Strategic Change
Strat. Change, **8**, 375–392 (1999)

David Hussey
Nottingham Business School,
Nottingham Trent University

Igor Ansoff's continuing contribution to strategic management

- *The article is a gesture of thanks for and recognition of the benefits we have all gained from the work of Igor Ansoff.*
- *Modern concepts of strategy are built on foundations which he established. The article describes his three greatest contributions: a systematic approach to strategy formulation, the concept of strategic management; his contingency approach which related strategy and management to conditions of environmental turbulence.*
- *It includes an extensive bibliography of his works. Copyright © 1999 John Wiley & Sons, Ltd.*

Introduction

Who has made the greatest contribution to the continuing development of the strategic aspects of management over the past 40 years or so? This is probably a question that no one can answer. It is a little like asking people to identify the best television series over the same period. There are immediate problems: there are more living people who have watched recent material, than who saw something 40 years ago; even those who saw the older series will have forgotten most of them; few, if any, people watch every series; styles of speaking, acting, and the technical quality of programmes have changed. So the bias would be to selecting a fairly recent series for the accolade.

If we turn back to the management question, there are even more problems.

- Management is a hands-on activity, and few managers would accept instinctively that anything written a long time ago, perhaps even before some of them were born, could have relevance today. They may use the ideas and concepts of the early authorities, without knowing where they have come from.

- Although the newest thinking is immediate and accessible, it is not easy to judge its value, however much hype the publishers and authors give their books and articles. Peters and Waterman (1982) achieved great popular acclaim for the study of the excellent companies, and there is wisdom in the book that has relevance today. But the sounds of immediate acclaim would not drown another sound: the cracking of so many of the excellent companies as they began to fall off their pedestals. Many of what seem to make the best contributions at the time are eventually seen to be shooting stars that burn out.
- The natural sciences build on successive, and often small and incremental, research findings and discoveries. Management is a mix of science and art, to which is added a hefty dose of common sense and street wisdom. Cause and effect are hard to separate, short term results are not always indicative of long term benefit, and the variables are numerous. Much management research gives results which are indicative rather than definitive, and much of what is researched is trivial and ignored. The concepts which last are those which succeeding generations of practical managers believe to be effective. But, as I have said, most of us lose sight of where the concept came from. All managers are aware of, and make use of, double entry bookkeeping. But how many people know that it first developed in Italy around 1300, or could name Luca Pacioli as the first person who described it in a printed book in 1494 (see Parker, 1984). Yet in management terms this was akin to understanding the laws of gravity, and there can be few of us who are unaware of Isaac Newton, and his conclusions after observing the second most famous apple in literature.

Much of what is researched is trivial

So back to my opening question. Although I cannot answer this, I can identify a number of people who are among the giants. One of these is Igor Ansoff. Among other things, he has been the architect of three major developmental concepts in the strategy field, has been publishing since at least 1956, and is still doing so. Awards for strategic achievement have been established in his name in at least two countries, Holland and Japan.

Biographical background

In his 1992 biographical essay, *A profile of intellectual growth*, Professor Ansoff describes the shock he received when he arrived

Professor H. Igor Ansoff.

in the USA from Russia, the land of his birth. He writes

> Prior to 1933, when our plans to go to America began to shape up, I had learned fluent German but had no knowledge of English. During the two years prior to our departure, my parents arranged for English lessons with a teacher who was educated in England. I attacked the lessons with great enthusiasm. By the time we left the USSR, I felt that I could understand English and speak it tolerably well. But I had little chance to test this opinion until, my academic schedule in hand, I showed up for my first class at Stuyvesant High. My English failed totally. I could not understand a single word spoken by my classmates and teachers. This condition lasted for about a month. I went from class to class understanding nothing and unable to communicate with others.

This sort of experience is, to say the least, character forming, and it is all the more amazing that there is no trace of his Russian origins in his accent. Indeed, until he told me this story a few years ago, I had always assumed that he was American born and bred.

Professor Ansoff graduated from Stevens Institute of Technology with an M.S. in maths and physics. His Ph.D. in applied mathematics was obtained from Brown University. In 1950 he joined the Rand Corporation. Six years later he undertook a basic study of the diversification problem at Lockheed Aircraft Corporation. From 1957 to 1960 he was vice president plans and programmes at Lockheed Electronics Company, after which he became vice president and general manager of the Industrial Technology Division of the electronics organization. In 1963, he was appointed professor of Industrial Administration, Carnegie Institute of Technology, in Pittsburgh.

He has been in the academic arena since that date, in a number of American universities and including a spell in the mid 1970s in Europe. Many of his more recent contributions took place on his return to the USA, where he has been with the United States International University at San Diego.

What makes his contribution different is that he began his career first as a mathematician, and then in management where much of his early thinking developed. His thinking developed further from his teaching, research and consulting work. His earliest contributions were published while he was in management, including his 1957 *Harvard Business Review* (HBR) article. Although his first book was not published until he had shifted to the Carnegie Institute, much of it was written while a manager in industry, and his acknowledgements include co-authors of his early articles who helped him shape his thinking.

He began his career first as a mathematician, and then in management

A giant leap for long range planners

1965 was the year in which it is not an exaggeration to claim that Igor Ansoff fathered the modern concept of corporate strategy. To understand the significance of his early work it is necessary to do more than read *Corporate Strategy*. We have to turn the clock back to look at the state of planning and management thinking at that time.

Igor Ansoff fathered the modern concept of corporate strategy

The 1950s were characterized by what was basically a seller's market. If you could make it, you could probably sell it at a profit. In the UK there were shortages of many consumer goods, and there were many restrictive practices in

Exhibit 1.

