

# 17 A new perspective of entrepreneurship: A dialectic process of transformation within the entrepreneurial mode, types of flexibility and organizational form

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## **Introduction**

Most entrepreneurial activity is undertaken within organizations. However, the analysis of the organizational context of entrepreneurial activity is still a relatively new field of study. More fundamentally, ambiguity and controversy exists over the meaning and the nature of entrepreneurship. This paper provides a new perspective of entrepreneurship, and of the changes in the appropriate flexibility types and organizational forms in the entrepreneurial process.

## **Analysis of entrepreneurial activities within an organizational context**

In recent years, several scholars have begun to explore in greater depth the various factors which seem to contribute to successful innovation (see Burgelman, 1983; Tushman and Anderson, 1986; Tushman and Moore, 1982; Van de Ven, 1986, and others). However, almost all the writers in this field have assumed the existence of only one mode of entrepreneurship. In contrast, drawing upon the works of Schumpeter (1934) and the Austrian school, Cheah (1990) has postulated the existence of two distinct modes of entrepreneurship, associated with the Schumpeterian (S) entrepreneur and the Austrian (A) entrepreneur. The entrepreneurial process is then conceived to consist of the dynamic alternation between these two modes over time.

We suggest that this entrepreneurial process creates significantly different situations, in response to which innovative organizations have to alter their strategies, structures and operational activities. This implies that organizations must possess a capacity for flexibility in these respects, so as to influence their environment or to adapt to changes in their envi-

ronment. However, the existing ideas relating to the notion of organizational flexibility have tended to be rather ambiguous and superficial. Volberda (1990) developed a conceptual model of organizational flexibility which has been operationalized in terms of a flexibility audit<sup>1</sup>. This paper applies that model to an analysis of the dynamics of organizational flexibility in the entrepreneurial process.

In undertaking this analysis we bring together two subjects which have previously been treated as separate disciplines. The first subject relates to the ideas about entrepreneurship and entrepreneurial activities stemming from the works of Joseph Schumpeter and the Austrian School. These ideas have remained largely within the domain of economic theory, and have often been cited or treated in a peripheral manner in the field of entrepreneurial studies<sup>2</sup>.

The second subject relates to organizational behavior theory which has largely been the domain of sociologists, psychologists and some unorthodox economists as Herbert Simon and Harvey Leibenstein. In economic theory, the entrepreneur has been perceived only as an individual, not as a member of a group, team, department or organization. As a result, the analyses of management and organization tasks within the firm is neglected or underestimated, under the assumption of 'ceteris paribus.' Organizational processes are presented in simplistic terms, based upon the layman's ('common sense') notion of rationality (see Minkes and Foxall, 1980). In contrast to this, organizational behavior theory explores in greater detail the complexities of management tasks and organizational conditions, but takes a simplistic approach to the substantive complexities of different technologies, markets and product life cycles (Dougherty, 1989).

To develop a better analysis of entrepreneurial activities in an organizational context, it is necessary to integrate these two different bodies of theory. This enables us to explore the impact and the implications of the entrepreneurial process on organizations.

### **The entrepreneurial process**

From the ideas of Schumpeter and his Austrian critics, it is possible to distinguish two principal modes of entrepreneurship. Schumpeterian entrepreneurship (1934) promotes disequilibrium. It results in change *of* an existing situation. Schumpeterian entrepreneurial activities result in major innovations and even systemic change that increase or create uncertainty and promote new development processes which serve to create and/or widen the (e.g. technological) gap between leaders and followers.

In contrast, Austrian entrepreneurship promotes equilibrium. This results in change *within* an existing situation. Austrian entrepreneurship stems from the discovery of the existence of profitable discrepancies, gaps, mismatches of knowledge and information which others have not yet perceived and exploited, and the entrepreneur acts to capitalize upon the opportunity for gain or advantage which that discovery presents. Austrian entrepreneurial activities increase knowledge about the situation, reduce the general level of uncertainty over time and promote market processes which help to reduce or to eliminate the gap between leaders and followers.

However, these need not be contradictory processes. Instead, Schumpeterian and Austrian entrepreneurship (and their associated opportunities, activities and processes) may be perceived as opposites and yet complements to each other (Kirzner, 1985, p. 162). Furthermore, we postulate that this complementarity is manifested also in a systemic alternation in dominance between the two entrepreneurial modes. This is illustrated in Figure 1 where the point S represents an ideal-type equilibrium situation. That is, it is a situation characterized by complete certainty. In this situation there are no longer any 'scraps of

existing information that are present in scattered form throughout society' which remain to be exploited by an alert (Austrian) entrepreneur. This situation presents the greatest scope for the disequilibrium-generating activities of the 'long-run' Schumpeterian entrepreneur.

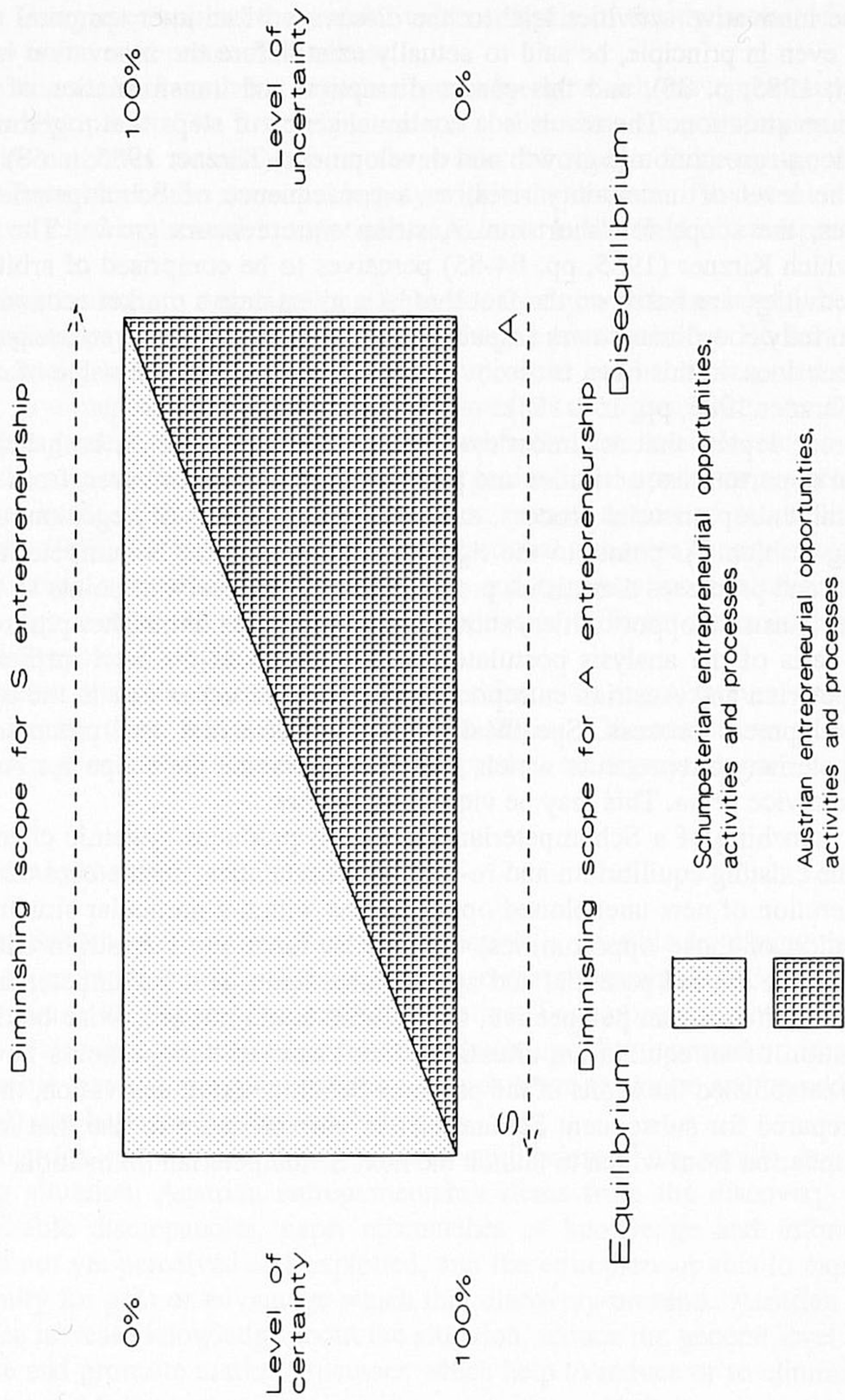
These innovative activities lead to 'the discovery of an inter temporal opportunity that cannot, even in principle, be said to actually exist before the innovation has been created' (Kirzner, 1985, p. 85), and this causes disruption and transformation of the pre-existing equilibrium situation. The result is 'a continual series of steps that together propel the engine of long-run economic growth and development' (Kirzner 1985, p. 68).

