



ORGANIZATIONAL EVOLUTION

Change always has costs but only sometimes has benefits.

VERSUS THE CULT OF CHANGE

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In an ancient quotation frequently posted on office notice boards today, Gaius Petronius (27-66 AD) remarked “every time we were beginning to form up into teams we would be reorganized” and reorganization itself is “a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization.” Today *change* has become even more of a cult among politicians and business leaders. In a technologically dynamic and rapidly changing society it is treated as an intrinsic virtue, with less regard for the disruptions and other costs involved.

As business school academic Darl G. Kolb puts it: “Organizational ‘change’ has become embedded in our assumptions of what a ‘good’ organization is.¹ We seem to have stopped questioning the trade-offs associated with change to the extent that change has become a fundamental and often over-riding organizational . . . value, in and for itself.”

I do not argue against change. Businesses and other organizations need to adapt and innovate. But complexity, the costs of change, and possible mistakes also need to be taken into account. To accomplish successful change we also need to understand their mechanisms. Instead of placing excessive faith in highly-paid leaders and executives, with a mission to accomplish radical change

from the top, we should put more emphasis on harboring and developing existing workplace skills, including those embodied in teams. Although there are some cases of successful top-down radical reorganization, generally organizational change depends on employees throughout the firm and it should be experimental, cautious, and piecemeal. It is shown here that some general evolutionary principles—taken from Darwinian evolutionary theory—help us to understand the processes involved in organizational as well as biological evolution. They carry important lessons about the possibilities and limits of change in business and other organizations.

Case studies, including the National Health Service in England since 1990

A good example is the history of the English National Health Service, which under three governments and eight Secretaries of State for Health has undergone numerous structural and substantive changes.

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By 1997 the Conservative government had moved towards a market-oriented system with fund-holding GPs, about 100 Local Health Authorities and eight Regional Offices. Pledging to reverse the “market” reforms of their predecessors, the incoming Labour Government of 1997 abolished GP fund-holding and created 480 GP Primary Care Groups to take the place of the Local Health Authorities. In further successive reorganizations under several Secretaries of State for Health, by 2002 the policy direction had again been reversed and “market” elements were generally being enhanced. In 2006 the system became similar to that when Labour came into power, with 152 Primary Care Trusts and 10 Strategic Health Authorities. By this time the repeated reorganizations of the NHS had cost £3 billion to implement with a structural outcome reminiscent of what was there in early 1997.

In 2006 David Cameron had pledged “no more pointless and disruptive reorganizations” of the NHS. But upon becoming Prime Minister in 2010, his government is implementing the most radical reorganization of the NHS in England since 1948. Further enhancing private and “market” elements, it is estimated to cost over £2 billion to implement, with no guarantee that it will improve performance. Kieran Walshe further argues that there is very little evidence that past NHS reorganizations have produced any improvement, and states that the new government “looks likely to make all these mistakes again.”²

The NHS is just one (particularly dramatic) example of many public and private organizations. New business executives and managers are hired and command large salaries because they are perceived to have powers of entrepreneurship or leadership that can change organizations. Of course, organizations do need to change to some degree in order to deal with developing circumstances and new competition, but the widespread cult of change engenders ambitions that are often unfeasible and generally costly for the organization itself and sometimes for the broader public as well.

There are examples of successful change. In 2004 the Danish toy-making firm Lego implemented a huge shakeup of the organizational routines, including the transferring of much manufacturing developing countries and the introduction of new games based on popular culture and sport. Lego moved back into profit. Other success stories include Panasonic changing its procurement, production, and marketing routines, leading to leaner and highly robotized processes of assembling electronic gadgets by 2007.

But all success involves existing as well as new expertise, and the enhancement rather than abolition of some routines. And while success stories capture our attention, we should not overlook the many cases of thwarted radical reorganization. For example, Adam Crozier became chief executive of the British Royal Mail Group in 2003 with one of the highest salaries for the head of a publicly owned body in the UK. His program of radical reorganization provoked a series of costly industrial disputes. He left the Royal Mail Group in 2010, with a golden handshake of £3.5 million. Although the Royal Mail Group was brought back into operating profit, it took five years to accomplish and it involved the closure of thousands of post offices. Much of the overall efficiency gain was achieved by reducing services and culling inefficient units. The capital account is less healthy and the post-2010 coalition government is resolved to privatize the organization.

A National Audit Office study of more than 90 UK government reorganizations found that, despite huge costs, the benefits were unclear, the process was often poorly managed, and that the impact on performance was often adverse.³

As well as the examples of unsuccessful radical organization, we have to consider the many business firms that fail to adapt and go under each year. Many try to change, but are unable to change with sufficient rapidity, or they sink under the costs of attempted redesign.