Outline Biography of Professor Igor Ansoff

Early Life	
1918	Born in Vladivostock, Russia
1924	Family moved to Moscow
1936	Family emigrated to the USA where his father had been born
Education	
1937-1941	ME in general engineering, Stevens Institution of Technology MS in math and physics, Stevens Institution of Technology
1946-1948	Ph.D. in applied mathematics, Brown University
1959-1960	UCLA Senior Executive Program
Career	
1948-1950	The Rand Corporation: mathematician
1950-1956	The Rand Corporation: project office
1956-1957	Lockheed Aircraft Corporation: development planning specialist
1957-1960	Lockheed Aircraft Corporation: director, diversification task force
1960-1961	Lockheed Aircraft Corporation: vice-president, plans and programs
1961-1963	Lockheed Electronics Company: vice president and general manager Industrial Technology Division
1963-1968	Professor of Industrial Administration, Graduate School of Industrial Administration, Carnegie-Mellon University, Pennsylvania
1968-1973	Founding Dean and Professor of Management, Graduate School of Management, Vanderbilt University, Tennessee
1973-1975	Professor, European Institute for Advanced Studies in Management Brussels
1973-1976	Distinguished Justin Potter Professor of Free American Enterprise, Vanderbilt University
1973-1977	Professor, Stockholm School of Economics
1976-1983	Professor, European Institute for Advanced Studies in Management
From 1983	Distinguished Professor of Strategic Management, US International University, California

Note

He also holds honorary doctorates from Stockholm School of Economics, University of Bath, Helsinki School of Academics, and Twente University

industry which reduced the impact of competition. Domestic markets in Europe and the USA had not yet felt the impact of severe competition from Japan and the newly industrialized countries, and it was possible for many industries to think in terms of country market share. Long range planning was around, but not very widely practised. The prevailing planning approach was a form of extended budgeting, which took the annual budget and extended this for a few more years, with very little attention to strategy. Some writers were giving attention to what might be termed the elements of strategy: for example Drucker (1955) had much to say about corporate objectives. Overall the literature was fairly sparse.

As we moved into the 1960s, things were beginning to change. More attention was being given to acquisition and merger: the prevailing wisdom was that diversification to spread risks was a good thing, as were horizontal mergers which strengthened a position in the industry. Competition from outside the country was beginning to become more of an issue. In the UK it was a period where restrictive practices began to be dismantled. At the start of the period there was economic optimism (Macmillan's 'you've never had it so good' re-election campaign). Many companies were beginning to think about better ways of planning than just extending the annual budget. Although much planning was still extrapolative (to use the term suggested by Ansoff in his 1967 report for Stanford Research Institute on the evolution of planning) supported by schools of thought arguing for either the application of OR techniques (OR had moved into industry as a result of its development and application in WW2), or for improved forecasting methods. Pioneer companies by the late 1950s and early 1960s were, according to Ansoff's 1967 report, moving gradually to a formal process of entrepreneurial planning. But until 1965 there was little guidance available on how to do it.

Ansoff's 1965 book, *Corporate Strategy* was unique. It was the first time that anyone had set out a coherent and analytically sound way in which an organization could think through its strategy in a formal way. One of the major components of the book was the concept of synergy. This, borrowed from the true sciences, became widely used in the management arena. It began with Igor Ansoff. In fact there is acknowledgement of this in Gilmore and Brandenburg (1962), which reported a study comparing the military decision-making process with that 'employed over the past five years by the Lockheed Aircraft Corporation, which has been carrying out a major diversification program'. There is a footnote acknowledgement: 'We are indebted to Dr H. Igor Ansoff for introducing the concept of synergy to us and for his assistance in clarifying a number of steps in our planning framework.'

Corporate Strategy was unique

Synergy is effectively one way of considering what in modern terms we would call added value, and the analytical processes Ansoff describes in his book offered a systematic way to apply the concept.

Another recommended step involved the development of a competence profile for the firm, which is interesting given the excitement evoked recently by the core competencies concept (see Prahalad and Hamel, 1990). We should also note that the importance of the distinctive competence of the firm was an important element of the strategy approach advocated by Learned *et al.* (1965).

Corporate Strategy focused on the strategic problem of the firm. In his 1964 *Financial Executive* article, which drew from his, then forthcoming, book, he defined this very clearly:

> To use a somewhat crude but descriptive analogy, in the operating problem we are seeking the best way to milk a cow, but if our basic interest is not the cow but in the most milk we can get for our investment, we must make sure that we have the best cow money can buy.
>
> Thus we have a second way in which a firm can solve its fundamental problem. Through allocating the firm's resources to product markets which offer the largest potential return. We will refer to this as the strategic problem of the firm.

In 1965 managers were offered, for the first time, a book which took them through all the steps of a formal approach to strategic decision making. Erected, on a platform of new thinking proven in at least one major organization, it provided numerous analytical tools and step by step process charts. At least two of his analytical matrices are still quoted in modern textbooks. One is his 2 × 2 growth vector component matrix (mission present/new; product present/new), which appears in two forms on pages 109 and 128 (Figure 1). Mission (defined on page 106), was used in a marketing sense as a product need. A similar matrix with minor word changes had been published in Stewart *et al.* (1963): however, the technique may still have originated with Ansoff. There is

Product / Mission	Present	New
Present	Market penetration	Product development
New	Market development	Diversification

Figure 1. Growth vector components. Source: Ansoff, H. I. (1965). *Corporate Strategy*, McGraw-Hill, New York. Reproduced with permission.

no doubt about the origination of his 'growth vector in diversification matrix' which is on page 132, but these acknowledged references are the tip of an iceberg. Almost every aspect of *Corporate Strategy* was subsumed into almost all subsequent thinking about strategic decision making and planning. Of course much that is new and different has been added, but the rock on which everything has been built was provided by Igor Ansoff.

In July 1966 the Bradford Institute of Technology, later to become Bradford Business School, arranged for Igor to run a seminar in England. It must have been one of the best attended and most influential planning events ever held. Bookings far exceeded the capacity of the largest public room at the Crown Hotel, one of the main conference hotels in Harrogate, and an overflow room was hired by the organizers where those who had not got their bookings in early could watch on closed circuit television, and pass questions via runners to the main conference room. Most participants would not have had much experience of corporate planning (I had been involved for two years), and I believe that this was the first opportunity any of us had to attend a seminar on the subject. My copy of the attendance list was discarded long ago, but my memory is that most of the best organizations were there. What Igor presented was both new and valuable, and had considerable impact on me at least, and I suspect most of the other participants. I also have an abiding memory of Igor prowling across the front of the audience, his microphone trailing its umbilical cord: he managed every about turn without tripping over it.