As the level of uncertainty rises, as a consequence of Schumpeterian activities and processes, the scope for 'short-run' Austrian entrepreneurs grows. The short-run processes, which Kirzner (1985, pp. 84-85) perceives to be comprised of arbitrage and speculative activities, are based on the fact that 'at a given date a market economy is likely to be less than fully coordinated *with respect to information currently possessed... What* the entrepreneur does, in this case, is discover the existence and/or the value of *available* knowledge' (Kirzner 1985, pp. 157-158).

Figure 1 depicts that at almost every point between **S** and **A**, both Schumpeterian and Austrian opportunities, activities and processes can occur. However, from the viewpoint of the overall entrepreneurial process, their respective periods of hegemony revolve in an alternating fashion. At points to the right of **S**, the scope for Schumpeterian opportunities, activities and processes diminishes progressively. Conversely, at points to the left of **A**, the scope for Austrian opportunities, activities and processes diminishes progressively. Indeed, on the basis of the analysis postulated so far, we could go even further and argue that Schumpeterian and Austrian entrepreneurship are *interdependent* in the overall evolutionary development process. Specifically, it is the activities and processes generated by Schumpeterian entrepreneurs which, over time, increase the scope for Austrian entrepreneurs, and vice versa. This may be viewed as follows.

The launching of a Schumpeterian innovation produces systemic change(s) which destroys the existing equilibrium and re-creates uncertainties, mismatches of information, and a proliferation of new unexploited opportunities within a particular situation. Through the exploitation of those opportunities, the specific function of Austrian entrepreneurs is to help to define the full potential and approximate limits of a Schumpeterian innovation. Indeed, from an Austrian perspective, those limits could not otherwise be determined. With the creation of an equilibrium situation, after Austrian entrepreneurs have (more or less clearly) established the limits of the previous Schumpeterian innovation, the foundation has been prepared for subsequent Schumpeterian entrepreneurs to use that knowledge as the new foundation from which to launch the next Schumpeterian innovation.

Figure 1  
 The relationship between Schumpeterian (S) and Austrian (A) entrepreneurial opportunities, activities and processes



In the subsequent sections, we suggest that this entrepreneurial process has a significant bearing upon the appropriate forms of organization and the corresponding types of flexibility for the promotion of innovation at different points in time. This conception serves to relate innovation and the evolution of organizational forms directly to the activities of entrepreneurs (and entrepreneurial organizations).

### **Organizational flexibility**

The issue of organization flexibility has recently received much attention from researchers, management consultants and practitioners. Nevertheless, fifteen years ago, Steers (1975) demonstrated in an ASQ article based on seventeen organizational effectiveness studies that flexibility was the evaluative criterion mentioned most frequently. However, its meaning in relation to the functioning of an organization is still ambiguous. Indeed, the multiple interpretations of the term organizational flexibility highlights this ambiguity (Volberda & Van der Stelt, 1988). The basic assumptions of many 'theories in use' of researchers as well as practitioners is that flexibility stimulates entrepreneurial processes and that entrepreneurial processes require organizational flexibility. However, this proposition is rather simplistic. Although entrepreneurship and innovation cannot be accomplished without some potential for change, not every change results in the same kind of entrepreneurship and innovation. In the following sections, therefore, we will examine more closely the relationship between organizational flexibility and the two modes of entrepreneurship introduced above. It will be argued that significantly different types of flexibility and their corresponding organizational conditions are related to each of the two modes of entrepreneurship.

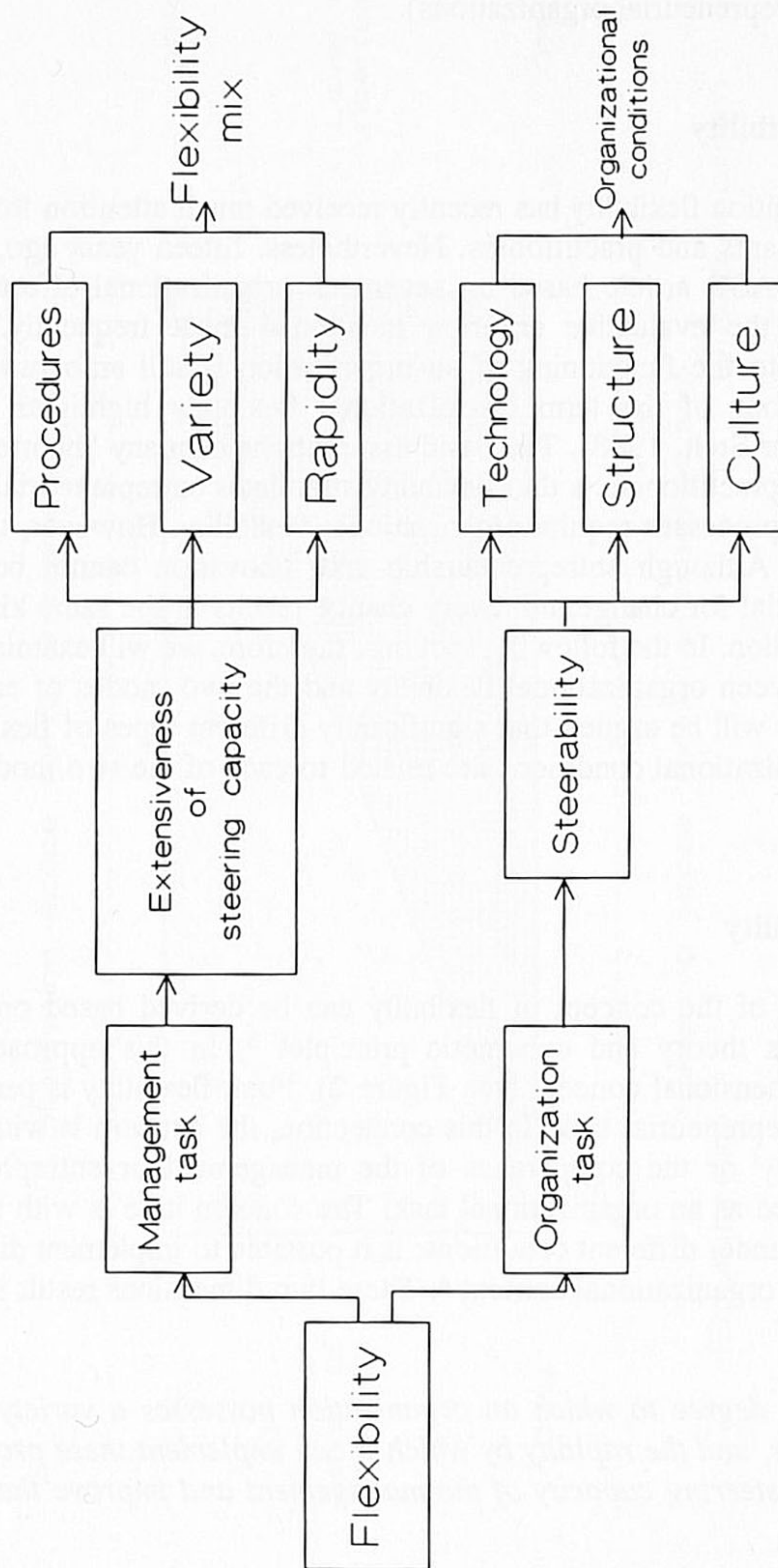
### **Definition of flexibility**

A clear formulation of the concept of flexibility can be derived based on some insights drawn from systems theory and cybernetic principles<sup>3</sup>. In this approach flexibility is treated as a two-dimensional concept (see Figure 2). First, flexibility is perceived to be a management or entrepreneurial task. In this connection, the concern is with the quality of the 'steering capacity' or the competence of the management or entrepreneur. Second, flexibility is perceived as an organizational task. The concern here is with the 'steerability' of the organization under different conditions: is it possible to implement different types of flexibility within the organizational context<sup>4</sup>. These two dimensions result in the following definition:

*Flexibility is the degree to which an organization possesses a variety of actual and potential procedures, and the rapidity by which it can implement these procedures, in order to increase the steering capacity of the management and improve the steerability of the organization.*

This definition will be explained below.

