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Scenarios, Strategy, and the Strategy Process

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Introduction: Responding to Uncertainty

How do organizations react in situations whose outcome is uncertain, where the signs are difficult to interpret? Consider the scene that occurs about 15 minutes into the film *Lawrence of Arabia*, where Lawrence (Peter O'Toole) and a traveling companion are resting at a well during an arduous trip through the desert. It's an unusually long shot, with a peptic-looking Peter O'Toole and his guide out in the sun; far away, just perceptible on the horizon, a speck. It grows; something is approaching from a far corner of the screen. It keeps moving toward them. What is it? A band of horsemen? Turks? Bedouins? They wait. They watch. They wait. Two men standing there, not knowing what to do about an approaching unknown. The shot keeps rolling. What's visible, finally, is another man galloping in on a camel. Who is he? Mesmerized, they stand and watch, not knowing what is happening or what to do. Finally, O'Toole's companion suspects something terrible is about to happen, runs towards his own camel, grabs his revolver and... Bam! From this desert specter, a rifle retort, and O'Toole's buddy is dead. The camera is still rolling on the dead man. Omar Sharif climbs down from his camel, rifle in hand, walks over and says: "He's dead." O'Toole replies: "Yes...why?"

The scene has a message for scenario planners. It illustrates the paralysis that can result from facing uncertainty in a "predict and control" frame of mind, leading to panic reactions when time is up, mostly with less than optimal outcomes. A "scenario thinker" may be able to overcome paralysis in such a situation. He or she will recognize the point beyond which the effort to work out what will happen produces diminishing returns, and will refocus sooner on a different question: "What do we do if...?" and then: "What does this mean for what we do now?" This approach requires keeping several futures simultaneously in the mind, which can seem difficult and uncomfortable to many "energetic problem-solvers."

Helping planners overcome these obstacles is what applying scenario thinking to the strategic planning process is all about. For an organization, the scenario process offers a way of thinking creatively yet systematically about possible future environments, and of developing strategies and then testing them for these environments.

Scenario thinking ultimately concerns the organization itself: in its current state, will it be capable of implementing the strategies it develops, or will it have to change as well? A new tool presented here, the "business idea," offers the organization a way of thinking about itself, just as scenarios offer a way of thinking about the environment.

A few points about the strategy process need to be stressed at the outset:

- It is not a one-step exercise, but involves an ongoing process, the "strategic conversation."
- It is a social process, involving a high degree of human interaction.
- It is specific to the organization; it cannot be pulled off the shelf, pre-packaged.
- It involves not only clearly codified and articulated knowledge, but makes use of the tacit, sometimes inchoate, thoughts of the people in the organization.

In the remainder of this paper, these points will be developed and illustrated with both practical procedures and relevant theoretical concepts.

Strategy: Self and Environment

In principle, scenario thinking is always appropriate, as all our decisions are affected by uncertainty. However, the degree to which uncertainty affects decisions can vary considerably. A useful concept to guide us is what Russell Ackoff, professor of management at the Wharton School calls the "futurity" of decisions: the degree to which the decision affects how the future will unfold. A decision on what I will eat today has low futurity, since it will not normally affect what happens tomorrow and thereafter. On the other hand, choosing a school for my son has higher futurity, since this decision may affect him for the rest of his life.

The further out we look into the future the more uncertainty enters into our consideration. Much predictability in the world is due to inertia; apart from the laws of nature it is the most important source of predictability. But since the effect of inertia wears off with time, decisions with high futurity have to be taken in the light of high uncertainty. These are the decisions that are of most importance to us, the "strategic decisions." They affect the direction in which we will be moving in the future.

Scenario thinking is most helpful to us in making those decisions where uncertainty is high, i.e., our strategic decisions. In order to make scenario thinking more effective, we need to be articulate about what strategic decisions entail.

Rationalistic Strategic Decisions

A lot of strategy is developed intuitively. Henry Mintzberg, professor of management at McGill University, argues that strategy can only be understood in retrospect, when we are able to analyze and see patterns in what has actually happened. Most managers do not find this view appealing. They believe there is a consistent pattern connecting the quality of their thinking with their resulting success and failure: good thinking should improve the chances of success—it is highly unsatisfactory to make big strategic decisions by rolling dice.

So it is not surprising that one approach to developing strategy is "rationalistic" decision making. The strong rationalistic tradition involves the decision maker in the following steps:

- Predicting the future environment (assigning probabilities, if appropriate)
- Identifying the basic aims of the "self" (individual or organization), and related measures of success
- Mapping the capabilities of the "self"
- Developing a list of optional strategies, based on these capabilities
- Evaluating the performance of each option in terms of the established measure of success in the predicted environment and selecting the highest-scoring option
- Implementing the selected strategic options

This approach is known as the *hard rationalistic paradigm*. It is based on two assumptions:

- There is ultimately one and only one best answer to any strategic question.
- Implementation follows the discovery of strategy; that is, action follows thinking.

These assumptions are both questionable. Scenario planning is an alternative way of decision making that does not depend so strongly on them. The second assumption will be examined later, once we have developed our understanding of the strategic process more fully. Consider for now the assumption that each strategic question has in principle one right answer.

The more uncertain the future seems, the less valid this assumption will be. The rationalistic paradigm handles uncertainty using one of three approaches:

- It can be ignored. An often-used argument says that there is nothing much we can do about things we don't know. Therefore the best way forward is to develop a "most likely" prediction, by asking the most expert individuals we can get access to, and using their responses for further analysis.
- Each variable is annotated with a margin of error. These are carried through the evaluation of all strategic options. The preferred option has the highest score on the basis of a statistically derived measure such as mean value.
- A number of alternative futures are generated, a probability is assigned to each, and the value of each option is calculated by averaging the values for each future, weighted on the basis of these probabilities.

Each of these approaches will lead to one unequivocal answer, by either ignoring uncertainty or dealing with it on the basis of probability. The question remains: Where do we find the requisite probabilities? Probability has meaning only if we are considering events belonging to a set with known statistical characteristics, either on the basis of historical empirical observation (e.g., the weather) or from first principles, based on laws of nature (e.g., dice). But strategy tends to relate to unique issues, which have not been seen before.

At this point the strong rationalist introduces the notion of "subjective probability," where "the expert" decides how to assess the probabilities. But nobody, however expert, can come up with a justifiable answer for the probability of a unique event. When asked to make such an assessment, managers make a metaphorical comparison with another area of human endeavor they know, and for which they feel they have some historical evidence. They will say such things as: "It is very likely that penetration of the Internet among the population will be ubiquitous—just look at how they embraced the telephone." Or: "The likelihood that Europe will move to a common currency is very high. After all, they have managed to get together on a common market."

The validity of such analogies cannot be assessed: metaphors have no assessable predictive value. We must conclude that the resulting subjective probabilities are untestable, arbitrary, and meaningless.

The decision theory itself, based on this model, is entirely consistent internally, based on a small number of intuitive axioms. However, the results of the calculations have no meaning since the essential input is unknowable.

Strategy Using Scenario Thinking: An Ongoing Process

Scenario thinking cannot be combined with the strong rationalist approach to strategic decision making. Using the term "scenario" for quasi-forecasts whose probability is to be assessed in making "the" decision is not what we mean here. Scenarios are devices for improving our perception. They fit into a different thinking paradigm, which defines strategy making not as a one-time decision, but as an ongoing process. This is the logical consequence of introducing unknowable uncertainty, which invalidates the idea of a single "best" strategy. Strategic decisions are not made once-and-for-all, but must be constantly revisited and tested. There is no "best" strategy and there is no single "definitive" set of strategic decisions: what may seem "best" today may be far from the optimum tomorrow. For a scenario thinker, the outcome of action is unpredictable.

Scenario thinkers focus on those elements in the future that are predictable to a degree. Their aim is to avoid having to say about an unfortunate outcome of a decision: "We could have known." Our knowledge of the future is limited. The rest is the unknowable risk an entrepreneur is prepared to take in return for a reward in the form of "profit."

Entrepreneurs cannot disengage from their decisions, so they must continue to monitor progress, pick up on new developments, and reassess the value of what has been done. Rather than "making a decision," they are continuously involved, learning through experience, and readjusting controllable variables in real time. It is in this approach to the future that scenario thinking has something significant to offer.

This approach resembles the wind tunnel testing of a new aircraft model. The aerodynamic behavior of an aircraft is too complex to be derived solely from mathematical equations. Furthermore, it must perform under a number of different conditions: it must accelerate and climb at takeoff, fly at cruising speed, descend and decelerate for landing, perform in crosswinds, etc. To allow for this, a model is built and tested in a wind tunnel, where conditions can be varied readily, and the results measured. The designer uses the results to determine how to improve the design. The model is then modified, and a new set of tests are conducted.

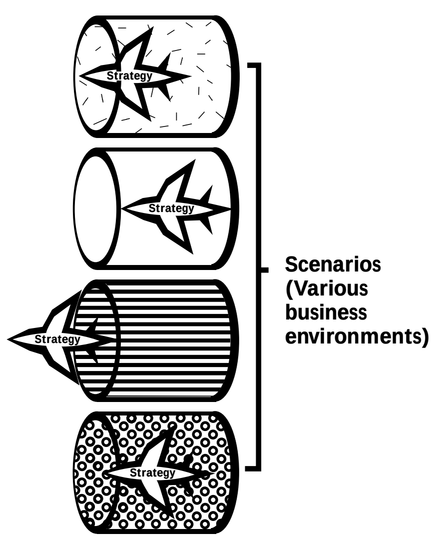


Figure 1: The Scenario Wind Tunnel

However, even when the designer feels ready to have a full-scale prototype built, the testing phase is not ended. The wind tunnel is kept available and the designer does not disengage from the project, but remains ready to make further modifications, fully aware that the design may not be the optimum one.

