

THE LOGIC OF BUSINESS STRATEGY

BRUCE HENDERSON

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1 **STRATEGIC CONCEPTS**

1. THE CONCEPT OF STRATEGY

The Beginning of Natural Competition

Competition existed long before strategy: It began with life itself. The first one-cell organisms required certain resources for maintenance of life. When those resources were adequate, each generation became greater in number than the preceding one. If there had been no limitation on required resources, exponential growth would have led to infinite numbers. But as life evolved, single-cell life became a food resource for more complex life; with greater complexity, each level became the resource for the next higher level. When two competitors were in perpetual competition, one inevitably displaced the other, unless something prevented it. In the absence of some counterbalancing force that maintained a stable equilibrium between two competitors by giving each an advantage in his own territory, only one survived.

Over millions of years, a complex web of competitive interaction developed. Today, more than a million distinct species have been catalogued. Each has a unique advantage in competition for its required resources within its particular niche of the environment. There are believed to be millions more such variations of species as yet unclassified.

Since each of these competitors must be unique, the abundance of variations must match an equal variation in potential factors which define a niche and the

varied characteristics in the environment which make that combination effective. The richer the environment, the more severe the competition and the greater the number of competitors. Likewise, the richer the environment, the smaller the differences among competitors.

This is consistent with biological research of the recent past. Experimental laboratory ecologists discovered in the 1930s and 1940s that if two similar species of small organisms are put together in a bottle with food and uniform substrate, only one species can persist.¹ The observation that coexisting species in nature do differ ecologically and that species must differ ecologically to coexist in bottles led to Gause's Competitive Exclusion Principle: "No two species can coexist who make their living in the same way."

For millions of years natural competition involved no strategy. It was natural selection: adaptation and survival of the fittest. Random chance determined the mutations and variations that survived and succeeded to compound their numbers. Those who left relatively fewer offspring became displaced. Those who adapted best displaced the rest. Physical and structural characteristics adapted, but behavior adapted also and became embedded in instinctual reactions.

The awareness of natural competition as a systematic effect is centuries old. Malthus quoted Benjamin Franklin's observation about the crowding out of natural competition. Darwin himself credited Malthus with the insight. Wallace and Darwin, separated by thousands of miles, simultaneously developed the concept of natural selection by competition. Darwin emphasized repeatedly the overriding importance of competition: It is awesome in its potential for evolution.

As far as we know, only primates possess imagination and the ability to reason logically. But without these capabilities, behavior and tactics are either intuitive or the result of conditioned reflexes. Strategy is impossible. Strategy depends upon the ability to foresee the future consequences of present initiatives.

The Beginning of Strategic Competition

Strategy in its most elementary form most likely developed when the hunting party was formed by early humans to capture large game that could not have been handled by a single individual. But this was hardly true strategy. The quarry itself could have no counter strategy, only its instinctive behavior. True strategy was probably first practiced by one tribe attempting to take over the hunting grounds of another tribe.

For strategy to be possible, it is necessary to be able to imagine and evaluate the possible consequences of alternate courses of action. But imagination and reasoning power are not sufficient. There also must be knowledge of competition and the characteristic higher order effects of alternative actions. That knowledge must reach a critical mass before it becomes significant. Until enough relationships have been integrated to see the whole pattern, knowledge is no more than the individual pieces of a jigsaw puzzle.

The basic requirements for strategy development are:

- a critical mass of knowledge;
- ability to integrate all of this knowledge and examine it as an interactive dynamic system;
- skill at system analysis sufficient to understand sensitivity, time lags, immediate and future possibilities and consequences;
- imagination and logic to choose between specific alternatives;
- resource control beyond immediate needs; and
- the will to forego current benefits in order to invest in the future potential.

Simple as these requirements may seem, they are absent in natural competition. Strategic competition requires an ability to understand the dynamics of the complex web of natural competition. The value of strategy in competition comes from developing the potential to intervene in a complex system with only a limited input and thereby produce a predictable and desired change in the system's equilibrium.

Strategy, as a concept, probably emerged in connection with military operations. All of the elements were present that made strategy valuable:

- finite resources;
- uncertainty about an adversary's capability and intentions;
- irreversible commitment of resources;
- necessity of coordinating action over time and distance;
- uncertainty about control of the initiative; and
- the critical nature of the adversaries' mutual perceptions of each other.

