

Paradigm Case Study Examples

From Future Edge

By Joel Barker

Paradigm Case Study #1: Compact Disc

Sony Corporation provides a good example of how seemingly small aspects of a paradigm can block the single insight needed to complete a breakthrough.

Consider the story of Sony's development of the compact disc. Their research and development began as early as 1970, but by 1976, they stopped their research, concluding that compact discs were not appropriate for music.

In 1979, Phillips of the Netherlands approached Sony to talk about establishing a world standard for audio CDs. Sony did not admit that they had long since abandoned the project; they invited Phillips to come for a visit. They allowed Phillips to make their presentation of information first.

Phillips respectfully acknowledged that the Japanese were far ahead of them in research and development, but Phillips proposed a disc size that was about one-half inch larger in diameter than today's disc.

"We think this is about the right size," the Phillips representatives indicated.

The size presented stunned the Japanese researchers. Why? Because their paradigm was the conversion of a twelve-inch LP into a twelve-inch laser disc! They had figured that the 12-inch laser disc could hold up to eighteen hours of music enjoyment--but how would one program hold that much music? And at what price would one sell eighteen hours of music? \$199.95? No wonder the project was abandoned!

Rather than working under the paradigm of size, the Dutch had asked the conductor of the Berlin Philharmonic what he thought was the proper length of a record? "If you can't get Beethoven's Ninth on one side, it isn't long enough," he replied.

Sony, known for its wonderful innovation and engineering, had been stopped by part of a paradigm, the boundary rules. Phillips had gone past the old paradigm boundaries and successfully recreated the recording industry distribution media as a result.

Adapted from Future Edge, by Joel Arthur Barker; William Morrow and Company, Inc., New York, 1992.

Paradigm Case Study #2: Breed Corporation

The development of air bags in automobiles has been on the drawing boards for almost two decades. One of the biggest stumbling blocks has been the prohibitive cost involved in the production and replacement of the air bags. GM, Ford, and Chrysler all agree that the cost is between \$500 and \$600--but in the mid-1980's, a company in Lincoln Park, New Jersey had devised an air bag trigger that, bag included, cost about fifty dollars. How?

The president of Breed Corporation was reading an article about air bags, and he saw a connection to what he did. Maybe a couple of phrases regarding the air bags caught his eye: "Air bags go off on impact." "Air bags blow up." He certainly knew about those things: Breed Corporation is a manufacturer of explosive devices, such as detonators for hand grenades.

He put a couple of his engineers to work to see if they could apply Breed technology to the air bag problem. Less than a year later, and with less than \$400,000 spent in research and development, Breed had developed a trigger for the air bag. (And it's the trigger, not the bag, that is the expensive part.)

A wonderful solution to an expensive problem--but the president of Breed Corporation was unable to sell his idea to any of the American automobile manufacturers. (Chrysler, as it happens, was already committed to an air bag design for all its American-made cars at that time. But GM and Ford found Breed Corporation's new design too simple and inexpensive to merit serious consideration. After all, they had already worked on the idea for fifteen years, invested close to a billion dollars in expenses, and still hadn't found a viable system!)

The lesson here is that we have to be ready to listen to the Breeds of the world if we want early access to the paradigm shifts that will change our world.

The paradigm shift question to ask is: "What today is impossible to do in your business, but if it could be done, it would fundamentally change the way you do business?"

Adapted from Future Edge, by Joel Arthur Barker, William Morrow and Company, Inc., 1992.

Paradigm Case Study #3: New Photography

The following example holds the rank of a corporate myth because so many

companies missed a major opportunity.

In the late 1940s, a man walked into one of the laboratories of a major photography company to demonstrate his concept of a new kind of photography. He brought along a bright red box that had inside it a shiny steel plate, a secret charging device, and a light bulb. In a separate container, he had some fine black powder.

In front of a company researcher, he carefully went through his process, step by step. By the end of his demonstration, he had created, using only his unusual equipment, a faint but perceptible photograph.

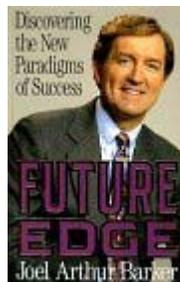
The process involved no developer, no fix, no film, and no darkroom! Why in the world would a major photography company consider such a thing? Why, it was not really even photography!

The dejected inventor was shown to the door with a "Thanks, but no thanks." --And received similar receptions at forty-two other companies.

Ultimately, the inventor, Chester Carlson, received assistance from the Battelle Corporation; he improved his invention and found a company, the Halloid Corporation, that was willing to develop his photographic process, which we now call xerography. What Chester Carlson invented was a set of rules and regulations for electrostatic photography. Only Halloid, which ultimately changed its name to Xerox Corporation, had the foresight to see that this new paradigm was worthy of commercial development.

Don't you suppose that IBM and Kodak and 3M and all the other companies that turned down Chester Carlson would love to have a second chance?

Adapted from [Future Edge](#), by Joel Arthur Barker,
William Morrow and Company, Inc., New York, 1992.
For information on this book click [here](#)



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process including custom design, facilitation, and integration with operational plans and scorekeeping.

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