Scenario planning involves a similar ongoing process. The strategy is like the test model in the wind tunnel (see Figure 1). Scenarios are the test conditions, representing various business environments in which the strategy has to perform. And just as the conditions chosen for testing the model have to represent the range of conditions the aircraft will encounter in the real world, so the scenarios—even those that present extreme cases—should represent both plausible conditions of the business environment, and those that are suitable and practical as planning assumptions. For example, although a worldwide nuclear conflict is not impossible, few organizations would introduce such an event into their planning considerations. Most importantly, like the aircraft designer, the scenario thinker stays with the strategy process to ensure that if things start to move in a direction different from what was originally envisioned the strategy can be developed in an appropriate way. The scenario wind tunnel remains in readiness.

The Strategist Within the Organization

The Importance of Communication

From here on I will focus on the strategist working within an organization—though much of what I say can also be transferred immediately to the individual. However, the organizational situation has an additional complexity because of the need to get different individuals to align their thinking on the strategy developed. Interpersonal communication is an important component of the organizational strategy process. It can take many different forms, of which language is arguably the most influential. People within an organization are forced by that organizational situation to express themselves to each other. It is this organizational need to express a line of reasoning in language, that is, more specifically, in conversation, that makes organizations more rational in their behavior than the individual strategist. The language of organizations is rational, even if decisions derive mostly from other than rationalist algorithms.

An effective strategist is aware of this conversational process. What exactly is the subject of this conversation? Various metaphors illustrate what the strategist is after. They are expressed in such words as the "fit" between the organization and the environment, or convergence between the "paths" the organization and the environment are taking (see Figure 2). Most of these metaphors express the idea that strategic thinking involves both the nature of the environment and the nature of the organization itself. By considering the juxtaposition of these two clusters of insights, the strategist, following the "wind tunnel" model, will be able to consider whether a particular organization will be able to be successful in a particular environment.

In this thinking process, scenarios become meaningful as test conditions. This means that only scenarios developed in the context of one's own situation will be experienced as interesting and important. Scenarios developed for someone else are not likely to be appropriate test conditions for one's own strategic model. The conclusion is clear: scenario development must always be a customized activity. Only by pure coincidence may someone else's scenarios be relevant to one's own specific test requirements. Mostly, they tend to be

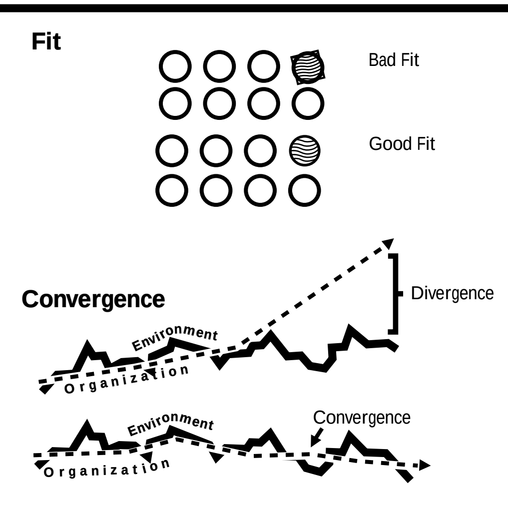


Figure 2: Strategic Metaphors

uninteresting and dull. Scenario facilitators would be well advised to make sure they know their clients' strategic situations and involve them directly in the scenario development process.

Traditional strategists, without access to scenario planning, often have difficulties in identifying and articulating the elements of the environment and of the "self" that are relevant to the strategic situation. Without these, the strategic conversation becomes impoverished and decisions become more and more intuitive. As a consequence, the rest of the organization outside the immediate environment of the decision maker is excluded from the process, and decision making takes on a top-down, power-based character. Such an impoverished strategic conversation often manifests itself in people down the line worrying about "not knowing the direction we are taking," and blaming the top managers for a lack of strategic focus. They are usually wrong about this; what tends to be missing is an articulation that allows the strategic ideas to be communicated.

Articulating Our Knowledge: The Process of "Scaffolding"

We can divide our knowledge into two categories—codified and tacit. Codified knowledge can be used directly for decision making. Its elements are well connected and integrated and are understood in context: they have meaning. However, we also have tacit knowledge, which we cannot articulate well. These elements consist of isolated observations and experiences that we have not yet been able to integrate and connect up with our codified knowledge. They seem intuitively important but puzzling: we do not yet understand their meaning very clearly.

It is often difficult for us to make our poorly connected constructs explicit on our own. In order to learn, one needs to relate new experiences to existing cognitive structures. To articulate our tacit knowledge, we need an outside agent to confront our unconnected bits of empirical knowledge with the knowledge structure in the wider group or society. This is the role of a "teacher" or sounding board. In this regard, the Russian psychologist L.S. Vygotsky introduced the term "the zone of proximal development" (see Figure 3) to indicate how far a child, with a few suggestions from a teacher, could move quickly beyond his/her current state of understanding. We use the term here to describe the realm where an individual's empirically rich, but disorganized tacit mental constructs interact with the logic of the reasoning expressed in the language of the social group. As a result of this interaction, the weak points of spontaneous reasoning are supported by the strength of the group logic.

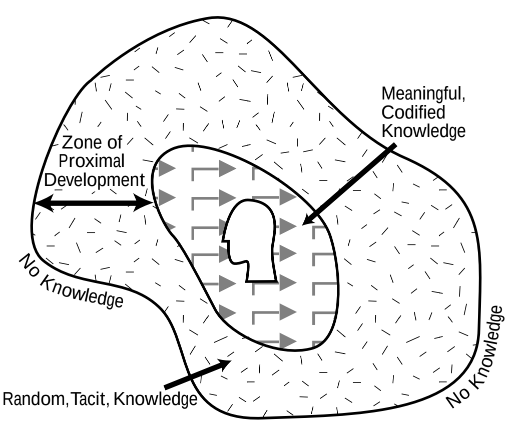


Figure 3: Zone of Proximal Development

This is a process which Vygotsky calls "scaffolding." It consists of building connections between intuitive isolated insights (tacit knowledge) and the larger context of one's understanding (codified). In this way, tacit knowledge can become part of the individual's overall knowledge structure: it can become meaningful, and enrich the mental model used to consider the future.

Strategy development is essentially a process of invention. It needs to go beyond codified knowledge, and must involve linking unconnected insights that have so far remained tacit. To use the terminology just developed: the process involves scaffolding in the zone of proximal development. Scenario development can be seen as a process of scaffolding insights about the environment, but since strategy is about confronting the "self" (i.e., one's existing insights and preconceptions, strengths and weaknesses) with the environment, we need a similar instrument for scaffolding insights about the organizational "self." Many scenario planners stop short of this, leaving their clients with exciting new insights about the business environment, but with nothing more than their own intuitive devices to draw conclusions about organizational implications. Many scenario workshops end with this, "So what?" question hanging, and the resulting frustration has turned many off the scenario methodology.

The business idea, discussed below, is a tool for articulating and scaffolding knowledge about the organization itself, just as scenarios are tools for scaffolding knowledge about the environment. Equipped with a set of scenarios for the future environment, in combination with a business idea as an explicit structural representation of the organizational "self," the strategist can then address the strategic question: "Is this company equipped to face the various possible futures we can imagine?"

I will first apply these insights into the learning process to the development of scenarios as the way to delineate possible environmental futures. I will then discuss the concept of the business idea as a means of clarifying the organizational "self."

Clarifying the Environment: Scenarios

In looking at the environment within the strategic time frame, what we are considering involves significant uncertainty. Not accounting for this is an abdication of managerial responsibility, a point ignored in most one-line business plans. Many people are so entrenched in the strong rationalistic paradigm that they cannot see an alternative. On the other hand, no one who has been confronted with the possibilities offered by scenario planning can logically go back to the one-line forecast. The scenario approach deals with uncertainty by generating more than one alternative future. Where do these alternative futures come from? What are the raw materials, and how are they put together?

Integrating Knowledge

The scenario approach takes insights and knowledge in the zone of proximal development and scaffolds them into the body of codified knowledge already possessed by the organization (see Figure 4). This is the only way to help the organization make progress. It will not be helped by representing only knowledge it has already codified; this would simply repeat what the organization already knows. Representing knowledge outside the zone of proximal development is not helpful either, since it cannot be integrated, and is therefore experienced as meaningless

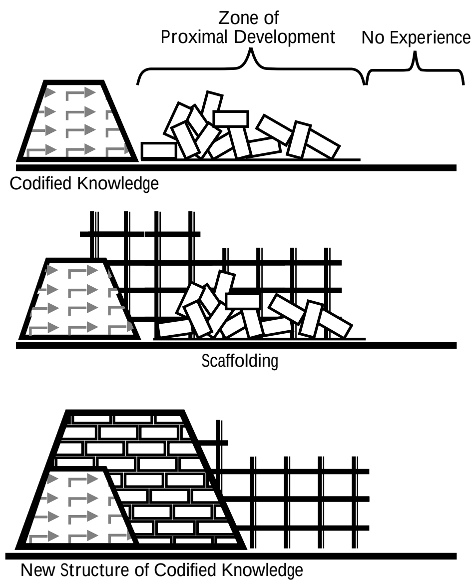


Figure 4: Integrating Knowledge by Scaffolding

or irrelevant, and leads to scenarios seen as "science fiction": fun maybe, but useless for business decisions.

