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## **Disruptive Innovation Often Comes From Unexpected Places**

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**[Click here](#) to read an original op-ed from the TED speaker who inspired this post and watch the TEDTalk below.**

As a mathematician, Max Little hasn't spent most of his career in a doctor's office or a hospital, but with a pad and pencil or behind a laptop. And yet it is he who has crafted a radically lower cost and more ubiquitous [method](#) for diagnosing Parkinson's.

Steve Jobs loved music, but hadn't spent his life as a disc jockey. He was not a professional musician or a stereo hardware designer and he didn't focus on music marketing. That is, until he and his team at Apple released the iPod. What Jobs did have was a deep respect for the consumer music experience, and with his knowledge on business and technology, he devised a business model that forever changed the industry and its customers.

Two doctors in Western Australia, far from the center of the world's cutting edge medical research, discovered that most ulcers were caused by bacteria -- not stress or acid as previously assumed -- and that they could easily and quickly be treated. And yet when Drs. Warren and Marshall proposed this idea, they were ridiculed and their research grant proposals uniformly rejected. In the end, they were right and went on to win the [2005 Nobel Prize](#) for their discovery and for bringing permanent relief to millions of sufferers.

This isn't a coincidence. If innovation in America is to reverse the "death march" that Peter Thiel, founder of PayPal and first investor in Facebook, believes that [we are on](#) then we need to understand where truly disruptive innovation comes from. And it is not found in the usual places nor sourced in the typical way.

In trying to solve a problem, we default to the set of knowledge and experience each one of us has. New or novel ideas or approaches are not readily considered. - Maura O'Neill

Why isn't it found in the usual way? Because we are often too narrow minded to see or pursue the faster, better, and cheaper alternative. Why is that, given that the financial and fame returns can be so enormous? It turns out that our brains are hard-wired for narrow-mindedness.

What do I mean by hard-wired? Every day, we are bombarded with thousands of visual and auditory inputs per minute. As I sit at my desk I have photos hanging on the wall, a window which looks out over the building across the street, a white board with a list of urgent items, a desk cluttered with computers, water glasses, papers and books. There is a TV tuned to a key U.S. Senate Foreign Relations committee hearing and I can hear the din of my colleagues' conversations. And I haven't even moved.

With the advent of technology that connects us to everyone and everything all the time, it is only getting worse. So

our brains have evolved to dump most of what we see, quickly categorize the rest, and file it all away in our long term memory using our brain's equivalent of the Dewey Decimal system.

Why did we evolve this way? For survival. From our Cro-Magnon ancestors until now, we immediately need to figure out whether something in front of us is friendly or could harm us. That is why most of the processing in our eyes and our brains is done in fractions of a second -- fast and frugal so we can assess the threat. Our brains are clever. They have [custom designed a search and retrieval system](#) for each of us that is not dissimilar to how Google or Bing work. This system is based on what we have learned (our equivalent of web pages) and how often we have experienced it (the frequency of how often those pages are viewed). The more we see, hear, touch or smell something, the more hard-wired in our brain it becomes.

This kills innovation. In trying to solve a problem, we default to the set of knowledge and experience each one of us has. New or novel ideas or approaches are not readily considered. Our world-class higher education system too often reinforces that approach. In order to earn a Ph.D. or get tenure, you must discover something that hasn't been discovered before. People think many of the big ideas have been discovered -- gravity, shape of the earth, DNA or that the next big idea will take decades to figure out.

Charles Darwin published his *Origin of Species* 28 years after he began his historic voyage... but our well-meaning advisors point us in the direction of greater and greater specialty so we can finish in 3-7 years rather than 28. Discovering more about something we already know a lot about becomes the typical approach. This happens all the time in both business and government. Looking for incremental improvements has become the focus thanks to the relentless pressure of quarterly earnings or two-year election cycles.

At USAID, [we develop methods to specifically source and scale innovations that achieve faster, cheaper and more durable health, food, and economic prosperity without long-term donor support.](#) [We aren't doing it alone. USAID knows that partnerships with businesses, non-profits, other donors, and local institutions that mashes up our different skills and assets is the key to accelerating progress.](#)

Want to find the next disruptive technology or approach as Max Little appears to have done? Become a voracious reader of a wide variety of disciplines, including fiction. And create teams like the one Max is on that have much more diverse skill sets and experiences. We have barely begun to discover the big ideas. We are counting on you for the next one.