Figure 2  
Flexibility and the associated management and organization task



## The management task

As a management task, flexibility is concerned with the creation or promotion of the organization's steering capacity, especially in situations of unexpected disturbance. Core components of this management task are:

(a) *the existence of actual and potential procedures* --- not only the actual arsenal of procedures is important, but also the collection of potential flexibility-increasing procedures. The possible emergence of opportunities or threats require management to have some potential procedures to rely upon as an insurance against risk (see Scott, 1965);

(b) *the variety of procedures in the organization* --- Ashby (1964) demonstrated that the required variety of procedures within the organization must, at a minimum, be equal to the variety of disturbances in the environment. This is the 'Law of Requisite Variety', or variety in the environment can only be absorbed by variety in the organization. The variety of procedures within the organization can be in terms of either the quantity, that is the number of procedures, or the quality of the procedures (such as one-off versus durable flexibility-increasing procedures). For instance, the training of multi-skilled personnel results in a more durable mode of flexibility, while the contracting out of certain peripheral activities or 'hire and fire' employment practices, tend to result in a one-off improvement in flexibility;

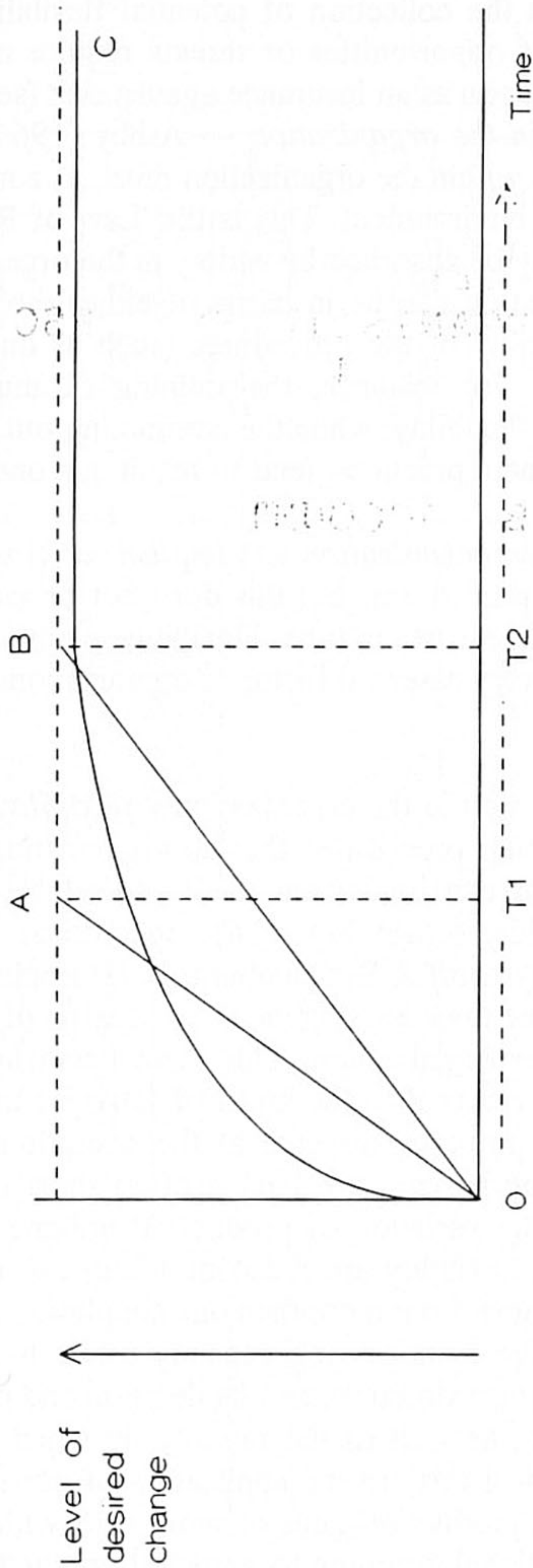
and (c) *the rapidity by which an organization can implement its procedures* --- an organization may possess the right procedures, but this does not necessarily mean that the management can implement these measures in time. Flexibility is not a static condition, but it is a dynamic process. Time is a very essential factor of organizational flexibility (see Figure 3).

The management task is manifested in the organization's '*flexibility mix*'. This refers to the collection of flexibility increasing procedures that an organization possesses, and the rapidity by which an organization can implement these procedures. The flexibility-mix consists of three types of flexibility<sup>5</sup> (see Figure 4): operational flexibility, structural flexibility and strategic flexibility (Ansoff & Brandenburg, 1971; Eppink, 1978).

*Operational flexibility* or routine manoeuvring capacity consists of routines based upon existing structures or goals of the organization. This most occurring type of flexibility relates to the volume of activities rather than the kinds of activities undertaken within the organization. These routines are primarily directed at the operational activities and are largely reactive in nature. The time horizon involved is often short term. An example of internal operational flexibility is the variation of production volume in the organization. Examples of external operational flexibility are the contracting out of certain peripheral activities or the obtaining of resources from more than one supplier.

*Structural flexibility* or adaptive manoeuvring capacity refers to the capacity of the management to adapt the organization structure, and its decision and communication processes, to suit changing conditions, as well as the rapidity by which this can be accomplished (Krijnen, 1979). Examples of this are the application of horizontal or vertical job enlargement, the creation of small production-units or work cells within a production line, or the transformation from a functional grouping to a market oriented grouping, with personnel and equipment that is interchangeable.

Figure 3  
Flexibility and response time



The management of organizations A, B and C possess the same collection of procedures. Nevertheless, in the figure, organizations A is able to implement these procedures faster than organizations B and C. Their respective times of attainment of the desired level of performance are  $t_1$ ,  $t_2$  and indefinite. That is, organization C is not able to accomplish the desired change within the time span depicted.



Figure 4  
Types of flexibility

	internal flexibility (I)	external flexibility (E)
Operational (R) flexibility	internal routine steering (IR)	external routine steering (ER)
structural (A) flexibility	internal adaptive steering (IA)	external adaptive steering (EA)
strategic (G) flexibility	internal goal steering (IG)	external goal steering (EG)

*Strategic flexibility* or non-routine steering capacity refers to procedures related to the goals of the organization or the environment (Aaker & Mascarenhas, 1984). This radical type of flexibility is much more qualitative and goes together with changes in the kind of organizational activities, such as the creation of new product market combinations (external strategic flexibility) or the application of a new technology (internal strategic flexibility). The creation of new activities in new situations has great importance.

Besides these three different forms of flexibility, we can distinguish the *metaflexibility* of an organization, that is, the supporting monitoring or learning system of the organization. Of particular importance in this connection is the sensor function of the organization. Meta-flexibility involves the processing of information to facilitate the continual adjustment of the composition of the organization's flexibility-mix in line with changes in the environment. This requires the creation, integration and application of flexibility increasing procedures in a flexible way.

### **The organization task**

The ability to initiate these flexibility increasing procedures is dependent upon the organizational conditions, namely the organization's technology, structure and culture. These determine the volume and composition (operational, structural, strategic) of the flexibility-mix, and its limitations. The creation of specific organizational conditions constitutes the organization task.