The zone in which scenarios can be useful is not very large, and has to be carefully delineated in each exercise. It means that one cannot develop useful scenarios for someone else without their significant involvement. The organization has to contribute insights and knowledge about its zone of proximal development. As mentioned earlier, it is well documented that scenarios experienced as extremely helpful by the group that developed them are generally not very meaningful to others. Scenario design can only be productive when it is customized to produce scenarios serving a specific group only.

Giving Meaning to Weak Signals in the Environment

The description of the scene from *Lawrence of Arabia*, used at the beginning of this paper, illustrates the sort of unconnected insights and knowledge that we call "weak signals": events we observe and that reach our consciousness because we intuit that they have some relevance to our situation. Their "weakness" in this context refers to our inability to give meaning to them, in contrast to "strong" signals whose potential implications we understand clearly. We puzzle about the "black spots on the horizon"; we feel that they may become important, but we have no clue how or why. Weak signals are typical of the material in the zone of proximal development that makes up the building blocks of scenarios. The more the scenarios can integrate this type of knowledge in a meaningful way, the more successful the exercise becomes.

How can we get these building blocks on the table, and how do we link them up with our codified cognitive maps?

Scenario development is a social process: individuals work together to combine, or scaffold, the spontaneous, as yet unconnected insights of their tacit knowledge into coherent structures. They make the initially isolated constructs meaningful, and in that way incorporate them into structured knowledge used to consider the future.

The process is conversational: it triggers people to surface their spontaneous knowledge and then integrate it into existing cognitive structures. But experience has shown that these desirable results do not necessarily emerge spontaneously from people sitting around a table wishing to engage in such a conversation. Useful results come from a suitable process, involving a facilitator familiar with the dynamics of social interaction in this area. Experience over the years has produced a number of methodologies that are all capable of producing results.

To surface what we have called spontaneous knowledge, it is not very useful simply to ask people. Their knowledge is tacit, and needs to be triggered. The facilitator must know which triggers will be productive in exploring the zone of proximal development. It is common for scenario facilitators to interview the members of the client team in some depth in advance to map this out. During these interviews the interviewer must not set the agenda—the interviewee has to decide where the conversation should be taken. But it starts with the search for territory where the client feels insecure, puzzled, or worried. These signals all indicate that knowledge is not properly integrated. The interviews must be as open-ended as possible, addressing questions of uncertainty and puzzlement. A common opening is to ask: "If I were an oracle and could answer any question, which three questions would you ask me?" If successful, the facilitator will collect enough insights to suggest a "scenario agenda," i.e., significant themes or issues, that characterizes the zone of proximal development.

In the group process the facilitator should confront the client group with suggestions relating to tacit insights and knowledge that will elicit a response. Material surfaced during the interviews can be used in this way. Brainstorming, too, can make people trigger each other's knowledge. Most facilitators consider it helpful to bring new and unexpected external impulses to the discussion by inviting people with structured knowledge, who do not normally take part in the strategic conversation of the client organization. If these individuals are carefully selected so that their structured knowledge overlaps the area where the clients' knowledge is fragmented and unstructured, such an interaction can provide a powerful method of surfacing insights. Being expert is less important than having *relevant knowledge*. These people are sometimes referred to as "remarkable people," (a term first used in this sense by Pierre Wack, who developed scenario planning at Shell in the 1970s) because they help the members of the client organization make leaps in understanding, causing them to surface tacit knowledge, and then integrate it.

Examples of such knowledge might include:

- Shifts in the values held by potential customers (e.g., "I don't understand the market.")
- Shifts in wider value systems (e.g., "I don't understand today's teenagers.")

Other ways of provoking responses involve asking questions based on general purpose checklists, with the hope that some of the responses will overlap with ideas in the zone of proximal development.

Once tacit knowledge has been surfaced, the next step is to integrate as much of this material as possible into the client's cognitive representation of the business environment. In scenario thinking the instrument used for this is the story line.

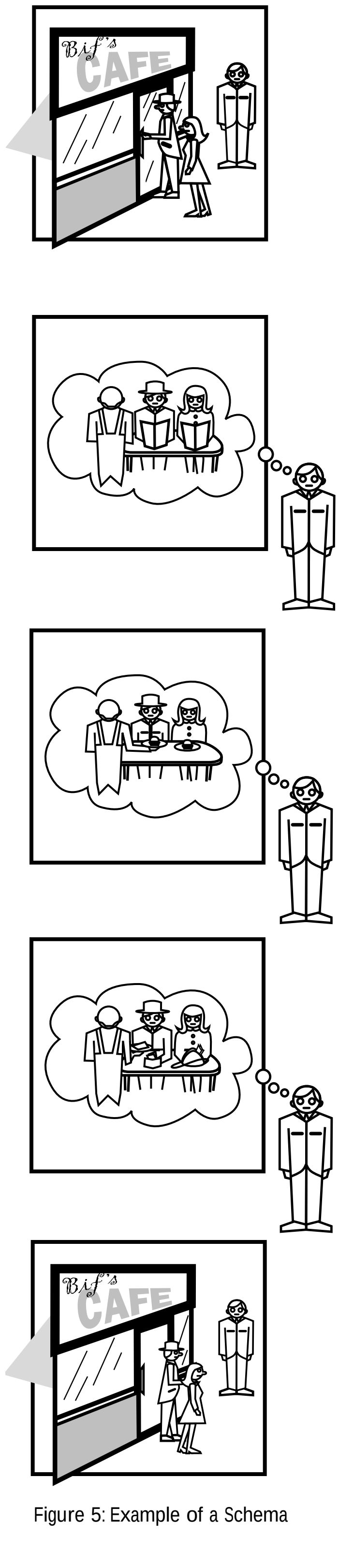


Figure 5: Example of a Schema

Scenario Stories as Scaffolds

A story line is one of the most powerful means of packaging a complex set of events and relationships into something that is cognitively manageable, and therefore memorable.

There are suggestions in the literature that much of human empirical knowledge is stored temporally and then used to construct story lines. For example, computer scientist and cognitive psychologist Roger C. Schank has introduced the term “schema” for a chunk of temporally organized knowledge concerning an area of human activity, such as the series of activities that one would expect to be involved in when visiting a restaurant (see Figure 5). Activating this schematic knowledge provides a basis for making inferences and suppositions about the meaning of events.

Neurophysiologist David H. Ingvar developed experimental evidence for his suggestion that temporally organized memories, which he called “memories of the future,” act as perception filters, determining what we perceive (see Figure 6). Going through life, people prepare for events by spinning stories in their mind about the future. For example, a prospective employee may rehearse answers to questions expected in an interview. This mental activity builds up a store of schemas or memories of the future through which subsequent events are interpreted. Even if the specific, rehearsed scenario does not play out in detail, the mind has nevertheless built up a readily available set of scaffolded concepts, allowing perception and judgment of what is going on. According to this model we all are well-trained scenario planners.

These theories help explain why, in scenario workshops, participants feel empowered by the new knowledge they have gathered through surfacing tacit knowledge and developing it into scenarios.

Because in the scenario planning process any story line is flexible, it is possible to embed the new discoveries made during the process in a limited number of scenario stories. Various ways have been developed to decide how to organize the building blocks into a limited number of stories. Most of these lead to satisfactory results. It is important to arrange the process so that building the story lines is another opportunity for participants to be prompted into surfacing further pieces of their tacit knowledge. This can happen in various ways: the juxtaposition of two ideas can lead to a third, or the need to create an internally coherent story line may suggest a further construct to complete it. For example, if a story involves a potential conflict that did not occur, one element of the story would have to explain how the conflict was avoided.

Clarifying the "Self": The Business Idea

Social organizations are often experienced as too complex to "put one's mind around." For the strategic conversation this experience needs to be simplified: we need a mental model of the organization that can be held in one's mind as a single whole. The literature is divided on how complex a model can be and still be grasped in a unified overview. It seems that we have to filter significantly in order to obtain what is essential from a very large pool of available detail. What principle can be used to arrive at the essence of an organization's strategic identity? How do we develop the mental model of the organization as it pursues its strategic objectives?

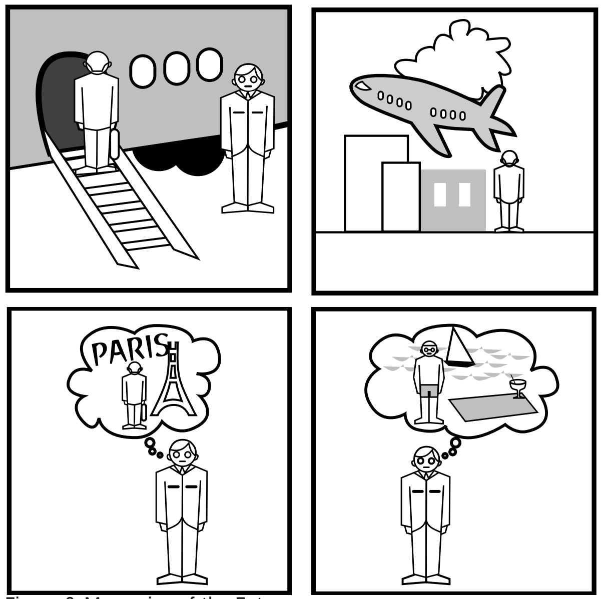


Figure 6: Memories of the Future

The Essence of the "Self"

We can begin by looking at what people admire in an organization. Observers of the business world are divided in their opinions. Magazines like *Business Week* or *Fortune* promote the "CEO as super-hero" approach, where it takes only a strong-willed CEO single-mindedly pursuing his objectives to create the great success stories of the business world. Against this viewpoint, the modern organizational learning literature emphasizes the need to be adaptable in a changing world. Strategist Arie de Geus admires companies that survive for hundreds of years by transforming themselves (in one celebrated example, from copper mining to paper and pulp manufacturing).

