making pickups and SUVs through 2008. But the world changed, and they just missed it," says Roger Martin, a professor of strategic management and the Dean of Rotman School of Management at the University of Toronto. Martin, who recently authored *The Design of Business — Why Design Thinking is the Next Competitive Advantage*, spoke with Vivek Kaul recently about his concepts. Excerpts:

What is design thinking?

I describe design thinking as productively balancing analytical thinking and intuitive thinking to advance knowledge. Analytical thinking has tremendous sway in the business world today. In this way of thinking, the path to value creation lies in rigorous, quantitative analysis — to declare truths and certainties about the world. Judgment, bias and variation are eliminated at all costs. The opposing school of thought embraces the primacy of originality, creativity and innovation. In this model, the creative instinct—the unanalysed flash of insight — is the source of true innovation. Both approaches have significant drawbacks. It's impossible to generate any new ideas using only analysis. And innovation without rigour is scattershot and unharnessed. So, it is in the combination of the two ways of thinking — blending analysis and intuition as a great designer does — that the real power lies.

Why do you say design thinking is the next competitive advantage?

This goes back to the way in which knowledge advances. In my view, there is a pattern to it. We begin with a mystery, in which we don't really know anything at all but have a perplexing question we wish to answer. We spend time pondering and trying to make sense of that mystery until someone, somewhere is able to make some headway, devising a way of thinking about that mystery that brings it down to size and makes it manageable. They develop a way of thinking about the problem — a heuristic (or experience-based techniques that help in problem-solving, learning and discovery) or rule of thumb — that cuts out some of the mystery and enables us to think and act with some level of assurance. Then, again over time, that heuristic is honed and refined. Finally, through some enterprising person pushes that heuristic ahead to become a well-defined rule for understanding the problem — cutting down the heuristic to become an algorithm (or a precise set of rule/s specifying how to solve a problem) that produces a reliable answer. That's the pattern — mystery, heuristic, algorithm.

Can you give an example?

Consider an example of McDonald's I use in the book. When the McDonald brothers started out with a few drive-in restaurants in California, they were staring into a mystery. In the new post-war, baby-boom culture in America, what experience would customers want when they went out to eat? After time and some trial-and-error, McDonald's developed a successful heuristic — a loose notion of a new type of restaurant — the quick service restaurant with a limited menu and a service window rather than a drive-in. And using that heuristic, they were successful in a fairly modest way. Then along comes Ray Kroc, who looked at that McDonald's heuristic and saw the potential for something much greater. He bought out the brothers and set out to turn the loose heuristic into a precise algorithm. He built a business model in which every burger was exactly the same, every employee was trained in exactly the same way, all locations were planned, designed and executed in exactly the same way. He cut out enough complexity that the chain could grow from a handful of southern California outlets to the largest restaurant chain in the world, creating a new category — the fast-food restaurant.

Because so many companies get stuck in one knowledge stage, honing and refining the heuristics and algorithms they already have, I believe

that enormous benefits will accrue to the companies who are able to advance knowledge from one stage to the next. It will separate the really great companies from the rest, and allow them to maintain a long-term competitive advantage. And the way to move from one stage to the next is design thinking.

A point that you make throughout your book is that it is not possible to prove any new idea in advance. Can you elaborate on this?

Absolutely. The problem here is the way in which we define proof. In business, proof means rigorous data derived from analysis of the past. For a new idea, there is no past data — no rich pool to analyse, no general rule to apply. Typically, new ideas come from hints of changes in our environment that can't yet be quantified or from anomalous bits of data that don't fit with our general understanding.

At Apple, Steve Jobs could not have proven in advance that the iPod would be successful. He had a product he really liked and some hints that consumers might respond well to it. But until he really got it into the hands of consumers, until he launched iTunes and shipped out the iPods, he couldn't have known for sure that it would work.

The main reason why companies are not able to come up with new products or services, seems to be that a successful company does not want to focus on new technologies or ideas away from its core money making operations...

Companies get trapped into doing what they

q&a
roger martin

McDonald's grew exponentially exploiting its algorithm with burgers, fries, and shakes. But by the 1990s, it had lost touch with its consumers and what they wanted. Other chains explored the mystery of what those consumers wanted, and their solutions drove McDonald's into a tailspin.