History books tend to tell us the sequence of events and who won a war. They tell us less about why the initiator thought it was worth taking the risk and even less about the strategy of each adversary. Strategy is often not clear or obvious even with the benefit of hindsight. Sun Tsu, a general in 500 B.C., said it well: "All men can see the tactics whereby I conquer, but what none

can see is the strategy out of which victory is evolved." The history of strategy is rarely more than rationalization.

There are many analogies between business and military strategy. One in particular is quite important: Visible conflict is only a periodic symptom of a continuing effort to manage a dynamic equilibrium between adversaries.

Visible hot wars are the result of instability in the competitive relationship. This instability is subtle and complex; it is not easily seen or understood. There are two basic reasons for this instability. First, no one logically starts a war in which the inevitable destruction to both adversaries is more than offset by the combination of favorable odds and potential positive net payoffs. Second, many of the events that lead to a progressive destabilization of equilibrium are emotional and not necessarily logical. The aggression which is inherent in warfare is unavoidably destructive, but the outcome may seem to be potentially valuable enough to at least one party to justify the initiative.

The relationships of geopolitical strategy are more comparable to business strategy than the battles that usually mark the turning points in military conflict. The ultimate objective for both participants is stability with peace and greater prosperity on a sustainable basis.

The Underlying Principles and Objectives of Strategy

Many of the basic principles of strategy have been distilled from warfare. Liddell Hart, the military historian, stated and collected some basic principles:

The true aim is not so much to seek battle as to seek a strategic situation so advantageous that if it does not of itself produce the decision, its continuation by a battle is sure to achieve this.

But we can at least crystallize the lessons into two simple maxims—one negative, the other positive. The first is that, in face of the overwhelming evidence of history, no general is justified in launching his troops to a direct attack upon an enemy firmly in position. The second, that instead of seeking to upset the enemy's equilibrium by one's attack, it must be upset before a real attack is, or can be successfully launched.

The principles of war, not merely one principle, can be condensed into a single word—"concentration." But for truth this needs to be amplified as the "concentration of strength against weakness."

—Hart

The whole art of war consists in a well reasoned and extremely circumspect defensive, followed by a rapid and audacious attack.

—Napoleon

Supreme excellence consists in breaking the enemy's resistance without fighting. Thus the highest form of generalship is to baulk the enemy's plans; the next best is to prevent the junction of the enemy's forces; the next in order is to attack the enemy's army in the field; the worst policy of all is to besiege walled cities.

In all fighting, the direct method may be used for joining battle, but indirect methods will be needed in order to secure victory.

—Sun Tsu

The most complete and happy victory is this: to compel one's enemy to give up his purpose, while suffering no harm oneself.

—Belisarius¹

The underlying concepts of strategy involve the allocation and concentration of resources, the need for communication and mobility, the element of surprise, and the advantage of the defense. However, military strategy concepts revolve around the assumption that open battle has already begun. Hart introduced the concept of "grand strategy"—the plan for securing and stabilizing the peace for which the war is fought. This is an aspect of strategy that is of the greatest importance to business. Business strategy must manage a constantly shifting dynamic equilibrium with multiple competitors.

For business, as for nations, continued coexistence is the ultimate objective, not the elimination of the competitor. The purpose of the strategy in both peace and war is a future stable relationship with respect to the competitors on the most favorable possible terms and conditions.

The emergence of grand strategy concepts for business has been severely handicapped by the lack of a comprehensive general theory of dynamic competition. Only in game theory has a systematic and methodical approach been developed. But a general theory of competition now appears possible and imminent.

The Beginning of a General Theory of Competition

There has always been conflict and competition for scarce resources. Strategy has been practiced whenever an advantage was gained by planning the sequence and timing of the deployment of resources while simultaneously

taking into account the probable capabilities and behavior of competition. But insight into this experience has rarely been integrated conceptually as a competitive system. Many aspects of competition were explored in great depth but rarely as a dynamic system in equilibrium.

The natural field of study that should have been expected to generate such insight was economics. For whatever reason, philosophical constraints on assumptions and their implications were biased, and economics earned the name of the "dismal science." It remained for a most unlikely discipline, biology, to develop the foundation of a general theory of competition. However, this emerged after considerable progress had already been made in the field of business strategy development.