The concept of strategic management

In the same year as Business International in conjunction with Centre d'Études Industrielles, Geneva summarized *Corporate Strategy* as covering one of 'four of the most crucial areas for internal innovation' (Business International, 1972), Igor Ansoff offered his next major contribution. The concept of

The concept of strategic management was introduced in 1972

strategic management was introduced in his 1972 *Journal of Business Policy* article, and was his next influential foundation concept. Of course it did not invalidate the earlier work: it developed from it. In his 1992 biographical essay, *A profile of intellectual growth*, Igor acknowledges the influence of one of Peter Drucker's phrases: 'According to Drucker, the ultimate concern of management is in two parts: the first is making sure that the firm is doing *the right thing* and the second that it is doing *the right thing right*'.

The term long range planning had almost disappeared before the end of the 1960s. By 1972 the terms strategic planning and corporate planning were well established and used almost synonymously. The number of books published had increased significantly, including comprehensive volumes such as Steiner (1969). There was development in the analytical techniques available. Professor Ansoff was at this time with Vanderbilt University, and in 1973 he organized a conference there to explore strategic management.

In *From Strategic Planning to Strategic Management* (1976), a book largely based on the conference, in an introduction written with Robert Hayes, a continuing problem was identified: the strategic planning approach did not always include all the dimensions of a strategic problem that a business faced. He visualized the situation as a three dimensional matrix, in a $2 \times 2 \times 3$ format (see Figure 2). One axis had the heading 'managerial problem', and was divided into external linkages and internal configuration. Another main heading was process, containing two divisions, planning (problem solving) and implementation (control/action). The final dimension was made up of the three 'variables': techno-economic—informational; psycho-sociological; political. There were thus 12 cells to the matrix requiring attention, but

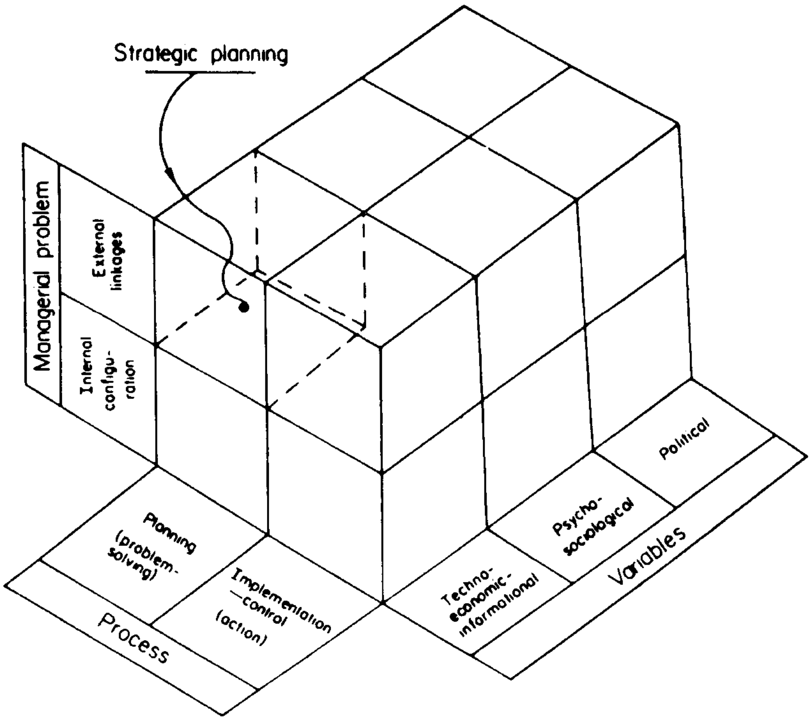

Figure 2. Strategic planning deals with only one element of the strategy problem. Source: Ansoff, H. I. and Hayes, R. L. (1976). Introduction. In H. I. Ansoff, R. P. Declerk and R. L. Hayes (eds) *From Strategic Planning to Strategic Management*, Wiley, Chichester. Used with permission.

strategic planning concentrated on one, bounded by external linkages, planning, and the techno-economic variable. Strategic planning was just one part of the total requirement, which was termed strategic management. What brought the need for a different way of looking at the strategic problem was the increasing complexity and turbulence of the business world.

In another chapter, written with two co–authors, the term 'planned learning' was coined. Historically organizations had applied adaptive learning; that is change was made through a series of increments as a new external situation was slowly perceived. The 'planned change' of Ansoff's view of strategic planning aimed to anticipate the new, and produce a solution to it in advance. Strategic management would follow a new approach 'planned learning' which accepted that there were limits to what could be anticipated and planned for, avoided 'over-planning', and applied adaptive approaches when planning was not possible. One key to this was the building of flexible organizations.

The term 'planned learning' was coined

So strategic management was born. The growth of this infant was somewhat slower than that of strategic planning, but somehow by about 1980 it had become the preferred term. Corporate and strategic planning directors miraculously became strategic management directors, and the term was in common use in books and articles. Exhibit 2 is my summary of some of the differences between strategic planning and the new concept of strategic management.

Much of what has been written under the term strategic management has moved a long way from what Ansoff and his colleagues intended. There are almost as many definitions as authors. Mintzberg *et al.* (1998) used the term as a generic title under which they reviewed different schools of thought,

Exhibit 2. The difference between strategic planning and strategic management.

Strategic Planning	Strategic Management
External linkages (e. g. products, markets, environment) to strengths & weaknesses	**Adds** internal elements (e.g. organisation, style, climate)
Strategy formulation to solve problems	**Adds** implementation and control
Focuses on the 'hard' aspects of the external environment	**Adds** the social and political aspects
Planned change of the firm to meet new situations	**Adds** elements of the adaptive approach to make a new concept 'planned learning'

including strategic planning. However, as we have seen, Ansoff considered strategic planning to be part of strategic management, not a variant of it. Mockler (1995) argued that in the 1990s the number of subjects considered by various authorities to be in the domain of strategic management had expanded so much that the term covered every aspect of business, and would lose its value if it was not re-defined more narrowly.

So Ansoff's work once again became the foundation for the evolution of the strategy subject, even though many of the directions some of the thinking has taken do not bear much resemblance to his ideas.