This is in line with De Leeuw's (1984) 'Law of Managerial Busyness', demonstrating that there are limitations to the steering capacity of an organization. An organization that has a surplus of flexibility-increasing procedures, will experience chaos. This leads to the consideration of the second dimension of flexibility, namely the 'steerability' of the system. This is an organizational task which involves creating the appropriate organizational conditions necessary to effectively realize certain types of flexibility. Core aspects of this organization task are 'stability' and 'preservation.' These frequently neglected conditions are indispensable elements for the realization of flexibility (Van Ham, Pauw & Williams, 1987). Just as there cannot be differentiation without integration (Lawrence & Lorsch, 1967), similarly, there cannot be flexibility without some stability or preservation. Stability provides certainty for organizational members and preservation facilitates steerability or controllability of the organization.

Thus, this two-dimensional conception of flexibility creates a paradox: an organization must possess some procedures which enhance its potential flexibility to avoid becoming rigid, but it must also be anchored in some way in order to avoid chaos. There has to be a constructive tension (Kanter, 1983) between that which must be changed and that which is necessary to preserve. This anchoring can be a result of the identity or mission stemming from the organizational culture, the organizational structure, or the operational technology.

The *operational technology* refers to the hardware (means of transformation, like machinery and equipment) and the software (knowledge) by which and the configuration in which the organization transfers materials and/or information. The characteristics of the technology can range from routine to non-routine <sup>6</sup>.

By the *organizational structure* is meant not only the actual distribution of responsibilities and authority among the organization's personnel, but also the planning and control systems and the processes of decision-making, coordination and execution. The former is related to the construction of the organization in functions and divisions/units (organizational form or 'Aufbau' [Kieser & Kubicek, 1978]). The latter is related to the or-

ganizational regulations of processes ('Ablauf'). The structure of the organization can range from mechanistic to organic (Burns & Stalker, 1961), corresponding to the opportunities for adaptive procedures<sup>7</sup>.

The *organizational culture* can be defined as the shared interpretations about the kind and usefulness of work and cooperation. It is the idea system of the organization, which is contained in the minds of the organization members (Hofstede, 1980). This means that culture is in our conception something different from the explicit behavior, which is an effect of the organizational structure. Culture cannot be observed directly, it can only be felt. This culture can range from conservative to innovative, depending upon the slack within the existing norms and value systems<sup>8</sup>.

These aspects of organization flexibility can be portrayed in the following conceptual model (see Figure 5).

In this conceptual scheme the flexibility-mix represents the actual flexibility of the organization (extensiveness of steering capacity). Because of changes in the environment, the management must continuously change the composition of the flexibility-mix in line with the environment. The preservation of this dynamic fit is called the meta-flexibility. The possibilities to implement these flexibility increasing procedures depend on the organizational conditions; they create the design limitations of the flexibility-mix.

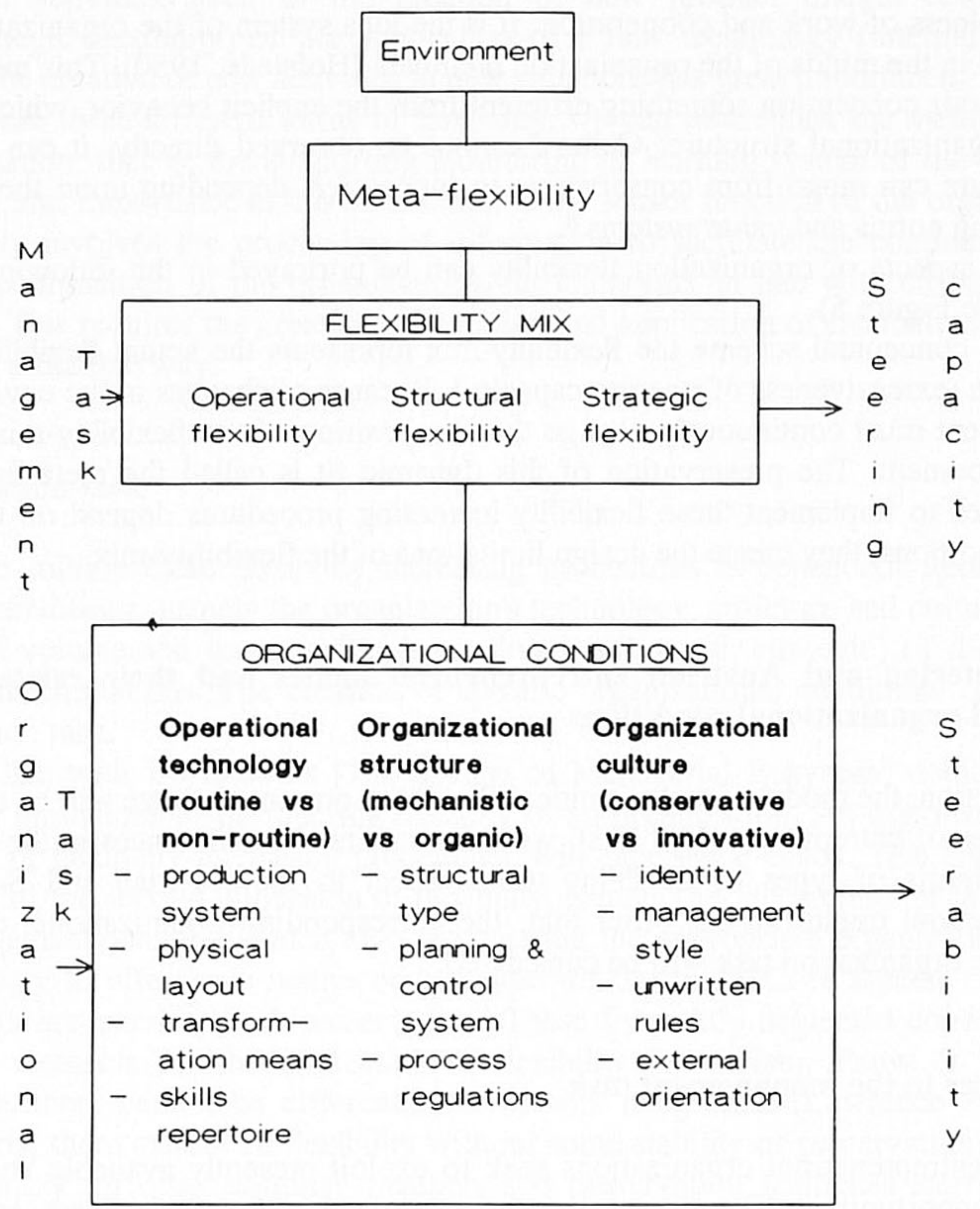
### **Schumpeterian and Austrian entrepreneurial modes and their related flexibility types and organizational conditions**

In this section, the model of organizational flexibility presented above will be applied to the two modes of entrepreneurship. First, we will examine the differences in the management tasks in terms of types of flexibility with respect to the Austrian and Schumpeterian entrepreneurial organizations. After that, the corresponding organizational conditions as part of the organization task will be considered.

#### **Differences in the management task**

Austrian entrepreneurial organizations seek to exploit presently available knowledge and existing opportunities. The domain of the organization ('what business are we in') is relatively clear, and there is little or no ambiguity concerning the boundaries of the organization and its environment (Thompson, 1967). As the external environment is relatively well defined, the organization's principal concerns become more internally focused. Consequently, the flexibility-mix of the A-organization is dominated by *operational flexibility*. This means that the organization tends to develop an increasingly large variety of routines to reduce uncertainty to a minimum, and to enable it to operate as efficiently as possible. The organization becomes very concerned with 'doing things right.' By developing a greater number and variety of routines, the organization tries to adapt to different demands

Figure 5  
Conceptual model of organizational flexibility



in the environment. Its growing concern is to achieve stability and equilibrium. This deterministic process assumes that there is only one optimal organizational configuration (Hannan & Freeman, 1984).

