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# Managing long-lasting cultural changes

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Organizational and strategic changes often require employees to modify their behavior in ways that conflict with traditional ''ways of doing things around here'' — or, in other words, with the culture of the organization. Edgar Schein describes organizational culture as a set of assumptions and beliefs that shape how people habitually relate to one another, their tasks, and the broader environment. These assumptions are mostly tacit and taken for granted. They are usually reflected in more consciously held values, defining desirable or undesirable behavior deserving punishment or reward. These values are often formalized in organizational statements, but, together with the underlying assumptions, are also embodied in a web of visible and tangible expressions, through corporate jargon, symbols, stories, practices, myths, physical settings and others, collectively referred to as organizational artifacts.

Schein's framework is useful to describe an organizational culture at a given point of time. It draws attention to how the various elements of a culture are tied together in a relatively coherent whole and, also because of this coherence, how difficult to change culture is. People, according to this view, are reluctant to modify traditional habits. Altering more superficial practices, structures and systems may conflict with the deeper assumptions they embody and symbolize. Changing the way people relate to one another, or perform their tasks may generate uncomfortable dissonance with what they have always believed to be the appropriate way, reflecting these fundamental assumptions. Because of their taken-for-granted nature, however, these assumptions are not usually open to debate.

How is it possible, then, for senior managers to promote and manage cultural changes? While there is general agreement that cultures tend to change naturally and incrementally because of demographic changes and changes in the broader cultural environment, scholars are divided about whether profound cultural changes can be introduced quickly and purposefully. Some authors celebrate the capacity of charismatic and visionary leaders to carry out rapid transformations in organizational norms and values, and to induce radical changes in people's behavior. Successful cultural change depends on the capacity of organizational leaders to create a sense of urgency, articulate an alternative vision for the future, and encourage changes through a combination of substantial and symbolic moves that signal the rest of the organization that it has to revise its values and priorities.

Other authors — taking a longer-term perspectives — warn us that the short-term changes that we observe in these cases may be only ceremonial or ephemeral. Organizational culture — Daniel Denison reminds us — is ''what people do when none is looking:'' people may temporarily comply with the new norms, but when coercion is relaxed, they often revert to traditional patterns of behavior reflecting deeply ingrained assumptions. At times, extraordinary organizational circumstances, such as spin-offs and demergers, or severe organizational crises, may induce people to be more receptive to cultural changes, as traditional assumptions no longer apply or seem to ensure the survival of the organization. Under normal circumstances, however, changing organizational cultures is one of the most serious challenges for organizational leaders.

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Our longitudinal study of the implementation of Six Sigma at 3M, under the leadership of CEO James McNerney, first, and George Buckley, later, indicates that, to some extent, both these perspectives are right and both are wrong. Our findings suggest that inducing long-lasting changes in people's assumptions about the appropriate ways of addressing their tasks and relating to each other is possible — and perhaps less difficult than currently assumed. Coercive implementation of new practices, structures, and systems may force people to experiment with new ways of doing things that may, over time, become assimilated as "the appropriate way" to the extent that they are perceived as providing better solutions to day-to-day problems or improving organizational performance. However, these changes will only last to extent that they are perceived as compatible with a restricted set of "core" values that define the identity of the organization in the eyes of its members (and, to some extent, its stakeholders too). Organizational cultures, in other words, are amenable to change, but it is these core values — the organizational identity — that set the acceptable boundaries of the change.

## IMPLEMENTING SIX SIGMA AT 3M

Founded in 1902, 3M is one of the few U.S.-based multinational corporations that are more than a hundred years old. After a somewhat difficult start, it established itself in the manufacturing of a large number of products related to adhesives and coatings. Since then, it has experienced continuous growth, expanding its offering into several markets. 3M now operates in a wide range of industries and markets, where it pursues a differentiation strategy, fueled by an impressive effort and success in technological innovation. For many decades 3M has consistently spent twice as much as the average U.S. company in research and development.

3M is also widely known for its distinctive organizational culture, which encourages self-initiative, autonomy, and collaboration among colleagues. William McKnight, president in 1929, and then chairman of the board between 1949 and 1966, is largely credited for instilling these values in the company. His managerial principles — internally known as the "McKnight's Principles" — were first laid out in 1948, and were still present in the corporate website at the time of our study:

> "As our business grows, it becomes increasingly necessary to delegate responsibility and to encourage men and women to exercise their initiative. This requires considerable tolerance. Those men and women, to whom we delegate authority and responsibility, if they are good people, are going to want to do their jobs in their own way. Mistakes will be made. But if a person is essentially right, the mistakes he or she makes are not as serious in the long run as the mistakes management will make if it undertakes to tell those in authority exactly how they must do their jobs. Management that is destructively critical when mistakes are made kills initiative. And it's essential that we have many people with initiative if we are to continue to grow."

These principles, the enduring legacy of a legendary leader of the past, articulate some of the assumptions underlying what people at 3M considered their most important and distinctive values: self-initiative, creativity, collaboration, and tolerance for mistakes.

The values of self-initiative and tolerance for mistakes were clearly expressed in the widely repeated motto "Better ask for forgiveness than for permission." Self-initiative was also encouraged by the ample autonomy the research labs enjoyed. Micro-management was shunned, and the organization was designed to "get out of people's way." "You do not build fences around people" — McKnight used to say — "fences make sheep". Self-initiative was also encouraged by the celebrated 20 percent rule, according to which scientists and engineers were allowed to spend 20 percent of their time in "skunk-work" projects that would occasionally lead to commercial blockbusters, such as the popular Post-it. A corporate biography issued soon after McNerney's arrival claimed how "attracting and retaining imaginative and productive people" and "designing an organization that does not get in people's way" were "key ingredients that foster a culture of innovation at 3M."

Self-initiative and tolerance for mistakes were considered essential to stimulate creativity and innovation. 3M's Time Tested Truth included "Give good people opportunities, support them and watch them thrive," and "Innovation comes from individuals, not just following orders." Employees were encouraged to follow their judgment and gut feelings, and occasional failures were tolerated as "part of the game" — the inevitable side effect of constantly trying to push the technological frontier. People should not fear for their jobs because the ideas they had pursued failed, or they would not have the confidence to take the bold risks associated with radical innovation.

Collaboration across labs, divisions, and country organizations was also considered essential for the exchange of knowledge, ideas and experiences, and for the transfer and replication of innovation across units. A strong collegial spirit and an egalitarian culture fostered collaboration, and building positive interpersonal relationships was important for advancing in the organization.

These values supported a business model based on the constant exploration of new technological opportunities that opened up new markets and market segments, where 3M could reap high margins to cover the high investments in research and development. Based on this model, 3M had thrived for more than 90 years. In the early 1990s, however, the traditional double-digit growth of the company had begun to slow down, and in 1995, for the first time in its history, 3M failed to meet its goals, reporting an 8 percent rather than the predicted 10 percent growth in earnings per share. In 2000, the increasing dissatisfaction of business analysts and investors with the low profitability of 3M, if compared with other high-tech companies, led to a lagging stock price in the face of a rising market, and induced the board of directors, for the first time in the company's history, to appoint an outsider as CEO: former General Electric VP James McNerney.

After a few weeks, the new CEO announced a vast program of organizational changes. Central to these changes was the

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