ONE

Why Are Some Organizations More Competitive than Others?

FORMAL ORGANIZATIONS OPERATE in every aspect of modern life, and in each domain some organizations become remarkably successful while most others do not. Popular magazines feature thriving businesses, describing these most competitive organizations and their leaders as models to be emulated. Meanwhile, thousands of other businesses flounder, and many fail outright. Winning and losing organizations appear in many other walks of life as well. Think of charitable organizations, research and development consortia, churches, sports leagues, social movement organizations, schools, political parties, or any other kind of organization, and you will likely know of a few stand-outs. Look deeper into any of these domains, however, and you will see many other organizations that have fallen short of success. How can we explain why some organizations are more competitive than others?

This question may seem straightforward, answerable simply by looking at what distinguishes the winners and losers we see around us. What makes the question tricky, however, is how quickly its answer changes over time. Even as our attention is fixed on today’s champion organizations, most champions of the past have fallen, and many are gone entirely. This is true, of course, when industries rise and fall, as was the case for the U.S. rail, textile, and steel industries, among others. But the same pattern of ascendance and failure appears as well in growing, vital industries. Not long ago, it was unthinkable that the likes of Bethlehem Steel or PanAm would become history even as their industries continued to grow. So the champions of each new organizational generation seem invulnerable in their times. But with the passage of time, the cycle of winning and losing among organizations replays, with yesterday’s champions falling away as new winners ascend.

Seeing our most successful institutions rise and fall can be perplexing, and as people search for answers academics have responded in force. Looking back over a century, one can find shelves of possible explanations, most of which point to a particular solution as pivotal for organizations if they are to sustain their competitive advantage. If you are young, you might not realize how many times the “new new thing” has come and gone. Those who have repeatedly witnessed mighty institutions rise and fall
know that if there is a way to gain an enduring advantage, we do not seem to have found it. Our libraries are full of possible explanations, just as our organizations are stockpiles of experience. Yet we seem unable to stop the cycle; organizations rise and fall today as they always have, taking with them not only yesterday’s livelihoods but also yesterday’s explanations. History repeating itself seems to imply that we have been unable to learn.

Here I offer a theory of why some organizations are more competitive than others, and why it is that such competitive advantage is fleeting. The basic idea is simple. If today your organization encounters competition, it will not perform as well as it might have otherwise. To meet this challenge, you will likely attempt to improve; you may even experiment with new ways of approaching the job at hand. If you succeed, now your rivals face stronger competition from you, as your solutions have become their problems. To perform as well as they might have hoped, now your rivals are challenged to improve. As they come up with new solutions, you in turn are again faced with new challenges, and the cycle starts again. Competing organizations engage in an ongoing cycle of cause and effect, becoming stronger competitors—but in so doing making their rivals stronger, too.

By this account, we do learn over time, but it is precisely this learning that prevents successful organizations from sustaining their advantage. Rather, even as organizations often are improving, relative to one another they appear to be standing still—or sometimes even falling behind. In evolutionary theory, this process is known as “Red Queen” evolution,1 a reference to Lewis Carroll’s Through the Looking Glass, in which the running Alice comments on her relative stability, “Well, in our country, you’d generally get to somewhere else—if you ran very fast for a long time as we’ve been doing.” To this the Red Queen responds, “A slow sort of country! Now, here, you see, it takes all the running you can do, to keep in the same place.” In an ecology of learners, relative stability masks an absolute dynamic. Organizations learn and sometimes pull ahead, but in so doing they sow the seeds of their rivals’ improvements. In Red Queen competition, learning does not lead to sustained advantage; to the contrary, learning is the reason that advantage repeatedly is lost.