Within the organization, innovations tend to be *incremental* rather than radical (Tushman & Anderson, 1986), based upon refinements or extensions of existing concepts or approaches. According to Clark (1985, p.249), 'Innovation of this kind strengthens and reinforces existing commitments. The organization becomes more conservative in nature: it strengthens and improves the fit between organization and environment and thus entrenches the established approach.' The operational difficulties also tend to become of a routine nature, capable of being solved on the basis of acquired experience. In this context, the management task tends to become a matter of optimization (Simon, 1960).

Besides experience, incremental innovations occur through imitation and extrapolation. These are all forms of 'single-loop learning' which do not involve changes in the existing criteria of evaluation or in fundamental values and norms (Argyris & Schon, 1978). The risk of the preponderant emphasis in the Austrian organization on achieving operational flexibility is that it can lead to organizational inertia. Those routines first have to be unlearned before an organization can change (Starbuck, 1983).

In contrast, the flexibility-mix of the S-entrepreneurial organization is dominated by an emphasis on *strategic and structural flexibility*. Strategic flexibility is externally oriented, and requires the existence of organizational slack for making 'strategic choices' (Child, 1972). The organization has to reduce or abandon past routines to become more receptive to new possibilities. The domain of the organization is not yet well-defined and the boundary between the organization and its environment is still fuzzy. The signals and the feedback received from the environment tend to be indirect and open to multiple interpretations. Extrapolation or other conventional management tools are not useful in this context. The organization has to conduct searches based on heuristics and nonroutines.

The issues and difficulties relating to strategic flexibility are by definition very unstructured and non-routine. Totally new values and norms are required and, thus, past experience may not provide any advantage. In this context, 'double-loop learning' by 'trial and error' is essential; it involves a change in the criteria of evaluation (Argyris & Schon, 1978). Indeed, past practices would need to be called into question, new assumptions about the organization have to be raised and significant changes in strategy are considered (Van de Ven, 1986).

These changes assist the S-organization to promote *radical innovations*, instead of incremental or adaptive innovations (Tushman & Anderson, 1985). These innovations are associated with departures from existing approaches, destroying the value of established commitments and competence, and requiring new resources and skills. These revolutionary changes also require a great deal of structural flexibility, that is, procedures directed at the renewal or transformation of existing structures and processes as an essential part of the overall change process. Restructuring of the organization often occurs during the radical innovation process (Schroeder et al., 1986). This restructuring can take many forms including the formation of joint ventures, changes in organizational responsibilities, use of project teams, and alterations in control systems.

While strategic and structural flexibility can lead to radical change, it can also produce low trust, defensive behavior, encounter unmentionable or sensitive issues, and lead to avoidance or bypass tactics. Management has to be alert to these possibilities and endeavor to channel actions or changes towards constructive ends (Van de Ven, 1986). If not, strategic and structural flexibility could result only in chaos.

## Differences in organizational conditions

The A-entrepreneur is focused on operational flexibility, resulting in incremental and evolutionary changes, but leaving the nature of the firm intact; the basic task is developing the right routines for reducing uncertainty. By developing a larger number and variety of these routines, the firm tends to move towards an equilibrium - or static fit - with the environment. Ideally, the A-entrepreneur seeks to eliminate slack completely, so as to achieve an 'optimal' organizational form.

In this situation, structural contingency theory (Thompson, 1967) suggests that such an organization would have a routine technology, a mechanistic structure and a conservative culture (see Figure 6).

The production system of the *routine technology* of the A-entrepreneur is focused on volume in order to create 'learning by doing' or 'economies of scale'. Mass or process production and a typical line lay-out is most appropriate here. The means of production are very specialized and the production repertoire (variety of production techniques) is limited. In Thompson's typology (1967) we could speak of a 'long-linked technology' with sequential interdependence.

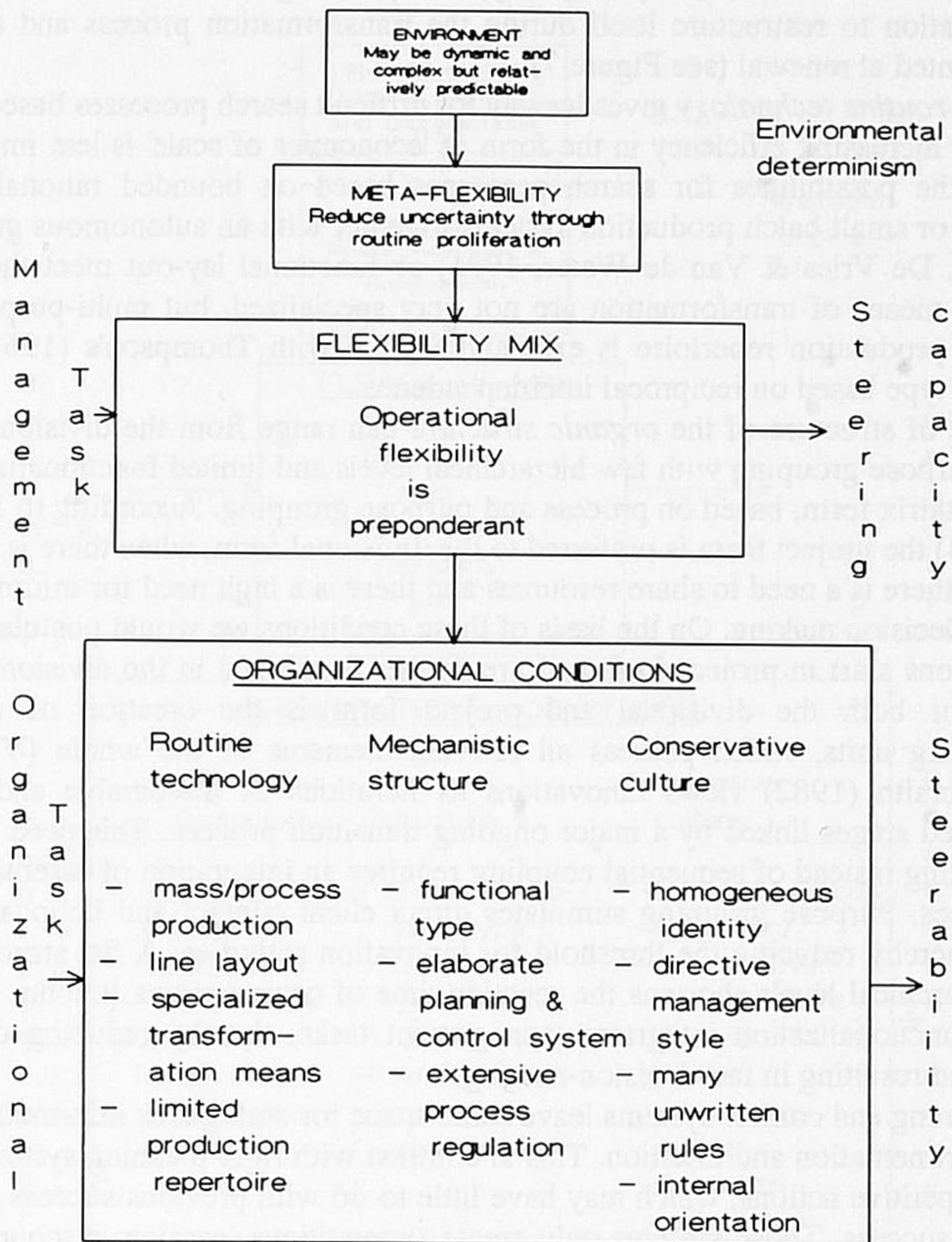
Characteristics of the *mechanistic structure* (Burns & Stalker, 1961) are a functional type of organization, based on process grouping (Gulick, 1937), many hierarchical levels, and high functionalization of management tasks. Processes are highly regulated through planning and control systems, specialization of tasks (small and simple tasks), a high degree of standardization, formalization and centralization. As a result, the levels of participation and delegation are low. This organizational type is very similar to Mintzberg's 'machine bureaucracy' (Mintzberg, 1979). It is consistent with the findings of Cohn & Turyn (1984), who concluded that evolutionary innovations (modest, incremental changes) are more likely in formalized and centralized organizations.

