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Disruptions: Innovation Isn't Easy, Especially Midstream

By NICK BILTON

Nick Bilton/The New York Times The Polaroid Land camera in the Instagram offices.

In Instagram's early days, in offices in the South Park neighborhood of San Francisco, basking in the blue glow of half a dozen computer screens, sat an old Polaroid camera. It was a Rainbow SX-70 OneStep Land Camera.

Most of Instagram's 30 million users wouldn't recognize this instant film camera — even though Edwin Land's creation was once a big deal, featured on the cover of Time magazine in 1972 — but they would recognize the echoes of the camera's design in Instagram's logo.

In fact, Instagram's personality and style were developed in some way from old film camera companies. The application's filters that convert pictures to look like snapshots from yesteryear were inspired by classic Brownies and Instamatics and disposable point-and-shoots.

So why was a small start-up with only 13 employees able to build Instagram while a company like Eastman Kodak, which recently filed for bankruptcy protection, was not? It's easy to imagine how things would be different at Kodak had it dreamed up the idea.

Leica, Nikon, Canon, Pentax and Olympus — all of which are still in business, though for how long is yet to be determined — didn't build Instagram, either. (Polaroid disappeared long ago, though its brand name persists in different forms.)

Michael Hawley, who is on Kodak's board, said the answer could be summed up in one word: culture.

"It's a little like asking why Hasbro didn't do Farmville, or why McDonald's didn't start Whole Foods," said Mr. Hawley, formerly of the Media Lab at the Massachusetts Institute of Technology. "Cultural patterns are pretty hard to escape once you get sucked into them. For instance, Apple and Google are diametrical opposites in so many ways, have all the skills, but neither of them did Instagram, either."

Neither could Facebook. If it could, it wouldn't have paid \$1 billion to acquire the small team of engineers and access to the program's 30 million users.

The challenge of creating something small and disruptive inside a large company is one that many face today.

Clayton M. Christensen, a Harvard Business School professor, explored this problem in his 1997 book, "The Innovator's Dilemma," and found that "it was as if the leading firms were held captive by their customers, enabling attacking entrant firms to topple the incumbent industry leaders each time a disruptive technology emerged."

In a 2008 talk at the Yale School of Management, Gary T. DiCamillo, a former chief executive at Polaroid, said one reason that the company went out of business was that the revenue it was reaping from film sales acted like a blockade to any experimentation with new business models.

"We knew we needed to change the fan belt, but we couldn't stop the engine," he said. "And the reason we couldn't stop the engine was that instant film was the core of the financial model of this company. It drove all the economics." The same was true of Kodak and its reliance on its own cash cow: silver halide film.

It is a cyclical problem all successful companies eventually face as the technology around them changes, but they cannot change.

Even if Polaroid or Kodak could have developed Instagram, it's likely that the project would have been killed anyway. What would be the reaction of almost any executive presented with a business plan to save the company with an iPhone app that had no prospect for revenue?

Companies that try to change the fan belt while the engine is still moving usually end up losing a few fingers. Many people thought Netflix was going to defy the innovator's dilemma as it weaned its customers from physical DVDs to digital downloads last year. It fumbled, and the company's market value was sliced to just over \$4 billion, from \$16 billion, during the three months it tried to make this transition.

The most perplexing part of Polaroid's fall and Instagram's rise can be seen with the founding thesis of both companies. In the early days of Polaroid, Mr. Land said photography should "go beyond amusement and record-making to become a continuous partner of most human beings." His goal was to build a business that would allow anyone to feel an emotional connection to photography. This was exactly what Instagram figured out, too. And it's what Facebook was unable to solve on its own.

Since it may be impossible to change the fan belt, buying a new engine, even for \$1 billion, starts sounding pretty smart.

PART 2



The Polaroid Land Camera

PART 3

