

The quantum leaps of innovative management

Some 30 years ago, as a doctoral student in neuropsychology, I was pursuing a then-unusual line of research and encountering some resistance from the tradition-minded faculty of my department.

One day my major professor suggested I read a book called "The Structure of Scientific Revolutions" by Thomas Kuhn. This thin and rather obscure book proffered the remarkable thesis that those aspects of scientific progress that altered the future of science did not occur due to the orderly and linear accretion of knowledge, but rather happened in quantum leaps when (and only when) the prevalent structure of scientific thinking in a given field was overturned and replaced by a new structure.

Kuhn called these structures paradigms and he defined them as "... the entire constellation of beliefs, values, techniques and so on shared by the members of a given community," and later as "... the constellation of group commitments." "In this light, a new idea or methodology could not be discovered under the old paradigm (where it was, literally, unthinkable) and was only possible when a paradigm was invented that allowed for the new thinking.

Since that beginning in the 1960s, the notion of paradigms has taken hold not only in science but in business and management as well.

Paradigm shifts (also called culture shifts and large-scale system changes among other less polite sobriquets) have become the stock in trade of forward-thinking management writing and consulting, and if not the norm, are at least an accepted possibility of organizational change. The disparate results of remarkable organizational change efforts such as General Electric's transformation under Jack Welch, Ford's breakthrough in teamwork on the Taurus project, and GM's success with the Saturn are lumped under the general heading of culture change and thus made understandable and, presumably, accessible.

Yet, despite the amount that has been written and said about culture shifts, the process has proved to be extraordinarily difficult. Organizations take on large-scale system change efforts only after considerable soul-searching, and only with the assistance of those relatively few consultants who specialize in this work. Some culture changes undertaken in this way have produced outstanding results. At the same time, it is beginning to become apparent that, even with a major

alteration of the paradigm for an entire industry, the new paradigm, sooner or later, becomes as confining an orthodoxy as the old.

When Ford introduced the Mustang in 1963, the paradigm of larger and larger cars that had ruled the U.S. automobile industry almost since its beginning was broken, and a new paradigm of small, economical cars was born. It has taken all of those 30 years, but it is now clear that the thinking given by that paradigm has paralyzed U.S. automakers in the face of Japanese and European competitors who have been able to manufacture cars that are simultaneously spacious and economical.

I contend that culture change, while unquestionably a valuable weapon in management's armory, is insufficient for U.S. industry to meet the challenges facing it in today's global economy. The key question here is where management will look to determine its responses to the challenges that confront it. Historically, we have looked to the proven methods of the past. In a world where challenges came from within the paradigm in which one was operating, this philosophy was adequate to meet most tests.

If a challenge came from the outside the prevalent paradigm, the options were to: a) dig in one's heels and defend the old way (for example, the U.S. Postal Service's lack of response to the challenges of overnight delivery and the proliferation of fax machines); or b) launch a culture change effort to catch up with the new wave (for example, GM's introduction of the Saturn, not only as a new model, but as a new paradigm).

Both of these options can be characterized as *adaptive* responses to a challenge. I propose that culture shifts, far from adapting to a changing world, create new fields of endeavor. That is, culture shifts, in contrast to being adaptive, are *generative*.

The future of American industry will lie, I believe, in managers being willing to take on and meet this challenge - to risk letting go of the security that comes with adaptation and to step out into the unknown of creating a new future, with only themselves and their colleagues to rely on.

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