Finally, the *conservative culture* consists of a very dominant and more important homogeneous identity, a directive management style based on authority and reliance on routines. There are large repositories of unwritten rules as a result of a strong socialization processes, an emphasis on discipline, and a low tolerance for ambiguity. Organizational members do not accept a difference between the formal and actual structure. There is a strong internal orientation, which is mainly short-term and reactive.

The *weaknesses* of the organizational conditions of the A-entrepreneur are associated with a tendency towards conservatism, delay in decision-making and implementation, and ossification.

As explained above, the S-entrepreneur promotes structural and strategic flexibility to facilitate radical or discontinuous changes. It is not a 'slack destruction' process, but a

Figure 6  
Model of the A-organization



'slack creation' process, which means that resources can be combined in many different ways. We would expect here a non-routine technology, because for radical changes the organization has to violate rules (Dougherty, 1989), an organic structure in order to allow the organization to restructure itself during the transformation process and a innovative culture oriented at renewal (see Figure 7).

The *non-routine technology* gives leeway for difficult search processes based on satisfying criteria. Increasing efficiency in the form of 'economies of scale' is less important than increasing the possibilities for search processes based on bounded rationality (Simon, 1960). Unit or small batch production systems together with an autonomous group lay-out (Van Donk, De Vries & Van de Water, 1991) or functional lay-out meet those requirements. The means of transformation are not very specialized, but multi-purpose and the operational production repertoire is extensive. It fits with Thompson's (1967) 'intensive technology' type based on reciprocal interdependence.

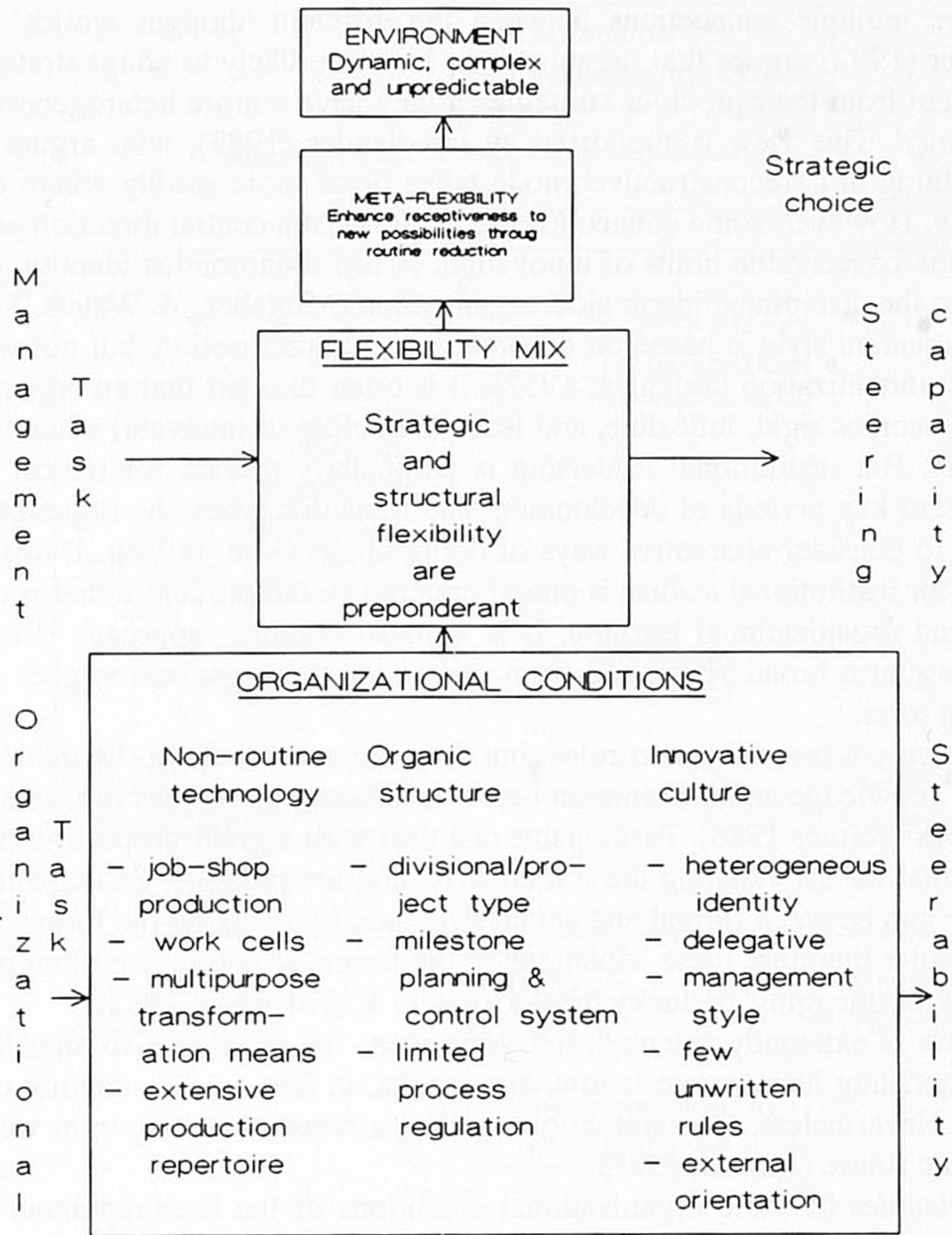
The type of structure of the *organic structure* can range from the divisionalized form, based on purpose grouping with few hierarchical levels and limited functionalization to the project or matrix form, based on process and purpose grouping. According to Hrebiniak & Joyce (1984) the project form is preferred to the divisional form, when there is a need for a dual focus, there is a need to share resources and there is a high need for information processing and decision making. On the basis of these conditions we would postulate that radical innovations start in project form and are further developed in the divisionalized form. Essential for both the divisional and project form is the creation of autonomous self-organizing units, which possess all relevant elements of the whole (Van de Ven, 1986). Galbraith (1982) views innovations as iterations of inseparable and simultaneously-coupled stages linked by a major ongoing transition process. This need for simultaneous coupling instead of sequential coupling requires an integration of essential functions and resources. Purpose grouping stimulates direct client contact and boundary spanning activities, thereby reducing the threshold for innovation activities. A flat structure, that is limited hierarchical levels shortens the reaction time of organizations (Quinn, 1985). Also restricted functionalization integrates management tasks, thereby reducing coordination problems and resulting in fast decision-making.

The planning and control systems leave some space for ambiguous information and necessary experimentation and intuition. This in contrast with rigid planning systems that only stimulate repetitive actions, which may have little to do with previous success and nothing with future success. Those systems only create superstitious learning, discouraging every kind of innovation. (Starbuck, 1983). Therefore, the S-entrepreneurial organization prefers a rough planning in the form of mile stone planning (Block, 1985).

The process regulation is very limited. Revolutionary changes require little standardization and formalization, and high decentralization (Cohn & Turyn, 1984). This is because standardization and formalization reduce the perceptible variety of innovation stimuli (Beer, 1985) Also, specialization is restricted. A high degree of specialization violates the synergy process, which is necessary for innovation. Redundancies in functions (Trist, 1981), that is broad and complex tasks (Kanter, 1988), create an understanding of the essential considerations and constraints of all aspects of the innovation in addition to those immediately needed to perform the individual task. It means 'think globally, while acting locally' (Van de Ven, 1986). Lateral relations between units (divisions or projects) are minimized, but intensified within the autonomous units. It creates a form of multistability;



Figure 7  
Model of the S-organization



relatively weak coupled self-organizing units are able to create new stabilities in new situations, without influencing the other units. In Mintzberg's terminology (1979) the organic structure resembles the 'adhocracy'.

The *innovative culture* consists of a heterogeneous identity within the different units, but there are multiple connections between the different 'thought worlds' (Dougherty, 1989). Meyer (1982) argues that organizations are more likely to adapt strategies that are more divergent from their previous strategies if they have a more heterogeneous organizational 'ideology'. This view is supported by Friedlander (1983), who argues that organizational learning in a 'reconstructive' mode takes place more readily where there is such heterogeneity. However, some connections in the form of a central direction are necessary; they define the conceivable limits of innovation. A too monotonous identity, on the other hand, leads to the disciplined ideological organization (Mintzberg & Waters, 1985).