Evidence and theory

Much evidence suggests that deep organizational change is difficult to achieve.⁴ Timothy Dunne et al. reported that it took new firms more than 10 years to increase their output level to match the industry average. Hence industry-wide change is as much or more a result of bankruptcies and new entrants than firm-level adaptations.^{5,6}

Nevertheless, the mechanisms and limits of firm-level adaptation are a vital and sometimes overlooked question of research. Indeed, if selection is a major force then we necessarily have to understand how new entrants can develop and adapt enough to survive, and why bankrupt firms failed to do so. To understand the difficulties and costs of adaptation we have to appreciate how knowledge and skills are preserved, transferred, and possibly enhanced. We know that much business knowledge is tacit.⁷ So how is it accessed, replicated, and developed?

Thorbjørn Knudsen and I propose a theoretical framework to help to deal with these questions.⁸ Fundamentally we argue that the three basic Darwinian principles of variation, replication, and selection—when defined in sufficiently abstract terms—apply to social as well as biological phenomena. But to say that two different domains have abstract features in common does not imply any similarity at the level of detail.

There are two connected mechanisms of change in biological evolution. The first is the *development* of individual organisms guided by their (individually invariant) genetic code, triggered by other factors and molded by their environment. The second is the population-level *selection* of entities that are fitter in relation to a particular environment. The general process of selection involves expiring and (typically slightly variant) newborn entities. Both developmental and selection aspects of the evolutionary process are important.

By extension, there are equivalent modes of change in business. First is the development of individual firms, involving the growth from small beginnings, the adaptation by the firm to its environment, or the creation of new prod-

ucts and markets. Second is selection via the elimination of some firms and the birth of others, without necessarily assuming that the more productive or efficient firms always survive. Selection may be even less effective in business than in nature in favoring ‘fitter’ firms. Guiding or monitoring this process is a matter for government competition policy, of whatever political hue. In any case, competitive selection is a major driver of industry-level change, and it can happen even if individual firms themselves change very little.

Accepting selection as a major source of change, it would be a mistake to ignore the development of individual organizations. Setting-up organizations is an unavoidable developmental process, even if they become eventually fixed in their ways. The more fundamental question is not whether adaptation occurs—it always does to some degree—but the efficacy and plasticity of ‘recipes’ and routines used to adapt to changing circumstances. Change has underlying drivers as well as internal and external constraints.

The ‘Genetics’ of social evolution

How are adaptive ‘recipes’ stored in an organization? We need to look for capacities to store and replicate knowledge—mechanisms that act as social and organizational ‘genes’. Richard Dawkins proposed something like this with his concept of a ‘meme’, which led to a claimed ‘science’ of ‘memetics’.⁹ But the meme idea ran into problems, partly because no consensus emerged on its definition, other than to vaguely hint that memes were ideas. By regarding social information as simply ideas, meme enthusiasts raised but ignored the ancient philosophical problem of relating the ideal to the material and of mind to matter. Without such a reconciliation, the mechanisms of meme-replication and storage are elusive. But unless we have some notion of how the information is stored and replicated the meme concept is useless.

Late in the nineteenth century, American pragmatist philosophers such as Charles Sanders Peirce,¹⁰ William James¹¹

and John Dewey¹² reached a solution to this philosophical problem. They regarded psychological habits as the foundation and preconditions of ideas. For pragmatists, habit is the basis of belief.¹³ Pragmatist psychology and philosophy are undergoing a revival today,^{14,15} and they are supported by experimental and neurological evidence indicating that our underlying habitual dispositions are at work well before make conscious decisions.¹⁶ The American institutional economist Thorstein Veblen was strongly influenced by pragmatism and he argued accordingly that habitual and instinctive dispositions were the foundation of all social institutions.¹⁷

Habits are the elementary 'genetic' building blocks (or replicators) of social evolution. In turn, higher-level replicators emerge on the basis of structured interactions of habituated individuals. These include organizational routines, which Richard Nelson and Sidney Winter appropriately compare with genes.¹⁸ Routines are interlocking patterns of habits placed within organizational structures: social interactions can trigger and enable behaviors that are impossible with isolated individuals. Habits are the basic social replicators, with business routines as organizational replicators.¹⁹ Social customs also qualify as replicators.

Evolution in both biology and society involves the retention, copying, and diffusion of information. We need to understand the nature of that information and how it is stored and passed on. In general, replicators are the carriers and copiers of critical information. Genes are replicators in the biological world. Social evolution involves the copying of information in habits, customs and routines. In each case we need to understand how these processes work.