A contingency approach to strategic management

Before various arguments about the 'best' way to formulate strategy began to emerge in the 1980s (among the proponents were Quinn, 1980, Mintzberg and Waters, 1985, and Hamel and Prahalad, 1994), Professor Ansoff was already well launched on his next major contribution. Reference to the bibliography of his work gives some idea of the direction in which his thinking was moving in the ten years or so after his first publication on strategic management. As well as articles on the shape of management and the firm of the future (which continued an interest which was first evident in his 1965 HBR article), from 1976 to 1980 he published much on turbulent and discontinuous change. Many were working papers of the European Institute of Advanced Studies in Europe, a Brussels organization with whom he worked from the mid 1970s to the early 1980s. Unfortunately, they are not as accessible as many of his other articles, and I have only the titles to go on.

He published much on turbulent and discontinuous change

An interest in discontinuity is not surprising. The year 1973 brought a major shock to business, when OPEC countries restricted the supplies of oil to force up the price. It was that year which brought a clear realization that successful business strategy was not just a question of accurate forecasting, or the application of OR techniques such as linear planning. By the end of the 1970s many more organizations realized that competition was global, and that competing on world wide terms was becoming essential. Unrelated diversification was seen as a drag on organizations, rather than a value in risk spreading. Old industries in the developed world were suffering decline, and there was a birth of new high technology business. As we moved into the 1980s, organizations began to sell off businesses which did not fit their core activities. Developments in computers began to change the way in which almost every operation in an organization was undertaken. The pace of change was increasing.

All this was leading Professor Ansoff to his third great contribution to strategy. This was the realization that although change was affecting every organization, the pace of change, and the degree of uncertainty was not the same for all. Some organizations operated in conditions of high turbulence, while others faced relatively stable conditions. The breakthrough in thinking was that the most appropriate strategic formulation and decision processes would be dependent on the degree of environmental turbulence.

Of course there were influences on his thinking, in addition to his own research and experiences. Again, his essay *A profile of intellectual growth* gives an insight into what he believed influenced his thinking. Both the quotations in this paragraph come from this source. He mentions Chandler (1972) whose research showed that the

> ... strategy/capability transformation process was triggered by an environmental discontinuity and that firms regained their profitability only when their strategy and capability were realigned with the new state of their environment.

Emery and Trist, 1965, who published a taxonomy of observable environments, and Bohr's model of the atom

> ... which I studied in my courses in physics, in which electrons rotate around an atom in discrete orbits and jump from one orbit to another when injected with discrete amounts of energy necessary to effect the transition.

It was Chandler's work which helped Igor to identify, in his developing thinking, that management capability was a factor which had been omitted from his early work on strategic planning.

The new theory was published in considerable detail in *Implanting Strategic Management*, 1984, and expanded in the 1990 second edition. However, it is unusual in the history of strategic thinking, in that it is one of the few theories (Igor believes it to be the only theory) that has been subjected to continual empirical research (see, for example, the second edition of *Implanting Strategic Management*, and his 1993 chapter in the *International Review of Strategic Management*). Basically the research has shown that those who manage strategically in the manner suggested by the theory perform better than those who are using an approach which fits a higher or lower degree of turbulence. Get it right and succeed; get it wrong and be less successful; get it very wrong and fail.

Most other theories have been based on research into what some successful organizations are doing, or are sometimes just what the originator believes organizations ought to do. Unfortunately success is not easily measured. For example Quinn (1980) used Xerox as one of his very small sample of successful companies, from which he derived his theory of logical incrementalism. With the advantage of hindsight, Hamel and Prahalad (1994) used Xerox over the same period as an example of a company which was failing strategically. Operational effectiveness had kept it profitable, but its relative market share had steadily declined. Thinking is good, but the heavy promotion of an unproven theory that has not been subjected to empirical research may be damaging.

Success is not easily measured

In conversation Igor Ansoff told me, when I last met him in Japan in 1996, that probably most theories were right under particular conditions, but none were universally right.

Exhibit 3. Turbulence changes the approach to strategy.

	Level 1	Level 2	Level 3	Level 4	Level 5
Capability Responsive ness	***Custodial*** Precedent driven	***Production*** Efficiency driven	***Marketing*** Market driven	***Strategic*** Environment driven	***Flexible*** Environment creating
Strategic Aggressive-ness	***Stable*** Precedent based	***Reactive*** Experienced based	***Anticipatory*** Extrapolation based	***Entrepreneurial*** Observable opportunities	***Creative*** Discontinuous novel
Organisatio nal responsive ness	***Stability Seeking*** Rejects change	***Efficiency Driven*** Adapts to change after the event	***Market driven*** Seeks familiar change	***Environment Driven*** Seeks related change	***Environment Creating*** Seeks novel change

Only his theory related a specific concept of strategic management to the specific environmental situation.

His theory suggests five degrees of environmental turbulence.

1. Repetitive (that is stable and predictable)
2. Expanding (slowly and incrementally)
3. Changing (rapidly, but still incrementally)
4. Discontinuous (some aspects discontinuous, others predictable)
5. Surpriseful (discontinuous and unpredictable)

You will not find 'surpriseful' in a dictionary, but the meaning is clear. There is an intermediate position between each level which he has not labelled, but which would affect the choice of approach.

His theory covers more than just the appropriate approach to strategic formulation and decision making. It identifies, for each level, desirable manager, organizational climate and competence profiles. What is appropriate for each level of turbulence can be seen from the brief details from his theory which appear in Exhibit 3.

Exhibit 4 attempts to summarize some of the differences of strategy process for each level of turbulence. What you see are five very different approaches, each fitted to a particular set of circumstances. The strategic processes are described in much more detail in his publications. I have to confess to explaining the process in my own words in the comments section. The books in which the theory is explained are much more detailed, and include various diagnostic charts. Exhibit 5 is a translated extract from the guidelines for Japanese readers which Professor Nakamura prepared when he translated *Implanting Strategic Management*. It captures the essence of the argument.