My objective here is to make explicit a theory of Red Queen competition among organizations. Many aspects of Red Queen competition are well understood by managers of organizations, industry experts, and academics. But I have tried to develop these ideas into a theory that goes beyond the common-sense notion conveyed in the Lewis Carroll quote. By working through each aspect of the process as it is likely to unfold among organizations, I develop an empirically testable model of Red Queen competition. The first step is to conceive of competitiveness not as a property of markets, but rather as a property that can vary from organization to organization.
“Competitiveness” Varies from Organization to Organization

Individual organizations differ remarkably in how competitive they are. Consider, for instance, the makers of candy canes. Striped, peppermint, cane-shaped hard candies probably do not strike most of us as a remarkable achievement. But, in fact, over the twentieth century, hard-candy manufacturers in the United States developed formulas and production technologies to pull, twist, and harden sticks of candy—including techniques for putting a “hook” at the end. Along the way, these organizations dealt with problems of melting and breaking candy from production through to distribution. One of these pioneering organizations was Bobs Candies. Many hundreds of organizations came and went in the candy industry over the life of Bobs, but this company managed to adapt to this competition over time and eventually became a leader in the candy cane market. Bobs had qualities that other organizations lacked. We might debate what those qualities were, but the bottom line is that these qualities allowed Bobs to survive in a market where most who tried failed.

Thinking of individual organizations like Bobs focuses attention on “competitiveness” as varying from organization to organization. In contrast, most prevailing theories on the subject conceive of competition as a property of markets, or of market segments. When competition exists, it is thought that anyone engaging in that particular market is subject to the force of competition, as when one joins into an auction. Yet we know that organizations vary in their ability to compete, and so some organizations are more formidable competitors than others. To see this, consider figure 1.1. The figure portrays two hypothetical organizations, denoted by j and k. Because these two organizations have different qualities, we would expect that they would differ in terms of their viability. For instance, j might have capabilities that make it especially viable compared to k. In terms of figure 1.1, this would imply that βₗ is greater than βₖ—that is, organization j’s characteristics make it more viable than organization k. In the same way, I propose that we allow for the competition generated by organizations to differ in strength as well. Just as j’s characteristics make it more viable, so might they make it a stronger competitor. In figure 1.1, this would mean that j’s competitive effect on k (w₁) is greater than k’s competitive effect on j (w₂). Just as some organizations are more viable than others because of their different qualities, so do some organizations generate stronger competition than others.

The theory of Red Queen competition explains the differences we observe in β and w among organizations as resulting from the different competitive histories of these organizations. Often, exposure to competition will make organizations more viable and stronger competitors. In other cases, however, such a history will backfire, making organizations espe-
Figure 1.1. Competitiveness varies from organization to organization. Organization j’s characteristics affect its own viability according to $\beta_j$, and affect its rivals’ viability according to $w_j$, the competitive intensity of organization j. Source: Barnett (1997).

Several well adapted to contexts that no longer exist. In still other cases, organizations will attempt to avoid or prevent competition entirely. To understand when these different outcomes will arise, it is necessary to make some assumptions about what is known by people in organizations, how organizations behave given what their members know, and how competitions play out given how organizations behave.

Organizations Are Intendedly Rational Adaptive Systems

Most modern theories of organizations accept that organizational rationality is limited. I assume that organizations are intendedly rational, adaptive systems. By this I mean that organizations not only have routines for behaving in certain ways today, but that they also tend to respond to problems and opportunities in a well-intended effort to make things better. Members of organizations try to make their organizations perform at a satisfactory level. When performance falls below that level, people in organizations attempt to restore performance. Yet people in organizations have only limited information about why their organization performs as it does, and about how their actions will affect future performance. What informa-
tion and know-how organizations do have is learned by inferring from experience, a process fraught with error. Consequently, although organizations are intendedly rational, the actual consequences of organizational development will fall short of what would be expected in a perfect world. In these ways, I assume that organizations develop as described by the so-called Carnegie School, which I will refer to as the adaptive systems perspective.  

An implication of the adaptive systems perspective is that, as long as organizations tend to keep searching until they find an improvement, we can expect that organizational learning will tend to improve performance compared to what would be the case if changes were random, or compared to remaining unchanged. Many academics studying organizations will take exception to this claim for two reasons. First, learning might not be worthwhile because adaptations come at a cost, in terms of both resources and disruptions to organizational routines. Consequently, even “correct” adaptations may turn out not to be worthwhile, if the process of getting them is too costly. Second, considerable uncertainty surrounds the process of adaptation, so the actual consequences of a change may turn out not to be what was anticipated for various reasons. Reverberations of change within an organization may be unexpected, and whether a change will ultimately match the changing conditions of the organizational environment is uncertain. Taken together, these arguments lead some to conclude that attempts at adaptation have little or no relationship to adaptive consequences.