There are theoretical reasons why replicators are relevant in the social domain. Just as biological evolution has led eventually to organisms of greater sophistication and complexity, social and economic evolution is marked by an even more rapid increase in the complexity of technology and institutions in a relatively short period of human history. It is important to understand

the necessary conditions under which complexity is enhanced in evolving systems. The most basic and important condition is the existence of replicators that can store and copy information to instruct and guide the development of their host entity. Another essential condition is that copy error during replication is minimized. By contrast, both reading and developmental errors—which occur when using information from a source copy—do not corrupt the original information and are generally less serious. If the original information remains intact and is copied faithfully, then it might be retrieved. But if replication over time leads to the loss of parts of the original, then they are gone forever. This argument suggests that replicators and faithful replication underlie the increasing complexity of social evolution.

Some enduring fidelity in the copying of this key information is a necessary condition for the evolution of complexity. Misleading propositions that social evolution is 'Lamarckian' have obscured this. Evolution of acquired characters might be possible, but it would limit the growth of complexity. If every organism reacted to its environment in a Lamarckian manner by encoding adaptations in its genes, then this would mean a substantial reaction to every ephemeral change and the relative devaluation of tried-and-tested solutions to enduring adaptive problems. What matters for evolution is that coding for long-lasting adaptive solutions to complex problems is preserved and copied faithfully.

Retaining tested knowledge

With social and economic evolution the advance of complexity depends upon similar conditions. In a world of complexity and uncertainty, designed solutions to economic and business problems are difficult and risky. While some planning and guidance is desirable and unavoidable, we have to rely enormously on tried and tested knowledge.

Many successful firms do this. Over one-third of all retail sales in the United States pass through chain organizations.²⁰ Most successful chains expand by impos-

ing a single organizational template on all chain outlets, including those that are franchised.²¹ Similar replication strategies are found in firms when they develop new production plants in different locations. All these cases involve the strategic replication of habits and routines, replicating through a series of business units.

Such replication often tolerates little creative embellishment or modification. Consider Intel's 'Copy Exactly' factory strategy. This ramps up production quickly by copying everything at the development plant—the process flow, equipment set, suppliers, plumbing, manufacturing clean room, and training methodologies. Everything is selected to meet high volume needs, recorded, and then copied exactly.

Other prominent examples of firms that try to stimulate growth by reducing copy error include: McDonalds, Burger King, Pizza Hut, Kentucky Fried Chicken; Holiday Inn, Novotel, Hilton (various brands). Marriott (various brands); Bank of America, Wachovia, HSBC; Merrill Lynch, Starbucks, Cosi; Office Depot, Staples; Borders, Barnes and Noble; Ikea, The Bombay Company; Benetton, Gap.²²

It seems that business replication strategies that minimize copy error have become widespread through a combination of trial-and-error, and competitive selection weeding out firms with less successful policies. Our theoretical argument may help to explain the otherwise puzzling observation that many firms base growth strategies by cloning existing arrangements as exactly as possible.

Given the existence of social replicators such as habits and routines, we need to understand the manner and degree in which these organizational 'genes' change. There might be fixed 'genes' for adaptability, in which case an organization may be adaptable but have fixed 'genetic' recipes for adaptation. A pressing question for the business strategists is to what extent habits and routines can be changed, and if so how. The evidence suggests that they are generally difficult to change; executives that try top-down change with insufficient regard to underlying habits and routines are courting failure.

The 'genetics' of social evolution involves understanding the psychological and neurological mechanisms involved in these social processes, including a deep appreciation of how social structures and positions enable the retention of knowledge that relates to coordinated activity within organizations or teams.

Implications and conclusions

The cult of change has been enhanced in an increasingly unequal society. Senior managers and business leaders are routinely paid six or seven figure salaries in the belief that their individual drive and energy is necessary for 'change'. But no individual can understand the complexities of a single organization or appreciate all the detailed, specific and often tacit knowledge embodied in individual habits or organizational routines.

Organizations do need to adapt to rapid social and technological changes; however, planned change in firms should be piecemeal, experimental, and cautious. Change always has costs but only sometimes has benefits. Generally, organizations should concentrate primarily on the careful development of existing competences rather than radical reorganization. They should first understand and develop what they already do relatively well. Leadership and entrepreneurship are important, but leaders and entrepreneurs have to learn much from other employees. Managing continuity is as important as managing change.²³

Change will happen. But forced and reckless change—as if for its own sake—is extremely wasteful and often counterproductive. Much business change will result from factors beyond any individual firm's control—by new entrants or bankruptcies. Just as economies cannot be planned from the top, neither can complex businesses in an uncertain and dynamic world. We should rely on ordinary people, as well as charismatic entrepreneurs. ■

NOTES

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