A disappointing response

This theory makes a great deal of sense, and one would have expected it to make the same sort of impact as the 1965 book. This has not happened in the USA and the UK, and it is difficult to see the reason. The fact is that although Professor Ansoff and his associates have continued to develop and apply the theory, it has not taken off as a 'must do' matter for organizations, and in discussions with British planners from industry I have found few who even know about it (this, of course, does not make a valid sample). It appears in too few of the standard textbooks on strategic management, and many of those that do mention it do so only as a brief reference.

This theory makes a great deal of sense

Yet others are now beginning to publish what should be seen as work built on the

Exhibit 4. Optimum strategic process for each level of turbulence.

Optimum strategy process	**Comments**
1.Procedures, budgets	Bottom up budgets, top down procedures
2 Financial control, extrapolated budgets	Tight performance targets, extrapolations
3 Formal planning based on patterns of success	Top down/bottom up Planning formal process
4 Strategic planning	Stronger top down input: scenario planning; issue management
5 Fast reaction process	Scenario plans, early warning systems

Exhibit 5. Comparison—competitive management vs. strategic management. This exhibit is an English translation from the guidelines for Japanese readers which Professor Gen-Ichi Nakamura wrote for his Japanese translation of Ansoff's *Implanting Strategic Management*. Used with permission. The exhibit was translated into English by Professor Nakamura for this article.

ITEM		**Competitive management**	**Strategic Management**
Contribution to a firm's success	Basic Approach	Conversion of a firm's potential profitability into its own performance	Generation of potential profitability through a firm's own self renewal of its potential
	Major Contents	Efficient deployment of economic/technological relations with a firm's interest groups	Construction and deployment of Economic/technological + socio-political relations with stakeholders
		Efficient deployment of various kinds of daily operations	Effective development of novel logistics/technologies/businesses (=new products/services x new markets)
	Scope of growth strategy	Incremental development of new products and new markets (within the scope of existing businesses)	Entrepreneurial development of novel logistics/technologies/businesses (=new products/services x new markets)
Characteristics of corporate environment	Continuity/discontinuity	Continuous/incremental	Discontinuous
	Frequency level of surpriseful events	Low (surpriseful events as abnormal)	High (surpriseful events as normal)
	Implications of socio-political changes	Secondary importance	Prime importance
	Type of technology development	Stable	Turbulent

foundations of the Ansoff turbulence concept, but which appears to have been arrived at by independent means. For example, Coyne and Subramaniam (1996) suggested a new strategy model which related the appropriate approaches to strategy to four levels of uncertainty: level 1 useful predictions; level 2 discrete scenarios; level 3 continuous uncertainty; level 4 true ambiguity. They write:

> How does this new approach to strategy relate to concepts that have been proposed by others? We believe that, like the traditional model, most of these concepts are appropriate only in specific situations within the broader picture ... Consequently, strategists should be familiar with all of these concepts, but not biased towards any of them. They should narrow their focus to a specific submodel only after they have determined which one is most appropriate to their situation.

And, in a slightly different way, this is what the Ansoff theory has been saying.

Books are also now appearing which offer approaches to strategy formulation under conditions of high uncertainty. A recent example is Brown and Eisenhardt (1998), which includes the magic word chaos in its title and deals with situations of 'high velocity change'. I could find no reference to Ansoff in this. Although the theorizing comes from their own work, the idea that highly turbulent conditions demand a different approach to strategy is pure Ansoff.

There are areas of the Ansoff turbulence theory which could be developed further. For example, possibly there is a level 6, or even 7 as the 1990s come to an end. I have always felt that more needed to be done to develop thinking about strategic processes under his level 5. I am sure that he would have welcomed more people to build on the foundation he had established. But the underlying strength of the theory is evident and it does not deserve to be overlooked.

The Ansoff turbulence theory could be developed further

Why has it not had the attention it deserves? I can only offer conjecture. Firstly, it is a complex theory, which resulted in a complex book which is not an easy read. Too often managers look for a quick fix. Fashions develop around methods which appear to offer a universal and sequential approach to a problem. A complex theory, which although simple in concept, is difficult to master in one reading, can easily be seen as more difficult than it really is.

Secondly the two editions published in London, although by a branch of an American company. The USA is a much bigger market for books, and I would speculate that had the American parent been the publisher, many more copies would have been sold.

Thirdly the book came out at a time when a number of other authors were stressing their claims to have the only effective strategy solution. Some managed to obtain more publicity than they deserved, offering concepts that had more emotive appeal to harassed managers, than useful substance.

Managers, and I suspect most business school lecturers, prefer solutions which are easy to explain, and have a superficial logic. The Ansoff turbulence theory is not superficial and is complex in considering five very different approaches to strategy, the right one being contingent on the level of turbulence.

Still a giant in the field

The name Ansoff is known throughout the world, even though it may be more closely associated with his earlier work than his other important concepts. My personal observation is more valid for the UK and to a lesser degree the USA, than for other countries in which I have undertaken assignments, so I sought a personal perspective from Professor Gen-Ichi Nakamura on how Igor is regarded in Japan. Professor Nakamura is one of the leading Japanese experts in strategic management, and ideally placed to comment. He writes:

Ansoff is known throughout the world

> Since the publication of the Japanese version of Igor Ansoff's first pioneering book *Corporate Strategy*, 1965, which was followed by its revised edition *The New Corporate Strategy*, 1988, his name has become well known in Japan among business managers and specialists, as well as academics.
>
> In the last three decades, a number of Japanese business practitioners have been making use of, and sometimes relying on, various basic concepts coined and developed by Dr Ansoff.
>
> Igor's impact on Japanese business practitioners has become doubled and tripled respectively by the ensuing publications of the Japanese versions of his second pioneering contribution *Strategic Management*, 1979 and his third pioneering work *Implanting Strategic Management*, 1984, which was followed by that of the revised edition 1990.
>
> Several other articles of his have been included in the following two books edited and published in the Japanese language.
>
> Ansoff H. I., Hussey, D. E. and Nakamura, G. I. *Dynamics of Strategic Management for the 21st Century*, 1992, Sanno Daigaku, Shuppanbu.

Ansoff. H. I. and Nakamura, G. I. *Strategic Management*, 1993 Toshi Bunkasha.

He visited Japan six times, in the years 1969, 1981, 1985, 1987, 1991 and 1996, and never failed to deliver outstanding presentations to a sizeable number of Japanese business practitioners.