Two Objectives: Direction and Adaptation

We seem to have two mutually exclusive but equally desirable objectives: pursuing a set goal or vision, and maximizing adaptation to change. How do they work out in organizations?

The strongly directional organization will find that the pursuit of strategic direction needs protection from diversionary forces in the environment. The environment is constantly changing, and new developments, if unchecked, may push the organization off course. For example, in a competitive environment other protagonists may copy a successful strategy, eventually invalidating it as a success formula for the original company. Thus Osborne, the maker of the first portable computers, was wiped off the map when Compaq copied the idea.

Protection against these forces has two aspects:

- Making sure your business idea is relevant in the market; that it produces value for customers
- Ensuring that it is based on distinctiveness that cannot easily be copied

Osborne produced customer value, but its portable design had nothing proprietary in it.

How does the organizational system deal with this? Organizations can continue to exist only if they absorb uncertainties, that is, make internal changes that counteract the effect of external unexpected events. But these changes could reduce internal coherence, and may disturb the directional business idea. One suggested solution is to establish specialized uncertainty-absorbing subsystems that allow organizations to deal with uncertainty without disturbing the directive managerial role. An example of such a mechanism in a manufacturing organization is the marketing/sales department, whose job is to translate the idiosyncrasies of individual customers into the standard product that the factory can mass-produce.

Survival and Self-development

A useful way to deal with dilemmas requires generating a higher-level concept that connects the two mutually exclusive objectives into one coherent construct. We can transcend the dilemma between direction and adaptability by considering a higher-level definition of the organization's purpose, using psychologist William Stern's concept of the "living organism." Stern defined the living organism as having the twin and interwoven purposes of survival and self-development. Although these form an inextricable pair, either one may be more appropriate depending on the particular state of the relationship between the organisim and its environment.

An organization's overarching objective is its self-development and in a competitive environment self-development is survival. Behind the dilemma between the visionary CEO and the adaptable firm lies a common agreement that self-development/survival is a valid direction for the organization to take. In fact, in most organizations it is seen as a strategic imperative: "If we do not grow we die." The overriding need for growth/survival is the starting point for the development of strategic identity. We are looking, therefore, for an approach that can define the organization in terms of its growth potential.

Reaching a Shared World View

The development of an organization's strategic identity is a social activity. Most organizations do not leave the development of strategy to an individual. Strategy can be effective in organizations only if it is shared among people: it must be articulated, discussed, and negotiated.

At the same time, the notion of strategy is linked fundamentally with uncertainty, and therefore involves more than one alternative view. Comparison of the relative value of each view in conversation can lead to a conclusion only through a reasoning process that links each alternative strategy proposed with the shared world view based on growth/survival. Only on the basis of this shared world view, that is, by recognizing that growth/survival must be the sole criterion for preferring one alternative to another, can the group derive a common conclusion acceptable to all.

The strategic identity of the organization needs to be argued rationally. It must contain the basics of a "success formula" that will enhance the chances for the organization to survive and flourish. Strategic identity is the basis of the business idea.

The Business Idea in Detail

A Positive Feedback Loop

Systems theory represents self-sustaining growth as the outward manifestation of a positive feedback loop. In such a loop the variables in the system are configured so that an increase in one variable causes ripple effects through the other variables in the system, which, in turn, push the variable up even further. Actions have a snowballing effect (see Figure 7 for examples). Loops of this kind are self-reinforcing, leading to sustained growth.

Because its growth is the overriding objective, an organization's business idea must be so defined that it can be expressed as a positive feedback loop. The most convenient way to express a feedback loop is by means of an "influence diagram," where the causal relationships between the variables in the system are shown by arrows (see Figure 8).

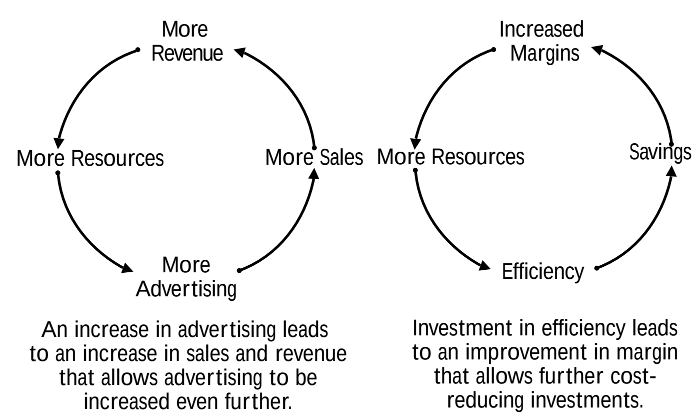


Figure 7: Positive Feedback Loop

Growth requires resources, and sustained growth requires the ongoing application of resources. How these resources are to be generated must be an explicit part of any business idea, and must be addressed in the positive feedback loop. Generating resources means that the organization's interaction with other actors is so valuable for them that they will return some of this value in the form of a price paid for service. This interaction-partner is a crucial player in the growth game—it may be a customer buying goods or services of value to it, or it may be a funding agent acting on behalf of the community to promote the creation of a common good. In any case, the crucial condition that must be satisfied for growth is the creation and realization of value for others.

Creating value is a necessary condition for growth, but not sufficient. The organization must also be able to appropriate some of the value for itself. To create the

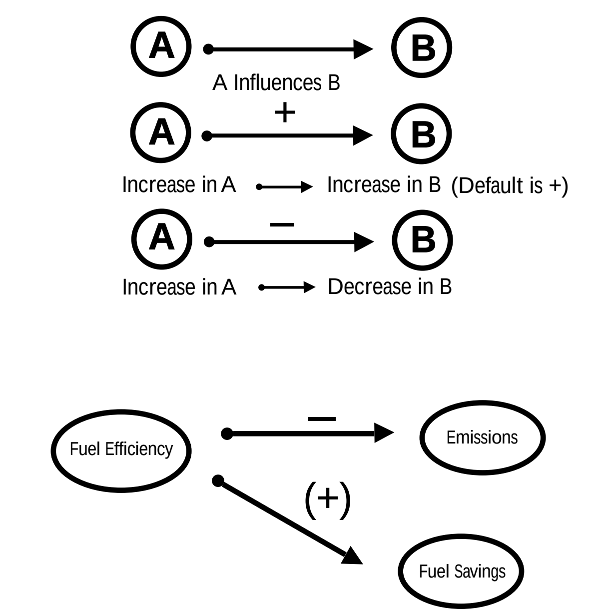


Figure 8: Influence Diagram

resources to support growth, it must be able to command a price for its services that is high enough to create a margin over costs incurred. This, in turn, is possible only if there are sufficient barriers to entry for other organizations that potentially could compete for this customer interaction. If these barriers are not in place, others will copy any successful customer interaction and, through competition, make the surplus disappear.

A typical example of a barrier to entry is the monopoly rights granted to a public sector organization. That this security may be more apparent than real becomes clearer if we reperceive the customer to be the funding agent. Most funding agents have competing alternatives open to them. An organization must be able to show that it performs a distinctive service if it wants to continue to enjoy the funding agent's support. It is more robust for an organization to build in its own barriers to entry through distinctive competencies that others find difficult to emulate than to rely on other methods.

The broad outline of the positive feedback loop now starts to take shape:

- Interactions between the organization and its customers produce value for these customers.
- The contribution from the organization is made possible when it brings its system of distinctive competencies to bear on the interaction.
- The customer is prepared to pay part of the value created as a price. If this price is in excess of the cost incurred, the organization creates a surplus.
- The surplus will then be applied towards acquiring the resources necessary to maintain the existing distinctive competencies, and build new ones.

The generic loop underpinning the business idea is shown in Figure 9. The diagram gives the skeleton of the business idea, which now needs to be articulated and made specific for the organization. As the basis of a strategic analysis and discussion, it becomes a useful "counterpoint" to the scenarios. This articulation should address a number of important issues:

- Who is the customer (defined in terms of the party with the power to engage this organization or not)
- What is the nature of the transaction between the organization and the customer?
- How does the customer derive value from the interaction?
- What is unique in the interaction, deliverable only by the organization?

- What are the distinctive competencies of the organization allowing it to produce this element of uniqueness?
- What resources are applied to maintain the distinctive competencies?
- What resources are applied to renew the distinctive competencies?