I agree with both of these concerns, and in fact I build each into my theory. The costs of adaptation, reverberations among adaptations, and the possibility that adaptations will end up out of step with the environment are all explicit parts of the model elaborated in the chapters to follow. Holding these concerns equal, however, if organizations search until the “stopping rule” of performance improvement, then learning will tend to be adaptive. If this outcome were not the case, then empirical estimates of the Red Queen model would fail to support my theory. In this way, not only does the idea that organizational search tends, on average, to be efficacious follow from the “stopping rule” of performance improvement, it is treated as an empirical question—at least in terms of its implications for competitiveness as I model it here. This is not to say that all attempts at adaptation are efficacious, nor is it a claim that organizations will not fail and be deselected as they try to adapt.

Often organizational learning will not turn out well, given the uncertainty that surrounds the process. For example, in the early 1990s, a software startup called FITS created a revolutionary photographic imaging program. The company’s founder, Bruno Delean, spoke to my (extremely skeptical) MBA students of a future when people would send each other
photographic images from computer to computer—an outrageous claim
given that the Internet as we now know it did not yet exist. In fact, at the
time, computer hardware limitations seriously constrained one’s ability to
manipulate digital photographic images on a computer, so much so that
such tasks required the use of then-costly, high-end computer work-
stations. FITS’ founding team of software developers came up with an
elegant new approach to the job that dramatically reduced the required
computing power, allowing one to use even a moderately priced Apple
computer to professionally edit photographs. Although the superiority of
this firm’s technology was never in doubt, it was not clear at first how to
turn the invention into a viable business. Over several years, management
frequently changed the company as problems and opportunities arose:
renaming the organization, competing in low-end off-the-shelf “shrink-
wrap” software, entering into licensing deals with so-called OEMs (ori-
ginal equipment manufacturer), and even taking the plunge into the online
world when the Internet came along. By 1999 the cumulative result of this
organization’s adaptations were without any clear logic; fraught within
internal misalignments and a serious lack of fit between the organization
and its various evolving strategies, this learning organization failed.

Of course, one can also find examples of organizations that learn and
prosper. For instance, many Americans will know that Trader Joe’s in
2007 is a successful specialty grocery chain that sells exotic private-labeled
delicacies to an upscale clientele at a reasonable cost. Less well known is
that the organization began some decades ago selling, among other
things, cigarettes and ammunition. Over years of gradual changes in man-
agement and strategy, the organization incrementally altered its product
mix to match the changing tastes of a shifting customer base, dropping
poorly selling products and experimenting with new ones. After decades
of such adaptation, one can now describe the organization as having de-
veloped routines for locating and distributing interesting foods. Each step
along the way was an intendedly rational adjustment. Some succeeded,
and some failed, as this organizations attempted over time to maintain
or improve performance by searching for new solutions when and where
necessary.

Contrasting these two examples illustrates that both successful and un-
successful attempts at adaptation are possible, a fact with several important
implications for the study of organizations. First, when thinking of orga-
nizational adaptation, beware of argument through selective examples. Of
course, examples help to make abstract ideas concrete. Necessarily, one
must select which examples to cite, and it is this selectivity that can lead
observers to make a logical error. This approach is typical in much of the
business press, and among popular writers on management. In fact, if you
look back at older editions of many management books, you will see that
it was necessary for the author to update the book in order to continue
arguing by citing selective (successful) examples. Second, and worse yet, if such examples are allowed to take the place of systematic tests, we can find ourselves thinking that a theory about organizational adaptation has received support when, in fact, it has not. If we cite examples even-handedly, we will see that adaptive attempts by organizations often go astray, despite the best efforts of those involved. In other cases, attempts at adaptation may work out—but for reasons unknown to the participants involved at the time.