The management style is based on delegation and improvisation, but not without some form of institutionalization (Selznick, 1957). It is often thought that an organization loses something (becomes rigid, inflexible, and loses the ability to innovate) when institutionalization sets in. But institutional leadership is particularly needed for radical innovations, which represent key periods of development and transition when the organization is open to or forced to consider alternative ways of doing things (Van de Ven, 1986). The strategic problem for institutional leaders is one of creating an infrastructure that is conducive to innovation and organizational learning. It is a mixed scanning approach (Etzioni, 1963); there is a long term broad vision and from this vision the organization goes step by step into the short term.

There are only a few unwritten rules, but they are not based on discipline dominance; exchange of knowledge and information between different disciplines is necessary for radical innovations (Kanter 1986). Participants can deal with a great proportion of ambiguity. Exceptions, that means violating the formal structure, are possible. Participants do not try to reduce the gap between formal and actual structure, by stressing the formal structure. In the more popular literature these 'violations of the formal structure' are often referred to in terms such as 'bootlegging' or 'lucky breaks' (Peters & Waterman, 1982).

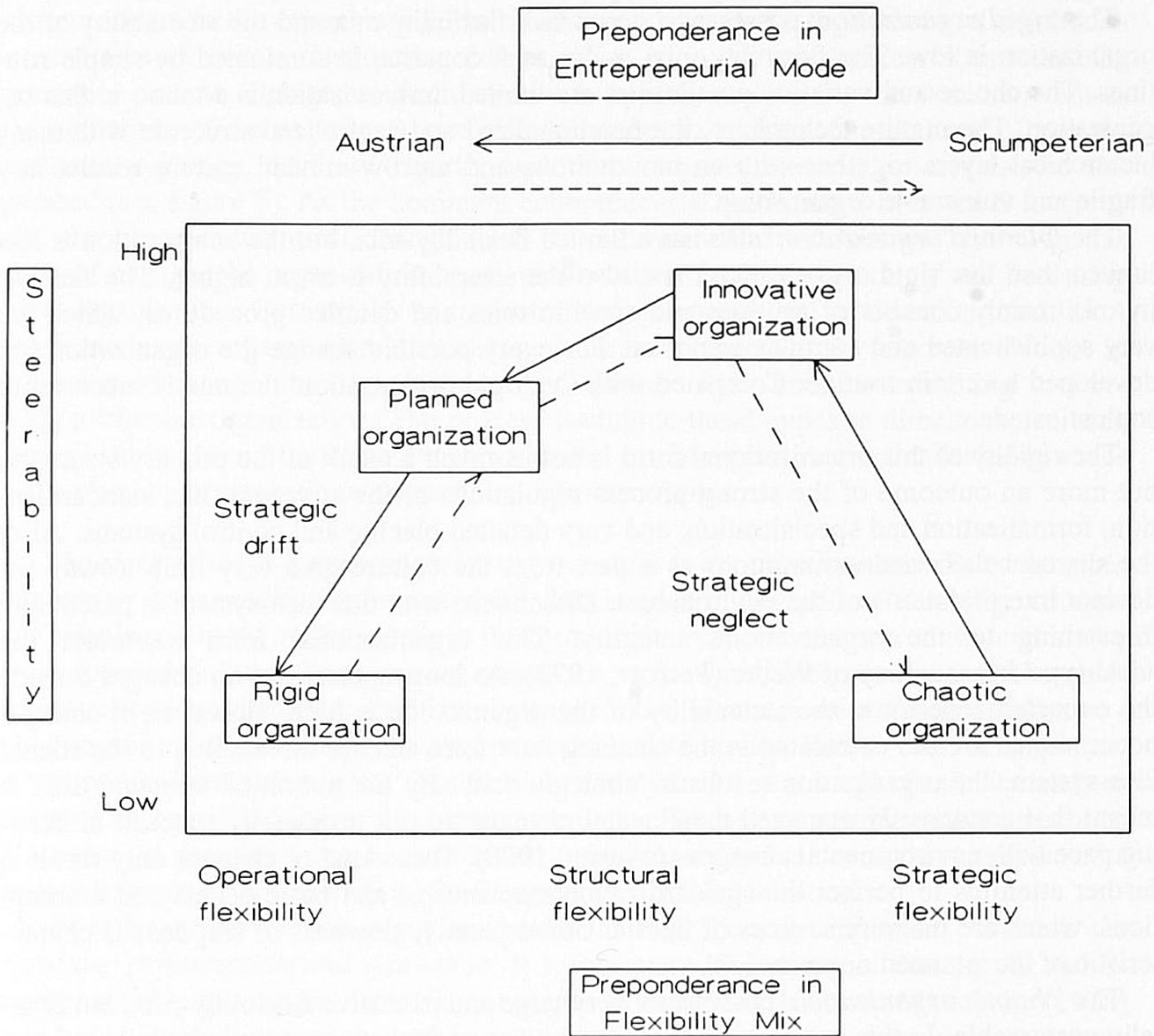
The culture is externally oriented and very open; the resistance to signals which can threaten the existing idea-system is low, and results, in fact, in the adapting of the actual idea-system. Nevertheless, the external orientation is based on a long-term vision and idealization of the future (Ackoff, 1981).

The *deficiencies* of these organizational conditions of the S-entrepreneur are related, among others, to potentially serious problems of conflict of authority, unclear responsibilities, inadequate controls, lack of direction and shared ideology, and, consequently, greater scope for chaos and inefficiency.

### **The successful and unsuccessful A- and S-entrepreneurial organizations**

The composition of the flexibility-mix and the organizational conditions were described for the A- and S-entrepreneur. It is important to understand that those are only two organizational configurations. With the use of the two dimensions of organizational flexibility, namely extensiveness of the flexibility-mix and the 'steerability' of the organization, four

Figure 8  
Transitions in organizational forms in the entrepreneurial process



organizational forms can be distinguished: the rigid, the planned, the innovative, and the chaotic organization (see figure 8). The 'Planned organization' represents the successful A-entrepreneur, while the 'Innovative organization' stands for the successful S-entrepreneur. The four organizational types will be discussed briefly.

The '*rigid organization*' possesses a very small flexibility-mix and the steerability of the organization is low. The flexibility-mix, as far as it consists, is dominated by simple routines. The choice and variation possibilities are limited; improvisation is a taboo in this organization. The mature technology, the functionalized and centralized structure with many hierarchical layers together with an monotonous and narrow-minded culture results in a fragile and vulnerable organization.

The '*planned organization*' also has a limited flexibility-mix, but the composition is less limited than the 'rigid organization', and also the steerability is much higher. The flexibility-mix mainly consists of routines and specific rules and detailed procedures, which are very sophisticated and complex in nature. For every possible change the organization has developed a certain routine. Compared with the 'rigid organization' the mix is much more sophisticated.

The rigidity of this organizational form is not as much a result of the primary structure, but more an outcome of the strong process regulations of the structure, like standardization, formalization and specialization, and very detailed planing and control systems. Also, the shared beliefs and assumptions as a part from the culture give very little leeway for deviant interpretations of the environment. Dissonance with this idea-system is potentially threatening to the organization's integrity. This organizational form resembles the 'ideal-type' bureaucracy of Weber (Perrow, 1972). As long as there are no changes outside the expected repertoire, the steerability of the organization is high. However, if changes occur, which are not calculated in the planning repertoire and are threatening to the shared idea-system, the organization results in 'strategic drift'. By the notion of 'strategic drift' is meant that consciously managed incremental changes do not necessarily succeed in keeping pace with environmental changes (Johnson, 1988). These kind of changes only result in further attempts to perfect the standardization mechanisms and basic beliefs and assumptions, which are the very sources of inertia. Consequently, slowness of response is characteristic of the 'planned organization'.