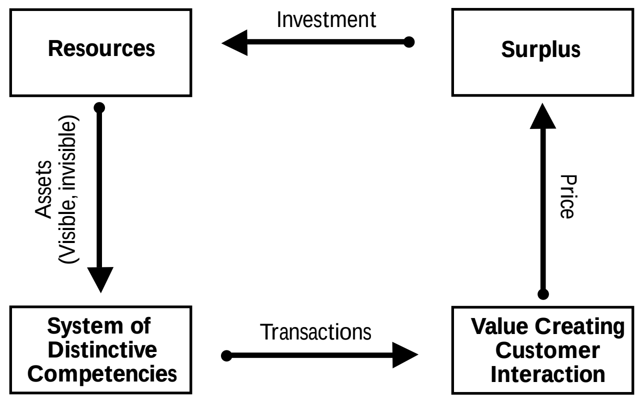


Figure 9: The Business Idea

Worked-out examples of the business ideas of two organizations are presented in "Business Ideas With Built-in Limits to Growth" (pp. 16–17). Both are shown as influence diagrams so as to bring out clearly the positive feedback loops on which they are based. Following usual practices, boxed items represent the distinctive competencies.

Defining "The Customer"

Identifying the customer depends on the definition of the business of the organization. In the context of the business idea, we define the customer as those parties deciding between competitors for their choice of partner in the value creation interaction. The question of who is the primary customer requires focusing on the crucial "moment of truth," when the battle between competitors is decided in favor of the organization we are studying. As we saw earlier, a public sector organization may consider its funding agent to be its primary customer. Similarly, instead of seeing as its customer the consumer buying its commodity product, an oil company may prefer to consider its moment of truth when a government decides to whom it will grant a favorable concession for a promising reserve. In the context of its business idea the government may be the primary customer, and it may be more appropriate to define the company as a provider of "rent-creation" services to host governments instead of by its secondary activity, the selling of oil to the public.

Distinctive Competencies

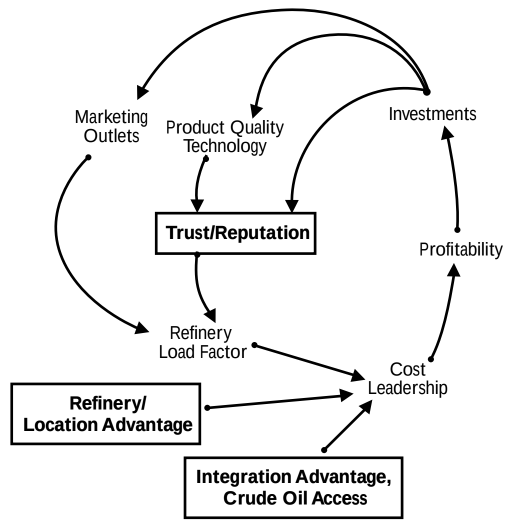
How and why might organizations acquire distinctive competencies? Since it is probably true that all distinctiveness is ultimately imitable, distinctive competencies are transitory, and need to be renewed. Their distinctiveness is based on the fact that they need time, resources, and energy to develop. This creates barriers for potential competitors, "friction forces" allowing organizations to enjoy the benefits of their acquired distinctive competencies for a limited period of time.

But since each distinctive competence needs to be renewed or replaced, it is crucial for any organization to understand what creates value for customers. For example, being able to read the customer's mind may in itself be a distinctive

Business Ideas with Built-in Limits to Growth

a) Small Oil Refining Company

This business idea was drawn up by a relatively small oil refining company supplying a local market. The company competes with a number of international companies in its market, but these have to ship in the product from further afield. Management recognizes that oil products are commodities, and that there is very little room in the market for competitive advantage based on product differentiation. Profitability is primarily based on cost leadership, which is the strategic aim.

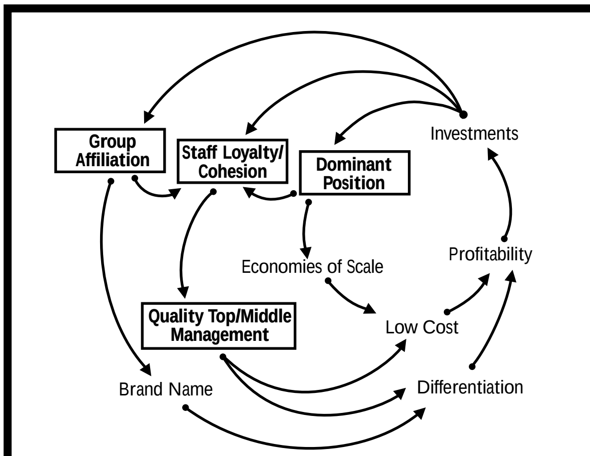


The Business Idea: Small Oil Refining Company

The company has a number of advantages, one of which is the fact that its facilities are closer to its markets than those of its competitors, and shipping crude oil is cheaper than shipping oil products. It also has a close link to a local crude oil producer, which assures it of a constant supply of crude oil of consistent quality. This reduces the cost of refining by avoiding run switching and by cutting down working capital in crude oil stocks. However, these advantages lead to cost leadership only if the refinery is always fully loaded. The company ensures this by first of all investing in its marketing outlets, and secondly by investing in its reputation. The latter takes two forms: first of all building brand awareness in the market by advertising and promotion, backed up by the second form, that is the top quality of the product itself, based on investments in product technology.

So far the business idea has enabled the company to survive in a highly competitive market. However, there are limits to its exploitation, in that expansion of capacity leading to a wider supply envelope will reduce its advantage vis-à-vis its competitors. This is a business idea with built-in limits to growth.

b) International Multi-product Business



The Business Idea:
International Multi-product Business

This is an example of a business idea at the corporate level. The company is an affiliate of a well-known international group, with a very well-established brand name. It deals with a number of rather dissimilar product lines which have little in common except that they make use of the same logistics systems. By achieving a dominant position there are clear economies of scale to be obtained here, and the company has built up a position to benefit from this.

Another distinct advantage the company enjoys at a corporate level is its international affiliation, which allows it to exploit the well-known brand name that differentiates its branded products in the market. An important aspect of the international affiliation is that it makes the company attractive as an employer in the market for managerial staff. The company has traditionally reinforced its attraction by investing in its employees, both by paying salaries in the top quartile of the industry range, and by paying continuous attention to training and development, using its international affiliation to broaden the outlook of its managers. As a result, it has traditionally attracted high-quality employees in the top and middle management ranks. Top management takes it as axiomatic that this is a precondition for the realization of rent potential through differentiation and cost leadership.

The positive feedback loop illustrates how profitability is realized by exploiting economies of scale in logistics and product differentiation through brand recognition in the markets. Cash generated is invested in market share, human resources, and dividends to the parent. As a result, the company has been successful in building distinctive positions in market dominance, quality of managers, and access to a worldwide brand. These form the foundations of its competitive advantage across all its product lines. The distinctive competencies shown in the diagram work across the total business and benefit all products.

All business ideas have built-in limits to growth. The company has already reached a dominant position, its managers are of the best quality available, and it already enjoys the benefits of a worldwide brand. The position of the company is strong, but significant expansion will have to be developed somewhere else.

competence. Richard Normann, a consultant on strategic change, categorizes distinctive competencies as:

- Productive distinctive competencies, such as:
  -A better trained work force
  -Technological know-how embedded in the organization
  -Ownership of patents
  -A flexible production system or culture
  -Superior market share (leading to economies of scale and learning effects)

- Relational distinctive competencies, such as:
  -Reputation
  -Brand name
  -Access to distribution channels
  -Customer-oriented culture

David J. Teece, director of the Institute of Management, Innovation and Change, at University of California, Berkeley, suggests that distinctive competencies are based either on investments made in the past that cannot be reversed ("sunk investments") or tacit institutional knowledge embedded in the organization. Real or intangible assets created by sunk investments are available to the organization to bring to bear in customer transactions at low opportunity cost. New entrants would have to make these investments at their full cost, putting themselves at a disadvantage. Examples of such assets are:

- Acquired legal protection, such as patents
- Reputation
- Specific-use assets

Uncodified knowledge must be owned by the organization and not by specific individuals within it if benefits are to accrue to the organization as a whole. This type of knowledge is difficult to emulate partly because of the friction forces mentioned above. In addition, much knowledge embedded in organizations is tacit, acquired more by accident than design, and may be difficult for a potential competitor to understand in all its detail. Examples of areas where organizations develop tacit institutional knowledge include:

- Distributed know-how systems
- Organizational culture
- Commitment of members of the organization
- Members who identify with the organization

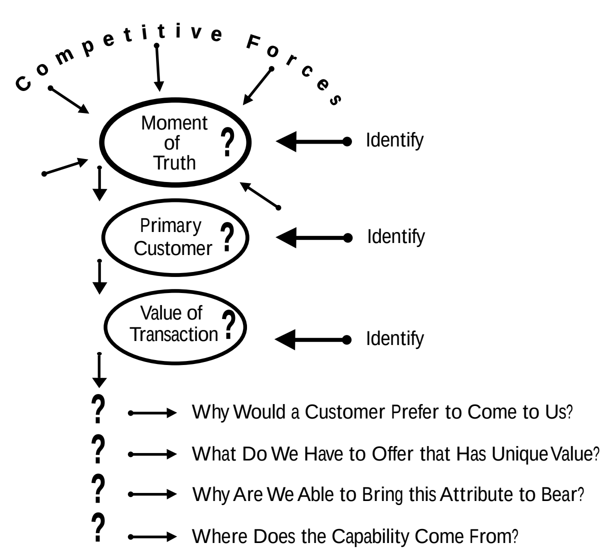


Figure 10: Developing the Business Idea

Distinctiveness is a relative notion, and distinctive competencies can only exist relative to competitors. For example, having “a committed work force” as such, is not enough; for it to be a distinctive competence it must be present in the organization to a unique degree.