Trials and Errors of Conceptual Development

The history of the general public's conceptual insight into the U.S. economic system can, to some extent, be judged by the evolution of the antitrust laws and the implicit assumptions embedded in them. The antitrust laws were precipitated at the turn of the century by the efforts of Standard Oil to integrate. Its tactics were to concentrate on a local competitor and undersell until it capitulated. In the absence of competition, Standard Oil could thereafter charge higher prices to recoup its losses. As strategy, it was excellent short term. As grand strategy, it was flawed. It caused very damaging second-order effects.

Since the turn of the century, antitrust laws have been interpreted and reinterpreted by the courts in the light of past and then-current concepts of competition. The evolution of theory represented the gradual development of generally accepted models of competitive behavior. Unfortunately, these competitive models were highly theoretical and simplistic. They were also based on untested and dogmatic assumptions. Semantics played an important role. "Perfect competition" became a goal. "Perfect competition" was meant to describe an idealized situation in which all competitors were so small that no one individual competitor could have any perceptible effect on supply or demand and therefore on price. No situation of this kind has ever existed except for very short periods. Such a situation is inherently unstable. But all alternate models were labeled "imperfect competition."

The conceptual model developed through court interpretation was quite simplistic. Although scale effects and their inherent instability were recognized, they were brushed aside. A never-tested assumption that optimum scale is only a fraction of industry size was necessary for the presumption that

multiple competitors are in stable equilibrium. The assumption that all cost-versus-scale curves are L-shaped or U-shaped was also a fundamental premise for competitive equilibrium to exist without monopoly. Assumptions were made that within a generalized industry all competition is essentially head to head.

These assumptions were further compounded by confusion as to whether the objective was to protect competitors from each other or to protect competition as a concept. And, of course, all of the assumptions were made within the constraints imposed by legal concepts of property and social organization.

Such constraints were simplistic enough to sharply distort a realistic view of the nature of competition. As a consequence, substantial inhibitions were created in the business community toward the usage of certain words and phrases like "dominate," "preempt share," "capture market," "match price," and so forth.

In and of itself this was minor compared to the inhibitions created with respect to the thinking about competitive interaction between specific pairs of competitors. Yet the interaction between specific pairs of competitors who vie for specific needed and scarce resources is the essence of strategy.

This is a generic problem inherent in any strategy. Characteristically, for any competitor there are many such pairs of competitors to be dealt with simultaneously. The realities of competition forced businessmen, often as a matter of course, to think in such terms. But the effect was to suppress open discussion and conceptual development of business strategy except in a peripheral way.

The Emergence of Explicit Business Strategy

Strategy, by its very nature, is like a poker game and not subject to accurate reconstruction by either kibitzers or historians. However, there are a few classic examples such as the General Motors segmentation strategy developed by Alfred P. Sloan against Ford's Model T. But this occurred in the early 1930s. Soon the focus was centered on war efforts. To a considerable extent, the emergence of concepts of business strategy can be traced to the late 1950s and the early 1960s.

Several streams of thought converged to produce the focus on business strategy that blossomed in the 1970s. These included:

- the problems of strategy development within a complex organization;
- the problems of strategy execution within a complex organization;

- the problems of information in a complex organization; and
- the problems of control in a multiple business organization sharing common resources.

Many of these were foreshadowed by the development of the giant organizations and trusts of the early twentieth century, which precipitated the anti-trust laws. In the United States many of these were monolithic, single-industry, narrow-range product organizations. Conspicuous examples were the oil and steel companies, with the automobile companies close behind. Characteristically, scale was a critical factor.

However, simultaneously, the multiproduct companies were beginning to emerge. The electric manufacturing companies that had their birth in the latter part of the nineteenth century were inherently multiproduct.

Although examples of large multiproduct companies had emerged in Europe even earlier, the European environment was different from the American environment. Consequently, the multiproduct companies in Europe had different characteristics.

When small countries are constrained by trade barriers at their boundaries, then the trade market area is inherently small. Large scale could come only from multiple product companies in small countries. Banks and banking institutions constituted the only source of capital for most concerns. Frequently such financial institutions were large equity owners. In such countries, the interaction between the financial institutions and with the government tended to inhibit freewheeling competition. In such small markets, specialization produced very small scale. The generalist had an advantage. Short distances prevented the growth of regional competitors who were isolated initially but who with increasing infrastructure and transportation capability later became competitors in other regions.

