

The Normal Science of Structural Contingency Theory

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Within organization studies, contingency theory has provided a coherent paradigm for the analysis of the structure of organizations. The paradigm has constituted a framework in which research progressed leading to the construction of a scientific body of knowledge. The task of this chapter is to outline the contingency theory of organizational structure and show how research within this paradigm has proceeded in a normal science mode.

The recurrent set of relationships between organizational members can be considered to be the structure of the organization. This includes, but is not restricted to the authority relationships, the reporting relationships as signified in the organization chart, the behaviours required by organizational rules, the patterns in decision-making such as decentralization, patterns of communication and other behaviour patterns. It embraces both the officially prescribed formal organization and the *de facto*, unofficial, informal organization (Pennings 1992). There is no definition of organizational structure that tightly circumscribes its subject matter *a priori*; rather the research projects each look at various, different aspects of organizational structure without claiming their focus to be exhaustive.

Contingency theory states that there is no single organizational structure that is highly effective for all organizations. It sees the structure that is optimal as varying according to certain factors such as organizational strategy or size. Thus the optimal structure is contingent upon these factors which are termed the *contingency* factors. For example, a small-sized organization, one that has few employees, is optimally structured by a centralized structure in

which decision-making authority is concentrated at the top of the hierarchy, whereas a large organization, one that has many employees, is optimally structured by a decentralized structure in which decision-making authority is dispersed down to lower levels of the hierarchy (Child 1973; Pugh et al. 1969). There are several contingency factors: strategy, size, task uncertainty and technology. These are characteristics of the organization. However, these organizational characteristics in turn reflect the influence of the environment in which the organization is located. Thus, in order to be effective, the organization needs to fit its structure to the contingency factors of the organization and thus to the environment. Hence the organization is seen as adapting to its environment.

Each of the different aspects of the organizational structure is contingent upon one or more of the contingency factors. Thus the task of contingency research is to identify the particular contingency factor or factors to which each particular aspect of organizational structure needs to fit. This involves the construction of theoretical models of fits between contingency and structural factors and their testing against empirical data. The empirical data usually consist of data comparing different organizations as to their contingencies and structures. The contingency theory of organizational structure will be termed here 'structural contingency theory' (Pfeffer 1982).

Kuhn (1970) argues that scientific research proceeds within the framework of a paradigm, which specifies the core theoretical ideas, the assumptions, language, method and conventions. The growth of a body of knowledge is

marked by paradigm revolutions, when one paradigm is overthrown and replaced by another. Such discontinuous changes are radical and infrequent. Most of the time science proceeds in a normal science phase guided by the ruling paradigm. In such a phase research works on problems within the body of work, such as resolving anomalies, while leaving the paradigm itself unquestioned.

The study of organizational structure witnessed a paradigm change when the classical management school was overthrown by the new paradigm of contingency theory, as will be seen below. This inaugurated an era of normal science research within the contingency paradigm. However, other paradigms arose subsequently that sharply question the contingency paradigm (Scott 1992). Thus the study of organizational structure is presently pluralistic with conflict between paradigms and normal science within the paradigms (Aldrich 1992; Donaldson 1985a, 1995a; Pfeffer 1993). Since other chapters in this *Handbook* deal with other paradigms we will here concentrate on the contingency paradigm. The normal science that has been pursued within the contingency paradigm is probably the largest single normal science research stream in the study of organizational structure to date. Thus in discussing the contingency paradigm there is a considerable volume of normal science research to report. Hence the concept of normal science in organizational studies is quite well illustrated by the work within the contingency theory of organizational structure (see also Donaldson 1996).

ORIGINS OF STRUCTURAL CONTINGENCY THEORY

Up until about the late 1950s academic writing about organizational structure was dominated by the classical management school. This held that there was a single organizational structure that was highly effective in organizations of all kinds. This structure was distinguished by a high degree of decision-making and planning at the top of the hierarchy so that the behaviour of lower hierarchical levels and of operations was specified in detail in advance by senior management, through job definitions, work study and the like (Brech 1957).