Articulating the Business Idea

A practical way of developing a business idea diagram is to set up a workshop environment, where a facilitator leads a structured dialogue in the management team, gradually developing the diagram on a white board. The process is described in Figure 10. The best place to begin is to identify the “moment of truth,” when the competitive battle is decided.

By addressing repeated “why” and “how” questions, the group gradually builds up the influence diagram, where some organizational attributes explain others. This process continues until attributes can only be explained by the investments the organization has made in the past or is currently involved in. At this point the loop can be closed by connecting investments with the surplus generated, in turn based on the value created in the customer system. This is illustrated in the two examples in “Business Ideas with Built in Limits to Growth” (pp. 16–17).

Following the conversational process, the facilitator usually needs to clean up the result by unraveling crossing lines and simplifying the diagram down to a cognitively manageable number of constructs. This normally requires combining constructs into a lesser number at a higher conceptual level. The whole process generally takes a few iterations through the management team, until full agreement has been reached and “ownership” is shared.

Working with Scenarios to Develop Strategy

Confronting the Business Idea with Scenarios

The business idea encapsulates the “success formula” with which the organization intends to walk into the future. The question arises whether it constitutes a strong, robust formula, containing enough general purpose competencies so that it can deal with most futures as we can envisage them. Alternatively there may be weaknesses that we can bring to light in time for us to take corrective action. This is where the business idea needs to be confronted with the scenarios in a wind tunnelling approach, addressing the question of whether this is the right formula to face the futures developed in the scenarios (see Figure 11).

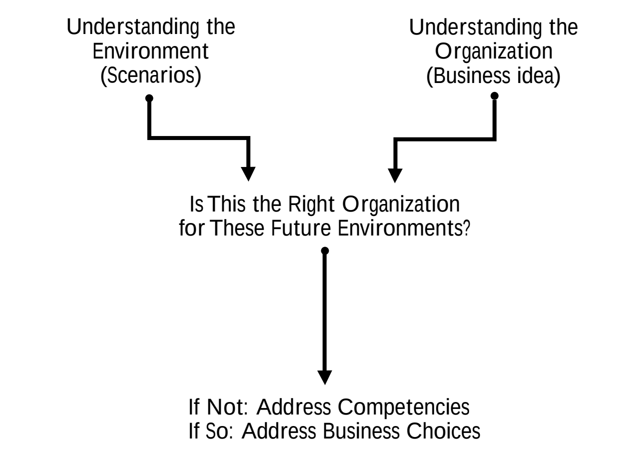


Figure 11: The Environment and the Business Idea

As we saw, the scenarios must be appropriate test conditions for the business idea. An effective way to achieve this is by articulating the business idea among the members of the management team before the scenario agenda is specified. The scenario development project then needs to be kept focused on this agenda, to ensure that test conditions are developed that are relevant to the specific business idea to be tested. Once appropriate scenarios are developed, there are two ways of wind tunneling the business idea, one from the perspective of the entrepreneur, the other from the perspective of organizational learning.

The Entrepreneurial Perspective

The entrepreneur's approach to scenario planning addresses head-on the question of whether "this is the right company for the future." The steps involved include the following:

- Identify the evolution of customer value in each of the scenarios (ask what is changing across the whole range of stakeholders, what new needs are arising for each of them).
- Study the performance of the business idea in the evolving value system of each of the scenarios. Identify strong and weak points.
- Generate options to respond to new customer values, either by exploiting a strong business idea or by improving a weak one.
- Build options together into strategies.
- Evaluate each strategy across all scenarios.
- Repeat as an ongoing process.

Generating Portfolio and Capability Options

The process revolves around generating creative strategic options open to the organization. At this stage the scenarios are used as idea triggers. The management team works through each of the scenarios in turn. They identify the stakeholders in each scenario and consider how each stakeholder's value system evolves. Stakeholders would include everyone needed by the company to be successful: the many segments of customers and potential customers, employees, suppliers, competitors, the government, the community, and so on. Once these stakeholders have been identified, the team members then ask themselves what their most effective competitor would be like and *whether it would be possible for the organization (as articulated in the business idea) to perform satisfactorily in that environment.*

If the question is answered positively, option generation concentrates on trying to find new areas in which an apparently strong idea can be exploited. These options are known as "portfolio options," since they concentrate on exploiting the same strengths over a wider portfolio of opportunities. Typical examples include:

- Market development
- Product development
- Entering new markets for the same product (for example, exports to new markets)
- Concentric diversification (using existing competencies in closely related new business areas)
- Mergers with, or acquisitions of, comparable organizations

If the business idea is found wanting, options will be generated of a type called "capability options." These indicate that activities need to be concentrated in the first place on strengthening the business idea before a new business portfolio is acquired. Typical examples include:

- Building customer access skills or a service-oriented culture
- Investing in a low-cost strategy
- Investing in turnaround or retrenchment strategies
- Divesting weakly integrated activities

At this stage the scenarios are used as idea triggers. They are of course not the only triggers available: there is no monopoly on good ideas. Strategic options may have been around already on an intuitive basis and can now be incorporated in a comprehensive snapshot of the total business situation. It is important that the exercise be conducted in a true brainstorming frame of mind, i.e., all judgment should be postponed until no new ideas seem to be forthcoming.

The options surfaced during the brainstorming activity tend to be a range of possible actions conceptualized at various levels from strategic to operational. The next step is to design strategies by packaging together those optional actions which pursue similar objectives and are mutually reinforcing. The best result is obtained if the options can be grouped into strategy clusters that are distinguished from each other in the way they resolve the major strategic dilemmas facing the management team, such as:

- Does the company concentrate on cost leadership or product differentiation?
- Does the company resolve weaknesses by retrenchment or expansion (by vertical integration or conglomerate diversification)?
- Does management downsize or expand?
- Does it reallocate rewards to investors, customers, or employees?

The main dimension along which the various strategies are mapped can only be clarified by reference to the business idea. This will show where the scarce resources and basic bottlenecks of the organization are located, and where any fundamental choices have to be made.

For example, in "Business Ideas with Built-in Limits to Growth," (pp. 16–17) the oil refining company might be thinking in terms of strengthening its cost position or developing a new set of differentiated products or offerings. Alternatively it might think in terms of building on its current positional advantage versus repeating the formula elsewhere.

The clustering activity can be carried out either by trying to articulate these fundamental dilemmas in advance, or by intuitive clustering in a trial-and-error approach on the basis of emerging choice criteria. However it is done, the final result should address the most basic choices facing the organization. For example, a company in South Africa, under considerable pressure to pull out in the early 1990s, formulated its strategic options as follows:

- Pull out altogether
- Stay as we are, keep "ticking over"
- Do only short-term investments
- Invest for the long term

Four Criteria for Evaluating Strategic Options

After the strategic options have been generated, their consequences are discussed and assessed. At this stage, management is interested in the impact of the strategies on the attainment of the basic organizational goals of survival/growth discussed earlier. This overall objective can be broken down into four aspects. Under each there are specific criteria to consider in assessing the quality of strategies and their chances for creating growth. The four aspects are:

1. Financial performance, representing the surplus generated to drive future growth. Traditionally, the financial performance of a strategy is expressed through a financial business plan. It can also be approached qualitatively by considering distinctiveness, competitive advantage, and customer value.

2. Risk performance. The assessment of strategic risk is often a somewhat haphazard, intuitive affair, since the probability of unique events cannot be estimated. Many proxies are in use. For example, investors will be interested in the qualities and track record of the management team as an indicator of its ability to deal with unexpected change. Similarly, strong competitive advantage reduces risk.

Scenarios can be used to assess risk by considering possible outcomes across a range of different future environments. Provided the scenario development has taken into account the crucial risk factors, it can provide a major contribution to "calculated risk assessment."

3. Strategic fit. As discussed earlier, the success of any organization depends on a strong business idea, based on a system of distinctive competencies working in concert. Building this system takes resources and time, and a business idea cannot be changed overnight. A strategy based on exploiting existing distinctive competencies is much more plausible than one based on building an entirely new business idea. Unrealistic expectations in this area have a significantly lower potential for success.

4. Cultural fit. A corporate culture is one of the most stable characteristics of an organization. Any strategy aiming to make significant changes in this area faces major obstacles. Some companies have developed and successfully implemented strategies of culture change. In some cases, these strategies involved the organization in change activities over more than one generation of workers. These strategies take organizations into uncharted territory and always involve enhanced levels of uncertainty.