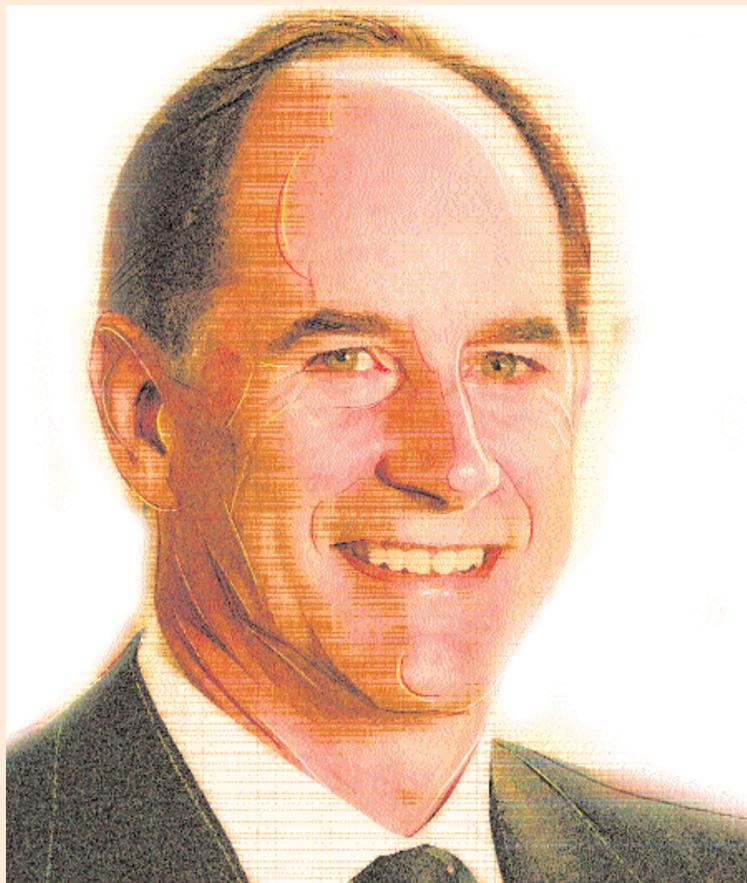
are good at. Continuing to hone and refine, to exploit what they already do, produces reliable results and looks a lot more straightforward than exploring new problems. Exploration is hard, with potential dead-ends and frustrations. Exploitation is predictable. So it is very seductive.

The problem is, exploitation has diminishing returns. And by focusing a company on what it already does, it puts that company at risk of missing new opportunities and avoiding disasters that come from big changes in its environment. The folks at GM were focused on doing what they had always done and were almost destroyed by changes they didn't see coming. They had lots of past data to suggest that they should keep making pickups and SUVs through 2008. But the world changed, and they just missed it.

Would it be fair to suggest that companies that

Mystery, heuristic and algorithm

Why companies get trapped into doing what they are good at



tures and norms that promote design thinking into a company. But it takes substantial work. For a company like P&G, it took the CEO to say it was one of his most important tasks — a part of his planned legacy — to jumpstart it. And then, it took a number of years to really bring design into the lifeblood of the company.

Bringing design thinking into an organisation can happen in big and small ways. P&G's former CEO A G Lafley did both. He created an important

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design organisation within P&G, which was tasked with spreading the gospel internally. But he also signalled a shift away from the primacy of exploitation and a balance with exploration in much smaller ways. For instance, he changed the process for annual strategic reviews. Traditionally, each category president had come to his or her review with a thick deck of slides and a single right answer for the coming year, including all the data and proof needed to back it up. The goal was sign off by senior management, plain and simple. The strategies needed to be airtight, so risky creative leaps and intuitive insights were out of the question.

Lafley recognised that this process was a recipe for focusing on the past instead of the future and so devised a new process. Presidents were told to submit their slide decks two weeks before the meeting. Lafley would read the materials and issue a short list of questions that he wanted to discuss. The meeting, he emphasised, would be a discussion, not a presentation. Presidents were allowed to bring only three more pieces of paper — charts, graphs, notes — to the meeting. Only by more or less forcing category managers to toss around ideas with senior management in this way, he reasoned, could they become comfortable with the logical leaps of mind needed to generate new ideas.

It was a shock to the system, but before long the category presidents embraced it. They were invigorated by the chance to engage in dialogue about what could be rather than what was. Freed from the demand to come up with the single right answer and prove it, they started to work out bigger bets with the corporate team.

Would you say a company like Google is the good example of a big company which successfully follows design thinking?