The '*chaotic organization*' possesses a very large and extensive flexibility-mix, but is totally unsteerable. In this organization the possibilities of variation are unlimited; there is no anchorage. There are innumerable initiatives for innovation, but it is impossible to implement them. Administrative structures and some 'shared values' in the culture are missing. A lack of administrative stability is caused by 'strategic neglect' (Burgelman, 1983). 'Strategic neglect' refers to the more or less deliberate tendency not to pay attention to the administrative structure of the organization. As a result, those emerging administrative problems deteriorate from petty and trivial to severe and disruptive. In his study of new internal corporate ventures, Burgelman concluded that this administrative instability is exacerbated by the fact that there is no strong orientation, and there is still a lot of opportunistic behavior on the part of some participants of the venture. The range of possible procedures is so extensive and large, that it is very hard to make a choice. The decision-making capacity of the management strongly reduces (Scott, 1965). Decisions are delayed, while the situation requires a direct decision.

Finally, the '*innovative organization*' possesses a large and rich flexibility-mix and the steerability is reasonable high. A variety of innovation stimuli can be observed and also implemented with some supple adoptions within the existing structure (Ansoff & Brandenburg, 1971). The paradox between change and institutionalization or preservation is well managed here.

## Trajectories within the entrepreneurial process

If, as our thesis suggests, the S and A opportunities do not exist in the same proportions at the different phases of the entrepreneurial process, then the composition of the two types of entrepreneurs in the organization, the flexibility mix, and the organizational conditions also need to vary in a corresponding fashion. That is, in the entrepreneurial process, the organization has to change its form to match appropriately with the dominant entrepreneurial mode of the opportunities which it chooses to address. On the basis of our organizational typology, different trajectories within the entrepreneurial process can be distinguished (see figure 8). As the dominant entrepreneurial mode shifts from the S to the A mode, the organization must change from the 'innovative' to the 'planned' form. In this process of change, the organization has to prevent itself from 'overshooting' and becoming a 'rigid' organization. Conversely, as the dominant entrepreneurial mode shifts from the A to the S mode, the organization must change from the 'planned' to the 'innovative' form. In this process of change, the organization has to prevent itself from 'overshooting' and becoming a 'chaotic' organization. The process leading in these opposite directions can each be conceived in terms of a trajectory in which the extreme positions are undesirable states characterized by organizational asymmetry. In other words:

1) *The risks of the A-entrepreneurial organization is the transformation into the 'rigid organization' as a result of 'strategic drift'.* The surplus of operational flexibility, consisting of simple routines, creates inertia in the form of a very mechanistic structure and a very narrow focused culture. The growing resistance to 'deviant' interpretations of the environment reflects a tendency toward 'overbalance' of the A-entrepreneurial organization.

2) *The risk of the S-entrepreneurial organization is tuming into a 'chaotic organization' caused by 'strategic neglect'* The surplus of structural and strategic flexibility leads to unfocused actions, resulting in disconstructive ends. The lack of administrative structures and a sense of direction, shared beliefs and institutional leadership is characteristic of a tendency towards 'underbalance' of the S-entrepreneurial organization.

3) *In order to survive an organization has to shift from the 'planned' towards the 'innovative' organization and visa-versa.* It is important to understand that the A- and S-entrepreneurial organization are different stages in a cyclical process. Mintzberg (1978) shows how organizations go through periods of strategy adjustment characterized by continuity, flux or incremental change, but also require more global changes. Greiner (1972) charts periods of evolution and revolution in corporate development. This is in line with the 'classic' of Burns & Stalker (1961), who concluded even then that the organic form was temporary because the necessary internal dynamics could not be sustained.

## Conclusions and research implications

The entrepreneurial process, that is, the alternation of hegemony between the Schumpeterian and the Austrian entrepreneurial modes, creates significantly different situations, in response to which organizations have to alter their cultures, structures, and operational technologies over time, to become and/or to remain successful. The analysis presented above has sought to highlight two sets of transition. First, to become successful in promoting a Schumpeterian innovation, an organization has to rise from a state of initial chaos or disorganization. Second, to remain successful, organizations have to manage a dialectical process which requires them to transform themselves from an 'innovative' form into a 'planned' form, and then back from a 'planned' form into an 'innovative' form, to match the opportunities set by the changes in the dominant entrepreneurial mode over time.

The key question is how to manage this dialectic process between the A- and S entrepreneurial modes and their corresponding organizational forms. How would the organization be able to achieve such changes in its flexibility mix and its organizational conditions so as to enable it to be in tune with the needs and the opportunities of the situation, and what is the process involved? The management of changes in organizational structure, culture and operational technology to produce the appropriate flexibility mix corresponding to each phase of the entrepreneurial process is likely to become an increasingly important function as organizations begin to acquire a better understanding of the implications for organizational performance.

## Notes

1. This flexibility audit has been used in a cross-sectional analysis of 7 organizations in The Netherlands. After that, the method was applied in 3 longitudinal case-studies: the Department of Commercial Accounts of the Dutch 'Postbank', the R&D Department of the 'Dutch National Gasunion', and the Production-unit Glass Bead Semi-Conductors of Philips Netherlands. This research project was made possible by the support of GITP management consultants, Nijmegen, The Netherlands.
2. It must be noted that even within Economics, the ideas of Schumpeter and the Austrian School have generally led a separate existence, and have proved difficult to integrate within orthodox, that is, neo-classical economics.
3. Systems theory is used here as an empirically vacuous theory; it helps us to order and to categorize complex phenomena.
4. This is in line with Block's (1986) assumptions about corporate venturing. He suggests that there are two distinct and equally important challenges to be resolved if venturing is to succeed. The first is the management of ventures. The second is the creation of the right context, structure and systems to foster entrepreneurship.
5. With the use of steering theory (De Leeuw, 1982) as a part from system theory, three forms of steering can be distinguished:
  - Routine steering (R): procedures to create flexibility, leaving the structure and goals of organization and environment intact.
  - Adaptive steering (A): procedures to increase flexibility, which result in a restructuring of the organization but without altering the organizational goals.
  - Goal steering (G): flexibility increasing procedures, which change the existing goals of the organization.

Also, a distinction can be made between internal and external steering capacity.

- Internal steering (I) is directed at the organization itself, that is adapting to the environment.
- In the contrary, external steering (E) means trying to influence the environment, so that the organization is less vulnerable for changes in the environment.

The foregoing means that the possible flexibility-mix consists of the following procedures <IR, IA, IG, ER, EA, EG> and that:

- operational flexibility stands for <IR, ER>,
- structural flexibility for <IA, EA>,
- and strategic flexibility for <IG, EG>.

6. The sub-dimensions which score on the technology dimension (routine vs. non-routine) are:

- the way of producing (process, mass, batch, unit),
- the physical production lay-out (line, group, functional, work station),
- the means of transformation (specialized vs. multi-purpose),
- and the operational production repertoire (limited vs. extensive).

For a more elaborated discussion of those sub-dimensions see Volberda (1990,1991).

7. The different sub-dimensions which score on the head-dimension of organizational structure (mechanistic vs. organic) are:

- type of structure (functional, divisional, matrix)
  - grouping (function, product, client)
  - levels (many, few)
  - functionalization (high, low)
- planning & control systems (high regulation, low regulation)
- process characteristics
  - specialization
  - standardization
  - education
  - formalization
  - lateral relations
  - horizontal decentralization
  - delegation
  - participation

For a more elaborated discussion of those dimensions see Volberda (1990,1991).

8. The different sub-dimensions of the head-dimension of organizational culture (conservative, innovative) are:

- identity
  - communality (strong, weak)
  - scope (small, broad)
  - homogeneity (homogeneous, heterogeneous)
- management style
  - leadership style (instructive, consultive, participative, delegative)
  - planning-approach (blue print vs. muddling through)
  - management attitude (routine, heuristic, improvisation)
- unwritten rules
  - discipline dominance (strong, weak)
  - socialization (strong, weak)
  - attitude formal-actual (unequivocal, unequivocal)
  - tolerance for ambiguity (low, high)
- External orientation
  - focus (short term vs. long term)

openness (closed, open)

planning attitude (reactive, inactive, proactive, interactive)

For a more elaborate discussion, we refer to Volberda (1990,1991).

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