The Scenario-Strategy Matrix

A powerful tool to help management to get an overview of the strategic situation facing them in these four categories is the scenario-strategy matrix. In a scenario-strategy matrix, columns represent different scenarios and rows represent strate-

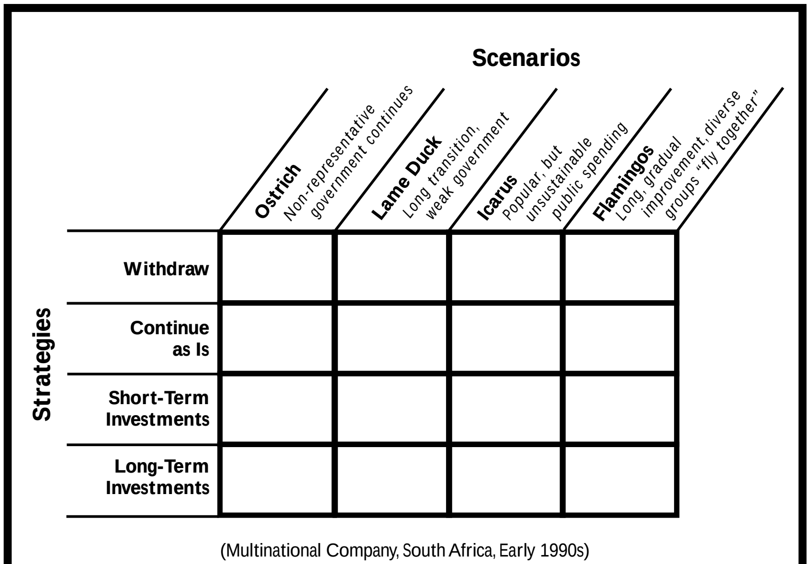


Figure 12: Scenario/Strategy Matrix

gies. It illustrates the idea that all strategies need to be assessed for all scenarios before a judgment of relative value can be made. Figure 12 shows a matrix for the South African company mentioned earlier, using the scenarios developed for South Africa at the Mont Fleur scenario exercise (GBN, *Deeper News*, vol. 7, no. 1).

Scenario planners must resist the temptation to develop preferences for specific scenarios. The idea of a "most likely scenario" contradicts the wind tunnelling notion of including uncertainty in strategy development all the way to the final decision point. The analytical task, therefore, is to assess all strategies across all scenarios, assessing performance in all boxes in the matrix on the four criteria mentioned in the last section. To do this, the scenario/strategy matrix should be read horizontally. By looking at the various outcomes for each strategy across all scenarios, one gains an impression of the level of risk involved for each strategy.

At this stage, the hard rationalist will suggest that a decision should be taken using the principles of multi-attribute decision theory. This involves assigning weights to each of the criteria involved and calculating an overall score. My experience is that in real life most management teams avoid working in this way. In situations where scores on different criteria rank differently, most teams will adopt an ongoing wind tunnelling process approach: they continue to work on each strategy and change its component mix until the choices across the decision criteria become clear. This will often involve building increased flexibility into a strategy to reduce the risk factor.

Flexibility

The wind tunnelling approach is based on the assumption that there is always room for improvement in the design of strategic options. This involves an ongoing search for options that are more robust across the scenarios. Most optional strategies tend to show rather different perceived performances depending on the scenario in which they are being tested. The search to make options less dependent on scenarios involves the question of flexibility in strategy. Marketing expert

Steven P. Schnaars has suggested four different approaches that can be adopted when designing strategy with multiple scenarios.

1. Robust strategy: Perform well over the full range of scenarios considered.

- Leads to an inherently conservative response to unpredictable environments
- Takes positions along the range of possible developments
- Protects against losses but provides only modest, albeit stable, returns
- Seeks to maintain a viable position rather than to gamble heavily on achieving spectacular results

2. Flexible strategy: Keep options open for as long as possible.

- With very high uncertainty, may be preferable to a robust strategy
- Depends on the level of perceived uncertainty and the cost of postponing a decision
- To be successful, requires that:
    - The decision maker understands how the strategy will be adjusted in each scenario
    - The decision maker remains vigilant in order to spot actual outcomes.
    - The response time is reduced as much as possible.

3. Multiple coverage strategy: Pursue multiple strategies simultaneously until the future becomes clear.

- Expensive, as it involves investments in strategies that will be discarded halfway without producing returns
- For firms with extensive resources, an ideal way to ensure against missed opportunities

4. Gambling strategy: Select a strategy which is known in advance to lead to suboptimal results if some of the possible scenarios develop, but produces more than proportional returns in others.

- As it is impossible to assess the probability of any scenario, it is best to consider a gambling strategy only if survival of the organization is not threatened in the worst case.

The Organizational Learning Perspective

Strategy and Execution

At the beginning of this article we identified the two basic assumptions underlying the strong rationalistic approach to strategy design:

- There is ultimately one and only one best answer to the strategy question.
- Implementation follows the discovery of strategy; that is, action follows thinking.

We had to abandon the first assumption when we considered the strategy process as a managerial activity that takes uncertainty into account all the way through the process while the team experiments, makes sense of experience, and acts accordingly. It is now time to consider the assumption that a strategic decision is followed by its execution as if these were two different activities. In fact, observers have repeatedly come to the conclusion that this is far from how things seem to happen "on the ground" in most organizations.

Consider the observations of John Harvey-Jones, former CEO of Imperial Chemical Industries:

> I believe...that in deciding where you would like to go, as opposed to where you are probably going to end up, you need a great deal of discussion and a great deal of development of new thinking and new processes. The idea of doing this through the planning department or through a paper on strategy presented to the board, seems to me to be quite inadequate. This process involves large amounts of time and constant discussion with those involved down the line who will actually execute the strategy on which the whole picture relies. This sort of circular debate, frequently widening out to involve others within and without the company, goes on until all are satisfied that the result is as good as they are going to get.

Mintzberg also found a style of behavior that seemed somewhat at variance with the traditional view of the decision-making world. He saw most executives

- Preferring verbal over numeric information
- Preferring conversation over reading
- Gathering data on an anecdotal basis
- Highly distrustful of any general theory presented to them
- Avoiding the "grand design" sort of decision
- Preferring to make smaller incremental decisions
- Letting the overall strategy emerge

John Kotter, a professor at Harvard Business School, notes that while executives claimed their task was goal setting, resource allocation, and use of resources, in fact they spent their time day-to-day on agenda setting, network building, and execution.

James Brian Quinn, professor of management at Dartmouth, observed that the full strategy is rarely written in one place. The processes used to arrive at the total strategy are typically fragmented, evolutionary, and largely intuitive. Although one can frequently find embedded in these fragments some very refined pieces of formal strategy analysis, the real strategy tends to evolve as internal decisions and external events flow together to create a new, widely shared consensus for action among key members of the management team.

A generation before these observations were made, political scientist Charles E. Lindblom pointed out that strategy seemed to differ from the rationalist model in important respects:

- Executives spend their time trying to avoid trouble rather than to pursue goals.
- Objectives are mostly not articulated clearly.
- Decision making moves between multiple, ever-changing decision centers.
- People adjust positions through bargaining and compromise.
- High value is placed on consensus-seeking behavior.
- Policy making thus becomes a serial process, of small incremental steps, often disjointed.

The organizational learning perspective sees managers putting high priority on the importance of engaging in a superior process of strategic discussion. It has relatively little to say about the strategy itself. For example, management guru Tom Peters has for many years emphasized such process skills as:

- Bias for action
- Closeness to the customer
- "Being big, yet acting small"
- Developing productivity through people
- Sticking to the knitting
- Simple form, lean staff
- Simultaneous loose/tight, minimal but effective control

These views emphasize the importance of human interaction for the organization's performance in its environment, with management as just one of the many actors involved. The most important aspect of these processes is the continuing dialogue being conducted throughout the organization, what we call the "strategic conversation."

The Strategic Conversation

In 1980, André Bénard, managing director of the Royal Dutch/Shell Group, wrote in the *Harvard Business Review* that "experience has taught us that the scenario technique is much more conducive to forcing people to think about the future than the forecasting techniques we formerly used." Since the mid-1960s, Shell has invested heavily in promoting the scenario technique within the company. The fact that it has proven difficult, except in a few celebrated cases, to come up with clear evidence of demonstrable links with improved strategic performance has not diminished the company's enthusiasm for the approach. Shell believes that upgrading the quality of the strategic conversation through the use of scenario planning is valuable, even if the direct link with performance is difficult to trace.

In consistently taking this stance, the management demonstrates its perspective on the company as a community with a common pur-

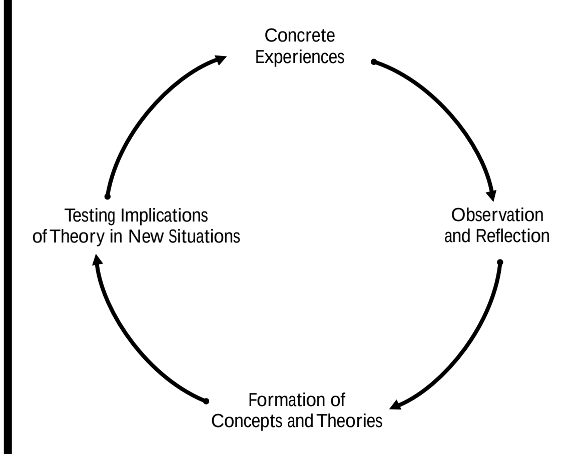


Figure 13: The Learning Loop

pose, which exists in a strategic conversation. Such a conversation creates learning loops which the organization continuously goes through, consisting of new experiences and perceptions, leading to conceptualization and adjusted mental models, leading to new plans and actions, leading to new experience, and so on (see Figure 13).

The amalgam of these actions follows a coherent pattern, which becomes the organization's strategy, created through a process of strategic conversation. Without the conversational process, the strategy would be tacit and emergent; there would be little scope for management to intervene. Effective strategy management, however, recognizes that strategic conversation plays an overwhelming role in making strategy development a conscious process. Furthermore, since top managers are themselves part of the ongoing strategic conversation, where they become part of a "central nervous system" through which signals flow, they are in a position to intervene, and exercise an influence on the evolutionary strategy process.