Because organizational learning may or may not lead to success, selection processes often operate to eliminate organizations that have gone too far astray. FITS was selected against in its environment, while (so far) Trader Joe’s has been selected for in its market. Strangely, many writers on organizations treat the processes of selection and adaptation among organizations as alternatives. Yet if an organization ends up worse off by attempting to adapt, then selection is especially likely to eliminate this organization. Consequently, when we see among surviving organizations only examples of successful adaptations, this likely is evidence that selection has been especially important. In this way, selection operates hand-in-hand with adaptation. Searching governed by a stopping rule of improvement can be expected to work out better than random change or stasis. That said, often search will go awry, and selection processes will operate to leave us with greater apparent effectiveness in adaptation than would result from learning alone.

Thus far, I have discussed organizations as adaptive systems, but without considering that they are surrounded by other organizations. In most settings, organizations typically encounter other, competing organizations with which they must contend for resources.

**Organizations Compete with Similar Organizations**

I assume that organizational environments are characterized by resource scarcity, and similar forms of organizations compete over similar resources. Painfully obvious at first glance, this assumption leads to an ecological conception of competition—an approach with several important implications. First, competition is scarcity-driven, or “zero sum,” in that one organization’s gain is another’s loss. Competition of this sort need not be intended, nor even understood, by those who manage organizations; it takes place incidentally as organizations attempt to attract the same scarce resources. Also, such competition is especially likely among similar organizations, since similarity increases shared reliance on common resources. Finally ecological competition can occur even among organizations that enjoy cooperation, collective action, shared legitimacy, and other benefits of similarity. The point here is that, other things equal, organizations face
greater difficulty securing resources when others also are attempting to secure those resources.

One useful aspect of the ecological approach to competition is that it lends itself to empirical observation. As formulated in Hannan and Freeman’s theory of organizational ecology, competition is made evident when we see that organizations harm one another’s viability. Understanding competition as a behavior, by contrast, would require detailed observations of organizational actions. Instead, ecological models reveal competition’s effects, in the form of organizations harming each other’s life chances. For example, if we see that two computer manufacturers increase each other’s rates of failure, we define these organizations as being in competition even though we may not have evidence of their specific competitive behaviors. By characterizing competition in this way, the ecological approach does not require strong assumptions about organizational rationality, as do more calculative theories of competition.

Ecological models of competition typically remain agnostic regarding the rationality of organizational behavior, making them theoretically compatible with adaptive systems theory. In some ways, my theory attempts to synthesize these two approaches. Similar organizations compete, but at the same time they attempt to adapt to the difficulties generated by such competition. For example, it is well known that the hard-disk-drive industry is competitive, such that similar organizations drive up each other’s failure rates. At the same time, however, organizations in the industry have responded to such competition by adapting in order to improve performance. Seagate, a disk-drive manufacturer, responded to competition in the 1980s by developing a global production system, including the creation of low-cost manufacturing facilities in Asia. Within a very short period of time, global production systems proliferated across the industry, increasing the strength of Seagate’s rivals so that this adaptation was an advantage for Seagate for only a very short period of time. More generally, this example illustrates how ecological competition and organizational learning fit together, each accelerating the other over time in what amounts to an ecology of learning organizations. And in the background of such evolution, the particular context faced by these organizations will determine the criteria on which organizations compete—what I refer to as a context’s “logic of competition.”

What It Takes to Win Depends on a Context’s Logic of Competition

There is no one best strategy. Rather, *winning in competition requires that an organization perform better than its rivals according to the context’s logic of competition*. Although one might talk about competition as a commonly
occuring relationship among people, groups, or organizations, the nature of competition can vary considerably across different contexts. What an organization might do in one context that would assure victory might well be a losing approach in another context. For example, Bobs Candies managed to sustain itself in the U.S. hard-candy market for decades. Yet this organization would have been unlikely to fare well, using the same practices and systems, if it were to compete in the production and distribution of high-end chocolates where craft systems of manufacturing, boutique distribution, marketing to women, and an exclusive (and possibly non-U.S.) identity tend to fare better. So it is that different markets, even within a narrowly defined domain such as the candy industry, can have very different criteria determining success and failure. Differences in the specifics of competition are even more pronounced across entire industries, national contexts, distinct cultures, and a range of societal sectors involving diverse forms of voluntary organizations, religions, social movement organizations, and political institutions. As general as competition may seem, one of its more notable properties is context-specificity.