The classical management school held sway for the first half of this century, but was challenged increasingly from the 1930s onwards by the human relations school. This approach focused on the individual employee as possessing psychological and social needs. An understanding of these would allow an appreciation of how

work organization emerged from the interplay of group dynamics (Roethlisberger and Dickson 1939). This would enable managers to adopt a more considerate approach that would elicit employee cooperation. The focus here was on the bottom-up processes of organizing and the benefits of participation in decision-making by employees from lower levels of the hierarchy (Likert 1961). There were attempts to bring together these two antithetical approaches of classical management and human relations by arguing that each approach had its place. Thus contingency theories developed in the 1950s and 1960s on topics such as small-group decision-making and leadership (see Vroom and Yetton 1973). Around the end of the 1950s scholars began to apply this contingency idea to organizational structures.

The key idea in the small group literature was that group problem-solving was accomplished effectively in a centralized structure when the task was relatively certain but required a less centralized and more richly joined structure where the task was uncertain in order to generate and communicate the larger amount of knowledge and communications needed (Pennings 1992: 276). Applied to whole organization structures this is equivalent to a hierarchy which centralizes expertise, communications and control for tasks low in uncertainty and a flexible, participatory team network for tasks which are high on uncertainty. A major way to have a low uncertainty task is to do the same thing repeatedly by avoiding innovation. Thus innovation becomes a major underlying contingency factor of the task uncertainty contingency. Increasing scale can lead to low task uncertainty, in that scale often involves repetition, such as mass production.

Scale also leads to increasing numbers of employees which in turn leads to specialization. This narrows the scope of each job so that it becomes less varied and complex, which in turn lowers the uncertainty of the task. These low uncertainty, repetitive tasks are amenable to bureaucratic formalization such that they are pre-specified in job descriptions, standard operating procedures, rules and training. This bureaucratization further reduces the uncertainty of those performing the tasks. Thus task uncertainty is the core contingency concept that has implications for second-order contingency concepts such as innovation and size.

Much of the significance of task uncertainty resides in the insight that the more uncertain the task the more information that has to be processed and this in turn shapes the communications and control structures (Galbraith 1973). The more uncertain the task, the less the work activities can be scheduled in advance and

the more the reliance on ad hoc arrangements. Moreover, organizations often have to deal with uncertainty by utilizing diverse bodies of expertise and this requires departure from deference to hierarchy as some of the expertise may be possessed by those at lower hierarchical levels. Some part of these experts may be professionals and this tends to amplify the shift away from hierarchical control of employees.

The core assumption of structural contingency theory is that low uncertainty tasks are most effectively performed by centralized hierarchy since this is simple, quick and allows close coordination cheaply. As task uncertainty increases, through innovation or the like, then the hierarchy needs to loosen control somewhat and be overlain by participatory, communicative structures. This reduces structural simplicity and raises costs but is rewarded by the benefits from innovation. As size increases the compact, simple centralized structure is replaced by a bureaucracy featuring a tall hierarchy and extensive specialization. This bureaucracy allows decentralization because employees are increasingly controlled through formalization (e.g. rules) and decentralization is increasingly required because the increase in scale, internal structural complexity and length of hierarchy makes centralization infeasible. Bureaucracy brings disbenefits through rigidity, dysfunctions and some loss of control, but these are more than out-weighted by the increase in predictability, lower average wages, reduction in managerial overhead and increasing computerization which bureaucratization also brings. As the organization increases the range and complexity of its outputs, that is products or services, or increases its geographical extensiveness, such as through becoming a multinational, so it further increases its structural complexity and decentralization, through adoption of a divisional or matrix structure.

This then is the framework that provides the underlying theoretical unity of the ideas composing structural contingency. Such a totalizing vision is possible in retrospect, but the theory was developed in more piecemeal fashion, through breakthroughs that identified a connection between a particular contingency factor or factors and a structural factor or factors. These theoretical insights were typically advanced in studies that offered empirical support through field studies of actual organizations.