The management style that fits with this perspective is one of facilitation rather than command. Top management that recognizes the power of the strategic conversation will approach the organization as a "learning system," intervening by means of instruments such as:

- Projecting a vision of "a better future"
- Working through a facilitating management style
- Influencing by myths and metaphors, often revolving around tales of disaster and crisis
- Providing short-term rewards for learning behavior

The strategic conversation has both a formal and an informal component (see Figure 14). The informal component consists of any exchanges of views that take place whenever people meet by chance outside scheduled communication events: at home, in corridors, or over lunch. While this part of the strategic conversation is difficult to influence deliberately, it strongly affects the views people hold. Since it happens spontaneously it will naturally take place in the "zone of proximal development" of the participants, and therefore affect how they make sense of events and trends in the strategic situation. The resulting mental models will then drive their action planning and action taking.

Formal Component	**Informal Component**
▼ Organized	▼ Spontaneous
▼ Formal meetings	▼ Chance meetings
▼ Budgeting systems, project evaluation	▼ Golf course conversation
▼ Strategy reviews	▼ Private expressions of concern
▼ Cost-cutting exercises	▼ Friends working together
▼ Product, capital, market decision points	▼ Meeting points
▼ High management influence	▼ Minimal management influence
▼ May seem less relevant	▼ Strong influence on people's views
▼ May have limited effectiveness	

Figure 14: The Strategic Conversation

Most organizations have formal processes, systems, and methods for the exchange of ideas and views, and organize events where people come together for this purpose. These systems, listed in Figure 14, offer opportunities for interventions by management.

Because this part of the conversation is less spontaneous, it may be less relevant for many participants than the informal conversation, and therefore less influential. Many organizations complain about the limited effectiveness of meetings and other formal information-exchange systems. The normal reaction is to reduce their number. The effect of this, however, is to leave more of the evolving strategy to be determined by the informal strategic conversation, mostly outside control by management.

In organizations where management approaches its task in a facilitating style, exercising its influence by intervening in the strategic conversation, the question of relevance and therefore of attention management and agenda setting becomes of major importance. Managers must be aware of what goes around in the informal conversation. In this way they can also ensure that the formal agenda addresses issues in the "zone of proximal development" as much as possible, thus maximizing their impact.

For such managers, scenarios, and the business ideas they are based on, are natural instruments for intervention. This is because the most powerful signals management can give out in an organizational system take the form of stories or myths, which people subsequently tell each other to illustrate "how things are understood," and good scenarios can serve this purpose. For this process to work, the scenarios must be recognized as important signals that the organization needs to heed. They have to enter the everyday language of the organization. This can happen only if they meet the following criteria:

- Simplicity and evocativeness
- A short but evocative name
- Plausibility, based on internal consistency and causal connections with the present
- Relevance (as determined by the business idea), yet challenging to the ongoing strategic conversation.

It helps if people down the line are aware that the scenarios emanate from top management, and point to areas they consider worth attention. It is even more effective if management makes the scenarios and the business idea part of the formal strategic conversation. An example was Shell's introduction of a rule that new proposals put forward for top management's consideration had to be economically evaluated against the current set of scenarios. This forced managers down the line to pull out the scenario book each time they wanted to propose a project. As a result, the scenarios became institutionalized and used in the day-to-day discussions about strategy. This, in turn, provided top management with a powerful tap into the informal strategic conversation that can be so crucially important for company development.

Overcoming Organizational Pathologies

The strategic conversation connects individuals and groups of individuals, each of whom can be seen as an intelligent learning system, moving through a learning

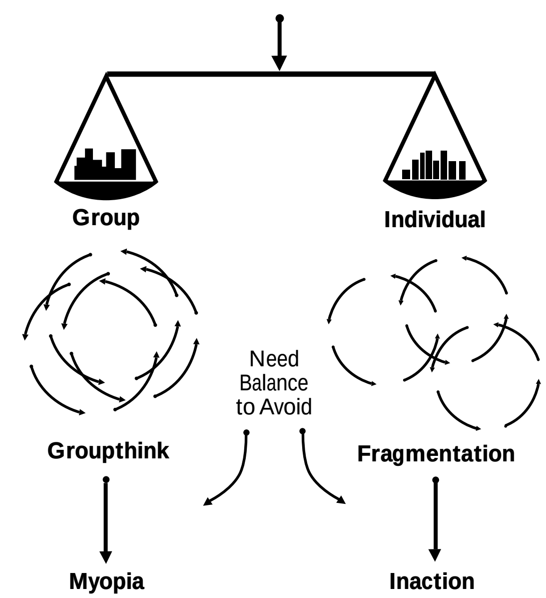


Figure 15: Strategic Conversation Organizational Pathologies

cycle of experiencing, reflecting, mental-model building and adjusting, planning action steps, and obtaining new experiences. In the strategic conversation, these cycles can be coupled in ways that can lead to pathologies, as illustrated in Figure 15. If coupling is tight, mental models will overlap, leading to increasingly similar action plans and experience. This, in turn, increases the overlap between mental models to the point where deviant ideas will gradually be shut out, and the danger of "groupthink" will loom ever larger. If, on the other hand, the coupling is loose, overlap between mental models will be small, and planning of action steps will take less account of the thinking elsewhere in the organization. Experiences will be personal rather than institutional, and overlap between mental models will be reduced further. Ideas will grow apart and the organization will lose coherence and fragment.

The system described constitutes a positive feedback loop, so that an organization left to its own devices will tend to drift towards either fragmentation or groupthink.

One of the prime tasks of top management is to continue to steer it to a more balanced middle position, where a degree of adaptability is combined with purposeful strategic direction. Most existing intervention and management training instruments attempt to improve communication and thereby increase integration. It is often less clear what management can do to increase differentiation and "out of the box" thinking. In closed organizations, individuals need to see themselves as "learning agents" for the whole. This requires an environment that promotes experimentation, which, in turn, requires a culture of psychological safety where error is seen as a positive investment in the future, rather than something that needs to be punished. It also requires a degree of slack in the organization. Differentiation does not come for free.

To promote differentiation in the strategic conversation, management needs to use a conversational instrument that allows, indeed requires, multiple views as an essential part of its structure. Scenarios have been proven to be a particularly powerful tool in this respect. A scenario discussion (see Figure 16) consists of a divergent and a convergent phase. A well-conducted process ensures that participants refrain from convergent thinking in the earlier, divergent phase. Deliberate attempts are made to bring in new views, drawing from the outside, on the assumption that every organization will develop some degree of myopia. In scenarios there is room for everyone's theory. Different and new views are celebrated and rewarded.

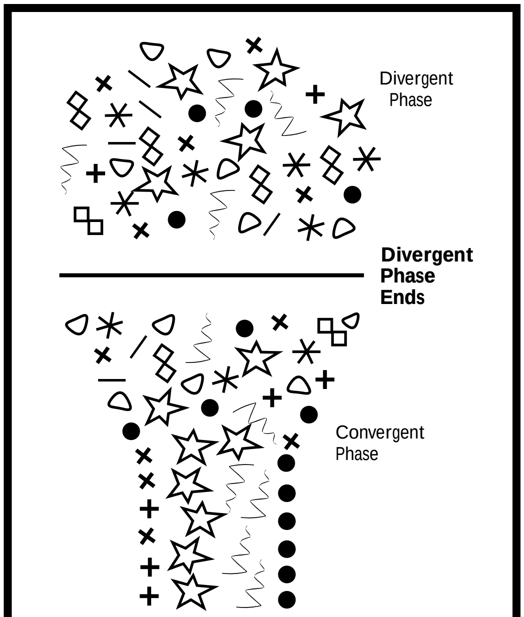


Figure 16: Scenario Discussion

The process avoids fragmentation by building in from the start a point at which the divergent phase is closed and convergence starts. In the convergent phase, story lines are developed that scaffold all these ideas and views, thus creating an overall structure in which the many, seemingly divergent views are given meaning in the overall context. In this way, a political debate in which one idea fights it out with another is replaced by a cognitive structure in which a variety of different ideas are all legitimized. This reflects the uncertainty in which organizations find themselves, and the context in which the strategic direction will have to evolve.

Managers who see themselves as facilitators rather than commanders will consider intervening in the strategic conversation as their main role. They understand that the intervention is the highest leverage available to management, and more effective than the rationalist top-down optimization of declaring the "best strategy." They realize that "making people think" is more important than "espousing strategy" that many of them know will seldom be implemented.

Conclusion

We began by exploring the world of rationalistic decision making and identifying its two fundamental assumptions. After reviewing the world of organizations we found that we had to put some question marks besides these assumptions. As a consequence, we focused on an alternative way of looking at organizational action as a processual learning loop. In this view, management's role is more a matter of facilitating the process than of decision making. Does this mean that the rational model has to be discarded? I don't think so.

To be sure, the language of organizations is rational: ideas align by rational argument. So even if decision making is not based on the rationalistic paradigm, the conversation, a crucial part of the organizational process that makes action possible, is rational. Facilitating the strategy process involves facilitating the articulation of knowledge on the basis of which the strategic conversation can be conducted. We have argued that scenarios, and their counterpoint in the conversation, the business idea, are powerful tools to help this conversational process move forward.

The power of these tools becomes particularly apparent when considering how to avoid pathologies in the organizational cognitive system. To do so requires the continuous, active involvement of management. The scenario approach to strategy is one of the most powerful tools available to management for carrying out this responsibility.

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