I haven't studied Google extensively, but it looks to me like design is very much a part of their culture. The 20% policy — where engineers get to spend one day a week working on the problems that interest them — strikes me a really smart way to get employees engaged in moving knowledge ahead. My bet is that some of Google's most successful ideas come out of that policy.

do hit pay dirt through innovation are plain lucky given that most corporations do not see the future coming?

Some companies — the one-hit wonders of innovation — may be lucky. But I don't know. Think about big innovation companies that succeed in producing new products again and again over time — Procter & Gamble (P&G) or Research in Motion (which makes the Blackberry phones). I don't think either of these companies is lucky *per se*. I think both companies have created a space for design thinking that enables them to do both — to exploit their current products and businesses while exploring possibilities for the future. Truly great companies work really hard at seeing the future coming.

Would you say as companies become bigger it becomes difficult for them to practice design thinking and as a result they become less innovative?

I wouldn't say it is a question of size. Instead, I'd say that as companies develop heuristics and algorithms that seem to work, they can be trapped by them. As knowledge advances, information and judgment are paired away. This presents a tremendous gain in efficiency — there is less information to consider and shift through — but it

means that you leaving a lot out. And what you leave out can come back to haunt you.

Think of McDonald's again. McDonald's grew exponentially exploiting its algorithm with burgers, fries, and shakes. But by the 1990s, it had lost touch with its consumers and what they wanted in the way of fast food; its original solution to that mystery had grown stale with time. The company's management was so busy running its algorithm that it missed the evidence that many consumers wanted fast food with different or healthier options. Many other chains from Taco Bell to Subway explored the mystery of what those consumers wanted, and their solutions drove McDonald's into a tailspin.

There are multiple paths out of virtually any mystery. McDonald's chose one route out of the mystery and drove it to an algorithm. But when it settled at that algorithm, it gave its rivals an opening to develop alternative solutions to the mystery. Subway, for example, retained the quick-service component, but replaced burgers and fries with submarine sandwiches and fresh, healthy ingredients.

How can they hope to break through this block?

It's possible to incorporate processes, struc-

IT MAY BE A CALCULATED RISK TO DISRUPT ONE MORE INDUSTRY, AFTER MUSIC AND TELECOM

iPad may change rules of the media game

Rajeev Srinivasan

In the breathless commentary on Apple's iPad — both for and against — there were several things that were not given due attention. Yes, it is a gorgeously large iPod Touch, that is, a big iPhone without the phone function. No, it is not clear which market segment will consider it a must-have gadget. But there is much more.

Apple clearly produces what Steve Jobs calls "insanely great" products, but the industry joke is that the uber-charismatic Jobs possesses a "reality-distortion field", so that if you get within a few feet of him, you fall under his spell. May be the adoring media are suffering from that effect.

Intriguingly, Apple started succeeding only when it moved away from product innovation and into business model innovation. Despite cool and elegant products starting from the Apple I and the Macintosh, it kept losing ground to arch-foe Microsoft, which realised that the operating system was a distribution channel.

Since Windows runs on 2 billion computers, Microsoft pushed other products through the channel — Internet Explorer, the lucrative Office franchise, and hundreds of thousands of third-party products. Apple could not deliver this large audience — size matters — and software makers built products only for Windows.



Steve Jobs

Jobs' big gambit

If Apple can help newspapers charge small amounts for content, it may revive big-name publishers now threatened with extinction

Apple has for the first time become a vertically integrated manufacturer, making everything from chip to OS to browser to applications

Amazon's Kindle e-book reader is directly threatened by the iPad as also the netbook family

This became a vicious cycle, and Macs became niche products.

With the iPod, Apple turned this game on its head using iTunes. That was the real breakthrough, not the iPod itself: business model, not product innovation. With iTunes, Apple was distributing third-party products, including music, movies, and podcasts. The operating system, e.g. Windows, became irrelevant.

iTunes is the third most ubiquitous software product around, after Windows and Adobe's Acrobat. Result?

Apple has become the world's biggest music distributor. Incidentally, they sold a lot of iPods too, which of course was their goal. For the end-user, it suddenly became easy to pick up music that was legal and inexpensive, and so they did, abandoning illegal downloads.

Similarly, with the iPhone, it

is not the touch-screen or other eye-candy that made the product successful, but the App Store: an easy-to-use distribution channel for third-party applications.

It was not a new concept. In the smartphone/ PDA space itself, there was a Palm Store as long ago as 2000, with a few thousand applications. However, Apple was the first to enjoy the network effects and has 140,000 applications now.