Particularly impressive were two keynote presentations he delivered at the 10th and 20th Anniversaries of the JSMS (Japan Strategic Management Society) held in 1985 and 1996 respectively.

He has been honorary chairman of the JSMS since 1985.

Partly to encourage Japanese firms to implant the discipline of strategic management for their successful self-renewal, and partly to keep in our minds his outstanding contributions to the business world in Japan, the JSMS has initiated the Ansoff Award (AA hereafter). Since May, 1999 the JSMS has been in the process of encouraging about three dozen Japanese firms deemed qualified for the criteria by JSMS directors to apply for the AA so that one or two firms, after an assessment and evaluation process, can ultimately be identified as most qualified.

An AA celebration ceremony is scheduled to be held in October, 1999.

Professor Nakamura translated and edited Ansoff's books for Japanese publication, a task which could only have been undertaken by someone with expert knowledge of the subject. He told me:

> My personal evaluation of Igor's outstanding accomplishments was that Igor was successful in the construction of a coherent and dynamic, conceptual framework of strategic management, which could be described as the Ansoff mountains. My message to Japanese managers over the past decade has been *why don't you try to climb the Ansoff mountains? At the outset, you may find it difficult and tiresome. After some trial, however, you will find your effort most enjoyable, enriching, and rewarding.*

It is good advice to managers of any nationality.

I hope that this article, which merely scratches the surface of his achievements, has done enough to show why I hold Igor's work in such high regard. No one has done more to develop our thinking about how a forward looking view should be taken of strategy, and even those who have not read his books or articles will have benefited indirectly from others who have built on his foundations. I owe him my thanks, as do thousands of other managers and strategy practitioners around the world.

Professor H. I. Ansoff: A Bibliography

English language only: note that works written with co-authors have been included in the same list as those by Professor Ansoff alone, so that all publications could appear in date order

1948. 'Stability of linear oscillating systems with constant time lag', *Journal of Applied Mechanics*, paper no. 48-A-22.

1948. 'A general stability criterion for linear oscillating systems with constant time lag', *Quarterly Journal of Applied Mathematics*, October.

1957. 'Strategies for diversification', *Harvard Business Review*, Sept/Oct. Reprinted in Ewing, D. (ed.). 1958. *Long Range Planning for Management*, New York: Harper & Brother. Reprinted in Bursk, E. and Chapman, J. (eds.). 1963 *New Decision Making Tools for Managers*, Cambridge, MA: Harvard University Press.

1957. 'A model for diversification', Management Science, Vol. 4(4), pp. 392–414, July. Reprinted in Berg, T. L. and Shuschman A. (eds.) 1963 *Product Strategy and Management*, Holt, Reinhart and Winston, Inc., New York, pp. 288–309. Reprinted in Studivant, F. (ed.). 1971. *Managerial Economics*, Glenview, Illinois: Scott Foresman Co. Reprinted in Luck, D. 1972 *Product Management*, New York: Prentice-Hall.

1959. With Andersen, Theodore, Norton, Frank and Weston, J. Fred. 'Planning for diversification through merger', *California Management Review*, Vol. 1(4). Reprinted in Ansoff H. I. (ed.) 1969. *Business Strategy*, London: Penguin.

1962. With Weston, J. Fred. 'Merger objectives and organization structure', *Review of Economics and Business*, Aug. pp. 49–58. Reprinted in Schiender, W. E., Scott, W. G. and Filley, A. C. (eds.). 1965. *Management in Perspective*, Boston MA: Houghton Mifflin.

1962. 'Company objectives: blueprint-or-blue sky', *Management Review*, Sept. Reprinted in Schiender, W. E., Scott, W. G. and Filley, A. C. (eds.). 1965. *Management in Perspective*, Boston MA: Houghton Mifflin.

1963. 'Management participation in diversification', *Proceedings of Client Conference*. Menlo Park, CA: Long Range Planning Service, Stanford Research Institute.

1964. 'Planning as a practical management tool', *Financial Executive*, June. Reprinted in Needles, B. and Skousen, K. F. (eds.). 1965. *Contemporary Thought in Accounting and Organizational Control*, Dickenson Publishing. Reprinted in Wadia, M. S. (ed.). 1966. *The Nature and Scope of Management*, Glenview, Illinois: Scott Foreman.

1964. 'A quasi-analytic approach to the business policy problem'. *Management Technology*, Vol. IV, June.

1964. 'Evaluation of applied research in business firms', in Bright, James R. (ed.), *Proceedings on the Conference on Technological Planning on the Corporate Level*, Homewood, Ill: Richard D. Irwin.

1965. *Corporate Strategy*, New York: McGraw-Hill.

1965. 'The firm of the future, *Harvard Business Review, Sept./Oct.* Reproduced in Ansoff, H. Igor (ed.). 1969. *Business Strategy*. Note: this article won the second award in the McKinsey Awards for 1965.

1967. 'The expanding role of the computer in managerial decision-making', *Informatic*.

1967. *The Evolution of Corporate Planning*, Menlo Park CA: Stanford Research Institute, Report 329, Sept.

1967. 'A quasi-analytic method for long range planning', in Marcus Alexis and Charles Wilson (eds), *Organizational Decision Making*. Englewood Cliffs, NJ: Prentice-Hall.

1967. With Brandenburg, R. G. 'Design of optimal business planning system: a study proposal', *Journal for Cybernetics of Planning and Organizations*, March.

1967. With Stewart, John M. 'Strategies for a technology-based business', *Harvard Business Review*, Nov/Dec.

1967. With Brandenburg, R. G. 'A program of research in business planning', *Management Science*, Vol. 13, Feb.

1967. With Brandenburg, Richard. 'Research and development planning' in Maynard, H. B. (ed.), *Handbook of Business Administration*, New York: McGraw-Hill.

1967. 'The innovative firm', *Enterprise*, the Journal of the PE Consulting Group. Reprinted in *Long Range Planning*, Vol. 1(2), 1968.

1968. 'Towards a strategic theory of the firm', Économies et Sociétiés, Vol. 2(3). Reproduced in Ansoff, H. Igor (ed.). 1969. *Business Strategy*.