The seminal statement that pioneered the contingency approach to organizational structure was by Burns and Stalker (1961). They distinguished between the mechanistic structure in which organizational roles were tightly defined by superiors who had the monopoly of organizational knowledge, and the organic

structure in which organizational roles were loosely defined and arrived at by mutual discussion between employees, with knowledge being dispersed among the employees who possessed varieties of expertise germane to the organizational mission. Burns and Stalker (1961) argued that where an organization faces a stable environment then the mechanistic structure is effective but where the organization faces a high level of technological and market change then the organic structure is required. The mechanistic structure becomes counter-productive where a high rate of innovation is needed; the resulting high uncertainty of the environment and of the tasks in the organization means that spontaneous cooperation within teams of experts, that is, the organic structure, is more effective.

The Burns and Stalker (1961) theory was advanced in a book that gave extensive illustrations from qualitative case studies of the electronics industry. This is probably the most widely received contribution in the structural contingency theory literature. It provided in one stroke a synthesis between classical management and human relations schools in the mechanistic and organic structures, respectively. It resolved the debate between them with the compromise that each was valid in its own place. It also gave primacy to task uncertainty, driven by innovation, as the contingency factor.

At about the same time as Burns and Stalker, Woodward (1958; 1965) conducted a comparative survey study of one hundred manufacturing organizations. She examined their organizational structures and found them to be unrelated to the size of their organizations. Operations technology emerged as the key correlate of organizational structure (Woodward 1965). Where production technology was primitive, with single articles or small batches being made, often mainly by hand and involving craft skills, for example, musical instruments, the organization was fairly informal and organic. Where production technology had advanced to large-batch and mass production using more specialized machinery, such as in automobile assembly, work organization was more formalized and mechanistic and more according to the prescriptions of classical management. However, with further technological advance to more capital intensive and automated production so that product flowed continuously, such as oil in an oil refinery, the regimentation of mass production gave way to work teams run on organic and human relations lines. The progressively greater predictability of the technical system and the smoothness of production as technology advanced led first to more mechanistic and then to more organic structures.

The Woodward (1965) model was more complex than that of Burns and Stalker (1961), being of three rather than two stages. However, it shared a similar conceptualization of structure, as mechanistic or organic, and had some similarity in contingency factor in that technologically induced uncertainty was a commonality. Moreover, Woodward, like Burns and Stalker, held that the future belonged to the organic, human relations, style of management and that this would be forced upon management by technological change. The task of research and academic writing in this approach was to bring these models and findings to the attention of managers so that they could avoid the inefficiencies that both Woodward (1965) and Burns and Stalker (1961) depicted resulted from failure to adapt organizational structure to technological change rapidly enough.

Unlike Burns and Stalker (1961), Woodward (1958; 1965) used quantitative measures of organizational structure, such as the span of control of the first line supervisor, the number of levels of management in the hierarchy and the ratio of direct to indirect labour. Woodward (1965) gives many quantitative results showing associations between operations technology and various aspects of organizational structure. There is also one table (1965: 69, Table 4) which shows not only an association between technology and an aspect of organizational structure (average span of control of the first line supervisor), but also that organizations which conform to the association had high performance and organizations which deviated had lower performance. Woodward (1965) argued that where the organizational structure fits the organizational technology this caused superior performance to those organizations whose organizational structure is in misfit to the technology.

Burns and Stalker and Woodward worked in the UK. Pioneering contributions came also from the US. Lawrence and Lorsch (1967) have been credited with initiating the term 'contingency theory' to identify the then fledgling approach to which they made a major contribution. They theorized that the rate of environmental change affected the differentiation and integration of the organization. Greater rates of environmental change require certain parts of the organization, such as the R&D department, to face high levels of uncertainty relative to other parts, such as the production department. This leads to large differences in structure and culture between departments, with R&D being more organic internally and production being more mechanistic. This greater differentiation makes coordination between these two departments, for instance to innovate a new product, more

problematic. The solution is higher levels of integration provided by more integrating personnel in project teams and the like, coupled with interpersonal processes that defuse conflict through taking a problem-solving approach. Lawrence and Lorsch (1967) advanced their theory in a comparative study of different organizations in three industries: containers, processed foods and plastics. They demonstrated also that organizations whose structures fitted their environments had higher performance.