Social scientists pay much attention to the fact that how one wins or loses in a given competition can vary considerably from context to context. Research commonly notes differences in why and how actors win or lose across different labor markets, national political systems, markets for goods and services, educational systems, and cultures, for instance. Experts writing on business often refer to different “rules of the game” as competition changes over time in a market or across industries, just as experts on war lament the habit of preparing for tomorrow’s battles based on the criteria relevant to the last war. In this light, an important step in contextualizing a theory of competition is to systematically describe such differences in the “rules of the game” across competitive contexts.

The rules of the game can be usefully thought of as the “logic of competition” in a given context. Specifically, I define a logic of competition as a system of principles in a given context that determines who can compete, how they compete, on what criteria they succeed or fail, and what are the consequences of success or failure. These principles can be formal or informal. For instance, governmental policies may require the licensing of an organization before it is allowed to compete in a given context, while in other instances restrictions on who competes arise de facto from the technologies, organizational forms, and the social networks and norms that operate in a given context. Considerable technological know-how is required to enter the market for microcircuit designs; relationships with reputable musicians are a prerequisite to competing as an agent in the music entertainment industry; the ability to organize a delivery system across a broad geography is needed to compete in many retail distribution markets. More generally, in any context one typically can identify formal and informal principles that determine who can compete and how they may do so.
As well, logics of competition include the criteria that determine success or failure in a given context. In the early years of the data storage industry, whether an organization won or lost depended in large part on whether it could produce high-capacity disk drives at relatively low cost. More recently, the criteria for winning or losing in that industry have shifted to include whether organizations are quick to develop and manufacture the next product generation. Importantly, the criteria for winning and losing can include both material practices and symbolic constructions—a useful distinction made by Friedland and Alford in their definition of institutional logics.\footnote{Friedland and Alford} Symbolic criteria often determine winning and losing, as noted by those studying the competitive consequences of organizational identities.\footnote{Raelin} Institutionalized identities confer legitimacy to the symbolic constructions of particular organizational forms. For instance, in some contexts value derives from being an “independent business” as opposed to a chain store, a distinction that is important to those who prefer to buy their coffee from the corner shop instead of Starbucks (even if that means drinking bad coffee). Similarly, just as one would not show up at a swanky party carrying a bottle of Gallo wine (even if it, in fact, was very good), neither would one effectively woo an attractive female with a value-pack of candy canes (even if she prefers candy canes). Such symbolic criteria operate whenever organizations are evaluated in terms of their authenticity. Anheuser-Busch is no craft brewer, despite the fact that it can brew a great craft beer.\footnote{Alford} So it is that symbolic, as well as material, criteria can determine winning and losing within a given context.

Logics of competition determine also the consequences of winning and losing. Contexts vary in terms of the extent of the rewards and penalties over which players compete. On the one hand, so-called winner-take-all contests reward success with an overwhelming positional advantage, as when mere prevalence reinforces the value of a computer operating system or a telecommunications standard. Losing organizations in such contexts often find it impossible to overcome their lack of position in the market, even if their products or services are attractive in other ways. On the other extreme, some contexts reward winners with only incremental gains and punish losers with modest losses. Interestingly, one often see examples of incorrect perceptions about the consequences of winning and losing in a given context. Webvan, a failed Internet grocery startup, was backed in the late 1990s by high-status private equity firms with investments that implied one of the highest valuations of any privately backed startup in history.\footnote{Alford} Behind this buzz was the perception that the Internet grocery market was a winner-take-all game, when in fact—now that Webvan is gone—we see a variety of organizations winning and losing incrementally in that context. More generally, an important difference among logics of
competition is the magnitude of payoffs and punishments that result from winning and losing.