1968. With Slevin, D. 'An appreciation of Industrial dynamics', *Management Science*, Vol. 14, March.

1969. (ed.). *Business Strategy*, Penguin Books: Harmondsworth.

1969. 'Issues in national policy on growth of firms', in Weston, J. Fred and Peltzman, Sam (eds.), *Public Policy Towards Mergers*, Pacific Palisades, CA: Goodyear.

1969. 'Managerial problem solving, in Blood, J. (ed.), *Management Science in Planning and Control*, New York: The Technical Association Publication No. 5.

1969. 'Long range planning in perspective', *Proceedings of the 15th CIOS International Management Congress*, Tokyo: Kogakusha Co.

1969. With Brandenburg, Richard. 'The general manager of the future', paper presented at the Alumni Conference, Carnegie Institute of Technology, April, 1967: published in *California Management Review*, Vol. 11(3). Reprinted in House, W. (Ed.), 1970, *The Impact of Information Technology on Manufacturing Operations*, Brandom Systems press. Reprinted in Turner, J. H., Filley, A. C. and House, R. (Eds.). 1971. *Readings in Managerial process and Organizational Behavior*, Glenview, Illinois: Scott Foresman. This article won the second award in the McKinsey Awards for 1968/9.

1970. With Avner, Jay, Brandenburg, Richard, Portner, Fred and Radosevich, Ray. 'Does planning pay? The effect of planning on success of acquisitions in American firms', *Long Range Planning*, Vol. 3(2). Reprinted in Hussey, D. E. (ed.). 1983. *The Truth about Corporate Planning*, Oxford: Pergamon, pp. 313–324.

1971. 'Strategy as a tool for coping with change', *Journal of Business Policy*, Summer.

1971. With Brandenburg, R. J., Portner, F. E. and Radosevich, H. R. *Aquisition Behavior of US Manufacturing Firms, 1946–65*, Nashville, TN: Vanderbilt University Press.

1971. With Brandenburg, R. G. 'A language for organizational design', *Management Science*, Vol. 17(12).

1971. With Lebell, Don. 'Institutional factors in strategic decision-making', *Journal of Business Policy*, Vol. 1 (Spring).

1972. 'The concept of strategic management', *Journal of Business Policy*, Vol. 2(4).

1973. 'The next twenty years in management education', *The Library Quarterly*, Vol. 43(4).

1973. 'Management on the threshold of the post-industrial era', in *Challenge to Leadership: Managing in a Changing World*, the Conference Board, New York: Free Press.

1973. 'Corporate structure, present and future', *Proceedings of the Third International Conference on Corporate Planning*, Brussels. EIASM working paper 74-4.

1974. 'Functions of the executive office in a large conglomerate', EIASM working paper 75-42.

1975. 'The state of practice in management systems', EIASM report, working paper 75-11, Brussels.

1975. 'The knowledge professional in the post-industrial era', *Bedrfjskunde*, Jaargang 47, p. 88.

1975. 'The future of corporate structure', *Journal of General Management*, Autumn.

1975. 'An applied managerial theory of strategic behavior', EIASM working paper 75-12.

1976. Interview: 'Shortcomings of strategic planning', *International Management*, Sept.

1976. With Leontiades, James. 'Strategic portfolio management', *Journal of General Management*, Vol. 4(1).

1976. With Declerk, R. P. and Hayes, R. L. (eds.). *From Strategic Planning to Strategic Management*, London: Wiley. Contributed chapters. The changing manager; with Hayes, R. L. 'Introduction'; with Declerk, R. P. and Hayes, R. L. 'From strategic planning to strategic management'.

1976. 'Managing strategic surprise by response to weak signals', *California Management Review*, Winter.

1977. 'The state of practice in planning systems', *Sloan Management Review*, Winter.

1978. With Thanheiser, Heinz T. 'Corporate planning: a comparative view of the evolution and current practice in the United States and Western Europe', EIASM working paper 78-10, Brussels, March.

1978. 'Proposal for research and future legitimacy (role) of the business firm in Europe', Ansoff, H. Igor: Anders and Hedlund, Gunnar (eds.). EIASM working paper 78-45, Sept., Brussels.

1978. With Eppink, D. and Gomer, H. 'Management of strategic surprise and discontinuity: improving managerial decisiveness', *Marknads Vetande, Utgiven av Sveriges Marknadsforbund*, 4'78 argang 9.

1978. 'Management in unpredictable environments', *The Intercontinental Advanced Management Report*, Vol. 1(7).

1978. '*Corporate capability for managing change*', SRI Business Intelligence Program, research report no. 610.

1979. *Strategic Business Areas*, Tehokas Yrtys: Johtamistoimen, Ammattilehti, Jan.

1979. 'Planned management of turbulent change', *Encyclopedia of Professional Management*, New York: McGraw-Hill.

1979. 'Societal strategy for the business firm', EIASM working paper 79-24.

1979. 'Aspirations and culture in strategic behavior', EIASM working paper no. 79-12.

1979. *Strategic Management*, London Macmillan; New York; Wiley.

1979. 'ABC of strategic management', EIASM working paper 79-25.

1979. 'Changing shape of the strategic problem', *Journal of General Management*, Vol. 4(4).

1980. 'Managing the process of discontinuous change. Part 1: Behavioral resistance', EIASM working paper 80-26, July.

1980. 'Managing the process of discontinuous change. Part 2: Systemic resistance', EIASM working paper 80-36, Sept.

1980. 'Managing the process of discontinuous change. Part 3: Alternative approaches', EIASM working paper 80-37, Oct.

1980. 'Managing the process of discontinuous change. Part 4: The learning action approach', EIASM working paper 80-38, Oct.

1980. With Kirsch, Werner and Roventa, Peter. 'Dispersed positioning in strategic portfolio analysis', EIASM working paper 80-12.

1980. 'Strategic issue management', *Strategic Management Journal*, Vol. 1(2).

1982. With Bosman, A. and Storm, P. *Understanding and Managing Strategic Change*. Amsterdam: Elsevier/North Holland.

1983. With Achleitner, P. and Haskins, G. 'The firm: meeting the legitimacy challenge', *European Management Journal*, Vol. 2, No. 1, Summer.