Hage (1965) advanced an axiomatic theory of organizations, similar to Burns and Stalker, in which centralized, formalized organizations produced high efficiency but low innovation rates while decentralized, less formalized organizations produced low efficiency but high innovation rates. Thus which structure was optimal depended upon whether efficiency or innovation was the organizational objective. Hage and Aiken (1967; 1969) demonstrated the validity of the theory in a study of health and welfare organizations.

Perrow (1967) argued that knowledge technology was a contingency of organizational structure. The more codified the knowledge used in the organization and the fewer the exceptions encountered in operations, the more the organization could be centralized in decision-making.

Thompson (1967) advanced a book-length theory of organizations containing many theoretical ideas and propositions. He distinguished closed system organizations versus organizations which are open systems transacting with their environments. He argued that organizations attempt to insulate their core production technologies into a closed system to render them efficient through buffering the core from the environment. External perturbations are dealt with by forecasting, inventories and other mechanisms. Thompson (1967) distinguished also three different technologies: long-linked, mediating and intensive. Moreover, he distinguished three different levels of interdependence between activities in the workflow – pooled, sequential and reciprocal – and identified the differing coordination mechanisms to handle each interdependency. He theorized that interdependencies between activities in the organizational workflow had to be handled at different hierarchical levels, thus generating the design of the organization. Thompson (1967) further argued that the environment directly shaped the organizational structure, with different parts of the organizational structure being specialized to conform to the requirements of different parts of the environment. Thompson theorized also about organizational politics, as had Burns and Stalker and Perrow. The main

focus of contingency theory, however, remained upon the way the organizational structure was shaped so as to meet the needs of the environment and the resulting tasks (see Donaldson 1996).

In the US, Blau (1970) advanced a theory of structural differentiation. This asserted that as an organization grows in size (employees) so it structures itself more elaborately into increasingly numerous sub-units, such as more divisions, more sections per division, more levels in the hierarchy and so on. He also argued that organizational growth leads to greater economies of scale with the proportion of employees who are managers or support staff declining.

Weber (1968) argued that organizations were becoming increasingly bureaucratic structures, characterized by impersonal administration, fostered in part by their increasing size. In the UK, the Aston Group (named after their university) argued the need to improve the measurement of organizational structure (Pugh et al. 1963). They developed a large number of quantitative measures of different aspects of organizational structure, with attention to reliability (Pugh et al. 1968; Pugh and Hickson 1976). The Aston Group surveyed organizations of diverse types, spanning manufacturing and service organizations and public and private sectors. They empirically distinguished two main dimensions of organizational structure: structuring of activities (how far the organization adopts specialization by function, rules and documents) and concentration of authority (centralization of decision-making) (Pugh et al. 1968). They examined a large number of contingency factors and used multiple regression to identify the distinct set of predictors of organizational structure. For structuring the main contingency was organizational size (number of employees): larger organizations are more structured (Pugh et al. 1969). For centralization the main contingencies were organizational size and whether or not the organization under study was a subsidiary of a parent organization: decentralization is higher in larger organizations which are independent (Pugh et al. 1969).

A further structural contingency theory focuses on the implications of the contingency of corporate strategy for the organizational structure of business corporations. Chandler (1962) showed historically that strategy leads to structure. Corporations need to maintain a fit between their strategy and their structure otherwise they suffer lower performance. Specifically, a functional structure fits an undiversified strategy, but is a misfit for a diversified strategy where a multidivisional structure is required for effective management of the complexity of several distinct product markets (Chandler 1962).

Other researchers analysed the significance for its structure of an organization going from operating only domestically to being a multinational (Stopford and Wells 1972; Egelhoff 1988; Ghoshal and Nohria 1989). This leads to adoption of structures such as area divisions and product-area matrices. Egelhoff (1988), in particular, advances a formal contingency theory based on the underlying information-processing requirements.

Other contingency factors, such as environmental hostility (Khandwalla 1977) and product life-cycle (Donaldson 1985b), have been identified, and their implications for organizational structure theorized. For a model prescribing the optimal organization design required by the combination of the strategy and innovation contingencies see Donaldson (1985a; 171).