In the early twentieth century, when Japan abandoned its policy of self-imposed isolation, the same pattern emerged. However, in the United States a quite different pattern developed that instead of inhibiting competitive strategy required it.

A vast and growing market without barriers or regulation except logistics favored the generalist initially but forced specialization as the market density increased. A large and dense market offers economies of scale to the specialist. But increased specialization on a national scale also means increased competition with finer and finer subdivisions of the market into competitive segments. The ability to define those competitive segments, determine who sets the boundaries, appraise the potential within those boundaries, and assess the

opportunity for redefinition of boundaries becomes ever more valuable. The need for strategy increased even though the understanding of it did not.

Unlike those in Europe and Japan, U.S. banking institutions were often unstable and highly fragmented until well into the twentieth century. This removed a major influence from the development of competitive growth patterns and imposed much of the responsibility for financing growth or success back upon the earnings retained in the business. The absence of an income tax on corporate earnings greatly increased the degree of competition and the need for internal financial resources. In some measure, this laid the foundation for multiproduct companies such as Westinghouse and General Electric, which in turn presaged the conglomerates that developed following World War II.

In all strategy the ultimate objectives tend to be access to and control of the required resources. For business this almost always includes money, supplies, markets, and recruits. Money, or its equivalent, comes first. This may have been the underlying cause of the development of the multiproduct or conglomerate form of company.

The multiproduct form of organization is particularly well suited for continual growth of a business organization in the same way that a multi-generation family pattern is well suited to propagation of the species over time. The impact of this is almost entirely in capital formation and reallocation rather than in marketing, manufacturing, or technology. Those business areas that succeed and reach full potential are characteristically unable to reinvest in themselves at rates equal to their capital generation. Conversely, they are well positioned to finance the young, rapidly growing segments of their company, which offer investment potential far in excess of any possible capital self-generation.

An additional area of potential for the multiproduct company was sharing of experience and scale across related but not identical products and services even though the competitive segments served by the products were different. This too was greatly facilitated by the absence of any income tax complications on the internal expense financing as well as the lack of the inherent overhead in external financing and other supply interfaces.

From Strategy to Structure

All of these factors made the United States a seedbed for productivity increase. But this very dynamism and complexity increased the importance of

a conceptual framework for strategy development rather than an intuitive base for resource deployment and management. Tactics can be learned from experience, but strategy cannot. Strategy is nonobvious management of a system over time. Good strategy must be based primarily on logic, not primarily on experience derived from intuition.

Perhaps the greatest insight into the complexity of the management of the large corporation was provided by Chester Barnard in his book, *The Functions of the Executive*. Chandler and Salsbury later provided additional insight into the relationships between strategy and structure in *Pierre S. DuPont and the Making of the Modern Corporation*. Alfred P. Sloan also revealed some of his strategy concerns in *My Years with General Motors*.

The foundation of Sloan's success with General Motors' management was divisional autonomy with central control combined with the separation of policy and operations. However, the emergence of structural and organizational problems and their connection with strategy were foreshadowed prior to World War II.

Both Westinghouse and General Electric changed from functional control by central management to profit center management prior to World War II. But it was not until the early 1950s when General Electric, under Ralph Cordiner, carried the profit center concept to extremes, and General Electric became identified publicly as the pioneer and leader of this structural architecture, which rapidly became widespread.

However, profit center organization soon began to reveal some problems. Carried to one extreme, there was no function for central management except as an interface with the banks and tax collector. At the opposite extreme, the profit center was only a symbol. The proliferation of corporate staff and the leverage of its influence effectively wiped out the independent profit center as a functioning unit. The parallel between the king and his troubles with the barons suggests the problem is not a new one.

The Dilemma of Decentralized Strategy

In large-scale, diversified, multiproduct companies it was impractical for central management to be familiar in depth with each business, each product, each competitive segment, and each unit's implied strategy. This led to more and more reliance on short-term financial control measures. This in turn rapidly led toward more short-term suboptimization of results.

The inevitable short-range viewpoint induced by quarterly profit mea-