1984. *Implanting Strategic Management*, London: Prentice-Hall.

1985. 'Conceptual underpinnings of systematic strategic management, *European Journal of Operational Research*, Vol. 19.

1986. 'Competitive strategy analysis on the personal computer', *Journal of Business Strategy*, Winter. Vol. 6(3), pp. 28–37.

1987. 'The emerging paradigm of strategic behavior', *Strategic Management Journal*, Vol. 8, 501–515.

1987. 'Strategic management of technology', *Journal of Business Strategy*, Winter 1987.

1988. *The New Corporate Strategy*, New York: Wiley. (Published originally as *Corporate Strategy*. New York: McGraw-Hill, 1965).

1990. With Sullivan, P. A. Competitiveness through strategic behavior. Making Organization More Competitive, San Francisco, CA: Jossey-Bass.

1990. With McDonnel, E. J. *Implanting Strategic Management*, 2nd edn. London: Prentice-Hall.

1991. *Strategic Diagnosis*. Unpublished diagnostic procedure. San Diego, CA: Ansoff Associates.

1991. 'Strategic management in a historical perspective', in Hussey, D. E. (ed.). 1991. *International Review of Strategic Management, Vol. 2.1*, Chichester: Wiley.

1992. 'A profile of intellectual growth, in Bedeian, A. G., *Management Laureates*, Greenwich, Connecticut: JAI Press.

1993. With Sullivan, P. A. *et al.* 'Empirical support for a paradigmic theory of strategic success behaviors of environment serving organizations', in Hussey, D. E. (ed.). 1993.

International Review of Strategic Management Vol. 4, Chichester: Wiley.

1993. With Sullivan, P. A. 'Optimizing profitability in turbulent environments: a formula for strategic success'. *Long Range Planning*, Vol. 26(5), pp. 11–23.

1995. With Lombriser, R. 'How successful entrepreneurs pilot firms through the turbulent 1990s'. *Strategic Change*, Vol. 4(2), pp. 95–108.

Translated editions of books (partial details)

Corporate strategy:

- Italian, 1968. Milan: Etas Kompass
- French, 1968. Hommes et Techniques
- Japanese, 1969. Tokyo: Sanno Daigaku Shuppanbu
- Swedish, 1972. Stockholm: Wahlstron and Widstrand
- Danish, 1972
- Dutch, 1973
- Portuguese, 1976, Sao Paulo, Brazil
- Spanish, 1976

Business Strategy

- Swedish, 1972
- Italian, 1974
- Spanish, 1976

From Strategic Planning to Strategic Management

- Spanish
- Portuguese

The New Corporate Strategy

- Japanese 1990. Tokyo: Sanno Daigaku Shuppanbu

Strategic Management

- Japanese 1980. Tokyo: Sanno Daigaku Shuppanbu

Implanting Strategic Management

- Japanese 1994. Tokyo: Diamond Sha
- Korean 1995

Acknowledgements

The idea of writing this article came to me from my colleague Mike Brown of Nottingham Business School, Nottingham Trent University whose students on the MBA programme were given the task of evaluating the contributions of various business thinkers who had helped to shape the way we think about management.

Professor Gen-Ichi Nakamura, a good friend, provided information for inclusion in the article, and kindly reviewed my first draft. His comments are particularly valuable as he is one of the leading people in the strategy field in Japan, and well known in many other countries.

Professor Peter Franklin, the head of the strategic management and marketing department at Nottingham Business School, another colleague, also reviewed the first draft and made many helpful suggestions.

Professor Igor Ansoff supplied me with biographical details.

Biographical note

David Hussey is the editor of this journal, has been both a practitioner and a consultant in strategic management, and is the author or editor of some 28 books on the subject. He is both a fan and a friend of Igor Ansoff.

References

Note: references to Igor Ansoff's work are included in the detailed bibliography, and are not duplicated here.

Brown, S. L. and Eisenhardt, K. M. (1998). *Competing on the Edge: Strategy as Structured Chaos*, Harvard Business School Press, Boston, MA.

Business International (1972). *Managing the Multinationals: Preparing for Tomorrow*, Allen & Unwin, London.

Chandler, A. D. (1972). *Strategy and Structure*, MIT Press, Cambridge, MA.

Coyne, K. P. and Subramaniam, S. (1996). Bringing discipline to strategy. *Mckinsey Quarterly*, number 4.

Drucker, P. F. (1955). *The Practice of Management*, Heinemann, London.

Emery, F. E. and Trist, E. L. (1965). The causal texture of organisational environment. *Human Relations*, Vol. **10**.

Gilmore, F. F. and Brandenburg, R. G. (1962). Anatomy of corporate planning. *Harvard Business Review*, November/December.

Hamel, G. and Prahalad, C. K. (1994). *Competing for the Future*, Harvard Business School Press, Boston, MA.

Learned, E. P., Christensen, C. R., Andrews, K. R. and Guth, W. D. (1965). *Business Policy: Text & Cases*, Irwin, Homewood, Illinois.

Mintzberg, H. and Waters, J. A. (1985). Of strategies deliberate and emergent. *Strategic Management Journal*, **6**, pp. 257–272.

Mintzberg, H., Ahlstrand, B. and Lampel, J. (1998). *Strategy Safari: A Guided Tour through The Wilds of Strategic Management*, Free Press, New York.

Mockler, R. J. (1995). Strategic management: the beginning of a new era. In: D. E. Hussey (ed.), *Rethinking Strategic Management*, Wiley, Chichester.

Parker, R. H. (1984). *Macmillan Dictionary of Accounting*, Macmillan, London.

Peters, T. J. and Waterman, R. H. (1982). *In Search of Excellence*, Harper & Row, New York.

Prahalad, C. K. and Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, May/June.

Quinn, J. B. (1980). *Strategies for Change: Logical Incrementalism*, Irwin, Homewood, Illinois.

Steiner, G. A. (1969). *Top Management Planning*, Macmillan, New York.

Stewart, R. J., Allen, J. K. and Cavender, J. M. (1963). *The Strategic Plan*, Long Range Planning Service Report 168, April, Stanford Research Institute, Menlo Park.

CCC 1086-1718/99/070375-18$17.50