The consequences of competitions vary, also, in how frequently they occur over time. In a coarse-grained context, the results of competition are relatively far and few between. For example, manufacturers in large-scale aerospace projects can make or break their organization’s fate for the next decade by winning or losing a contract for a military aircraft, space rocket program, or jetliner. The logic of competition in coarse-grained environments is marked by occasional, discrete “showdowns” among rivals. By comparison, in more fine-grained contexts, payoffs and punishments from competitions are relatively frequent. In the scientific instruments market, for instance, companies like Agilent sell frequently to large numbers of (often small) customers every day, effectively giving the organization a steady stream of feedback from its environment over time. Logics of competition marked by such fine granularity essentially allow organizations to adapt their strategies incrementally, as seen for instance in Intel’s relatively gradual evolution among products in the semiconductor industry.12

Predation as an Alternative to Competition

It is possible, of course, that we could avoid competing entirely. Business executives typically react to my theory by proposing this possible solution. Organizations often strategize in an attempt to find markets where competition is less of an issue. One of the founding schools of the modern field of strategic management was built around the idea that a good strategy reduces the competition with which a firm must cope.13 And, if we must deal with competitors, perhaps a collusive agreement of some sort would be in order, or even a merger or acquisition could do the trick. To the extent that such steps are taken, an organization can avoid competition, and the processes of Red Queen evolution will not apply.

In most industrialized economies, blatant attempts to avoid or eliminate competition are frowned upon, legally if not normatively. Consequently, when organizations do make arrangements that reduce competition, the organizations involved frame these moves as intended to enhance efficiency. Mergers, acquisitions, and other strategies that eliminate rivals may or may not be efficiency enhancing, but by definition they retard the process of Red Queen competition. In the candy-cane market, for example, Bobs Candies was acquired in 2005. This acquisition was touted as improving efficiencies all around, and that may well have been true. But it is also true that there was one less competitor in the candy market and so, if my theory is correct, that market featured less competition and consequently less development going forward.
When analyzing a context’s logic of competition, therefore, an important question is whether the legal and normative context will allow organizations to eliminate rivalry. Where and when this can occur, organizations can be expected to respond by attempting to eliminate their rivals, and so essentially killing the Red Queen. Current analyses of this problem focus on the consequences of market power resting in the hands of one or only a few organizations, a topic much addressed by antitrust economics. In light of the theory of Red Queen competition, one must consider as well the developmental implications of predation. By eliminating rivals, organizations thereby eliminate the catalyst that generates capabilities in organizations as they evolve. I will develop these dynamic implications in my model.

After the fact it is possible to look back on industries and watch their competitive logics unfold. But we know that, at the time, people in organizations often are not aware of the competitive logics that are operating in context. This opens up the problem of discovery: How organizations come to know the competitive logic that is operating in any given context.

Organizations Learn a Context’s Logic of Competition by Competing

The competitive logics within an industry typically are not clearly understood when organizations first enter. Rather, organizations may not know what logics of competition are operating when they first enter a context, but they learn by experiencing competition. For instance, Network Appliance, a company that sells file servers that speed the movement of data in computer networks, grew at an astounding rate after it was founded in 1991. Yet the organization initially took time to learn its industry’s competitive logic. At first the company sought to make inexpensive, simple file servers that could be sold through distributors at a low price to smaller customers. This initial strategy and organization quickly failed to meet the hopes of the founders, as they lost in competition against general-purpose computer server manufacturers. At the same time, the company’s engineers discovered that once installed, their file servers were much faster at moving data than the competition, implying that the product could be useful for larger customers. In these ways, although competition initially hurt the company, dealing with competition informed the company about their industry’s competitive logic. Acting on this knowledge, management shifted its strategy to aim at larger customers and built a direct-sales organization and a rationalized product development process as is appropriate for such customers. These responses to competition sent them into a period of tremendous
success and rapid growth, but behind this success was an initial process of learning about competitive logic by dealing with competitors.

More generally, one can think of learning the competitive logic of the context as a sampling problem. A context’s competitive logic is not known but can be discovered by drawing competitive experiences from the market. My assumption is that the size of the sample drawn by the organization depends on how varied are the competitors that it faces. Each time an organization encounters a rival, it is drawing a lesson about the context’s competitive logic—either about the value of outputs or about the value of the methods of production. Ideally, an organization would have a large and unbiased sample of such experiences that informs its managers about the competitive logic of their context. This would be the case if the organization encountered many, varied competitors. But in some cases an organization may have very few competitors from which to learn. Those in an organization operating alone in a market are less likely to be pushed to question the context’s competitive logic. As the only game in town, they do not know how or why they might have lost had they faced competition. Each new competitor the organization encounters, however, presents a new challenge and so offers a new lesson regarding what wins and what loses according to the context’s competitive logic.