Apple wants to apply these lessons to the media market. Books alone count for \$24 billion a year; three times as big as the music industry. Add to this struggling newspapers and magazines, savaged by classified ads and other ad spending migrating online.

If Apple can help newspapers charge small amounts for content, it may revive big-name publishers now threatened with extinction.

On the other hand, Amazon's Kindle e-book reader is directly threatened by the iPad.

The other vulnerable product is the netbook family. Add a docking station with a keyboard, and the iPad is a web-surfing desktop, or a cheap Mac. Its display as large as a netbook's — around 10 inches. Apple previously dismissed netbooks, saying it was impossible to build a decent one for \$500.

Indeed, that is the first big surprise with the iPad — the \$499 entry price point, unusual for Apple's premium image. Surprise number two — the chip is Apple-owned, a result of its purchase of PA Semiconductor some time ago. Apple has for the first time become a vertically integrated manufacturer, making everything from chip to OS to browser to applications.

And surprise number three — there is no subsidy from the

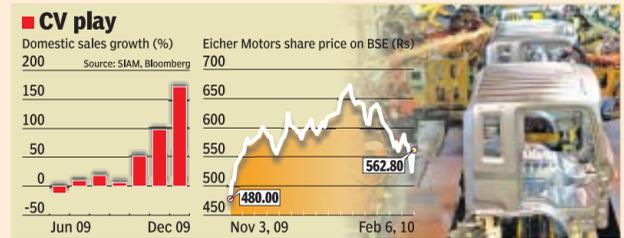
telecom carriers for the 3G models: there is no contract with AT&T (with those early termination penalties consumers detest), and you can just buy a monthly \$30 unlimited data plan with no strings attached.

Thus Apple is trying out another first: a device that it controls fully in terms of major components, and even the demand chain, and which it is willing to subsidise until it reaches volume — surely at \$499, it is losing money. This means the product is really important to Apple.

This is not to say that Apple has not placed some wrong bets in the past: an example was the Newton tablet, too early to market. But a successful bet was in Apple's early days, when it subsidised Canon's laser printers and created the whole industry of desktop publishing.

It would be poetic justice if Apple rides in like a white knight and rescues the publishing industry. The iPad may well be the calculated risk that allows Apple to disrupt one more industry, as it has done with music and telecom already. There are downsides — publishers may discover they don't like ceding too much power to Apple. And as far as consumers are concerned, especially those in developing countries, they may find themselves priced out of a lot of currently free content.

The writer is a management consultant focusing on innovation



Eicher-Volvo bets on CVs with four new products

Eyeing a 15% share in the heavy-duty truck segment by 2015 as against 2% now

Sindhu Bhattacharya, New Delhi

VE Commercial Vehicles (VECV), the joint venture promoted by Eicher Motors and Volvo, has lined up four new product launches this year as it prepares to take advantage of the surge in commercial vehicle market.

On the horizon are a 6x4 tipper and a semi low floor city bus under the Eicher brand, besides a new tipper and tractor trailer under the Volvo brand.

The JV's plans to pump in Rs 500 crore by 2012 remain on track. This investment would be used to ramp up production beyond the 4,000 units per month capacity available at Pithampur at present, enlarge the components and engineering solutions business and capture significant market share in heavy duty trucks and city buses.

Siddhartha Lal, MD & CEO told DNA Money the company has set itself ambitious market share targets by 2015.

"We are looking at a 15% share in the heavy-duty truck segment against only

2% now; 30% in light and medium duty from 27% now and 20-25% in city buses. We also want to retain our 70% share in the high value CKD truck market with the Volvo brand."

Lal said the overall CV sector sales have improved drastically because the rolling population of primary-usage CVs came down last year after most transporters stopped buying trucks. Rolling population, according to industry estimates, stands at 3.5 million trucks and buses in the above 5-tonne category.

"This has to be replenished. We see an encouraging buying trend here...t here is a strong sentiment. Transporters are saying 'Is saal hum kharidenge?'"

To a question on whether VECV had been asked by Volvo for permission to manufacture and export trucks other than the Volvo brand trucks from its Pithampur facility (on payment of a fee), Lal replied in negative.

"VECV has the right to manufacture all Volvo group trucks in future. But exports will be only under Eicher brand for trucks and buses. Volvo group trucks are already being produced and exported from Pithampur." He acknowledged that the company was sitting on a "huge" chunk of cash but said no acquisitions were on the horizon just yet.