THE STRUCTURAL CONTINGENCY THEORY MODEL

Increases in the innovation rate of a firm may reflect competition from other firms through new products, so the ultimate cause is the environment. For this reason the contingency approach is often termed 'the organization in its environment approach'. However, the environmental innovation leads the organization to raise its rate of intended innovation which is the immediate cause of the adoption of an organic structure. Thus the structure is caused directly by the internal factor and only indirectly by the environment. Both the internal and the environmental factors are referred to as contingencies but a more parsimonious statement of structural contingency theory would need refer only to the internal factor. Therefore, many contingency factors of structure such as organizational size or technology are internal to the organization, though they reflect the environment such as population size or commercially available technologies. Thus while it is correct to include the environmental factors as contingencies shaping structure a sufficient explanation may be obtained by considering only the internal factors as contingencies.

The import of the contingency theory may be summarized briefly in the following way. A small organization, one with few employees, is organized effectively in a simple structure (Mintzberg 1979) in which there are few levels in the hierarchy. Decision-making authority is concentrated in the top manager (who is often the owner in a small firm) who exercises power directly over the lower-level employees by directly instructing them. Thus there is little delegation of authority and there is also little specialization

among the employees. As the organization grows in size, especially in the number of employees, the structure becomes more differentiated. Many more levels are added in the hierarchy, creating tiers of middle managers. Some of the decision-making authority of the top managers is delegated down to them, commensurate with their greater knowledge of local, operational matters, such as direction of lower-level personnel and some decisions on production. This delegation is to a degree forced upon senior managers by the increasing burden of decisions that they are facing as organizational size and complexity increases. Again the growth of hierarchy and the geographic spread of personnel makes senior management remote from 'the firing line' and so it becomes infeasible for them to access all the required information. However, senior managers retain decision-making over strategy, policy and large decisions, including capital allocation and budget amounts.

Throughout the organization there is a greater division of labour as operations are broken down into their components and allocated to specific departments and work-groups. Administration is also increasingly broken into specializations each handled by distinct staff roles such as accounting, production planning, records, personnel and so on. Behaviour is increasingly regulated by written job descriptions, plans, procedures and rules. These constitute an impersonal web regulating organizational members, so that control shifts from direct, personal supervision to impersonal devices. At the extreme in the large organization, its structure is a machine bureaucracy (Mintzberg 1979). The increase in scale and specialization means that the work of any one individual becomes more routine and this facilitates its bureaucratic formalization, which in turn heightens the routineness and predictability of the work. The greater formalization and predictability of employee behaviour encourages the senior levels to increase their delegation of authority down to lower levels as they can do so with more confidence that such discretion will be used as the senior levels intend, though such control is imperfect as bureaucratic dysfunctions arise (Gouldner 1954; Merton 1949). The greater specialization of personnel increase their competence, which again fosters delegation, though again with some hazards (Selznick 1957).

As organizations seek to innovate, in products or services or production processes, so this entails more uncertain tasks. These tasks cannot be formalized by the bureaucracy i.e. the tasks cannot be pre-specified in advance in a rule or procedure because this would require knowledge that the bureaucrats do not possess. Thus there

is recourse to trial and error learning often accompanied by employment of more educated and higher trained employees such as professionals. The organization has to allow them discretion and encourage them to use their initiative, with the actual division of labour involving team elements and emerging through discussion between employees rather than being imposed by hierarchical superiors. This means that the R&D departments are structured more organically than the typical production department. While R&D design the new offering, the production operations department makes it and sales sells it. The dove-tailing of these requirements means that successful innovation needs coordination across these departments and this is achieved by cross-functional project teams or matrices or product divisions (depending upon the other contingencies such as the degree of strategic diversification, see Donaldson 1985b).

As the firm diversifies from a single product or service to multiple products or services, so the original functional structure becomes overwhelmed by the complexity of decision-making. A multidivisional structure allows this complexity to be factored down so that each division makes the decisions for its own product-market. This improves the expertise and speed of the decision-making and relieves the top management of overload, allowing them to concentrate on strategic decisions and more selective interventions in the divisions. The centre retains overall control through treating the divisions as profit centres and creating a corporate staff to monitor divisional performance and plan corporate strategy. Thus the organization, if large and diversified, becomes even more bureaucratic and more decentralized.

This in brief is the contingency theory model of the way organizational structure changes as the contingencies change through growth.

THE STRUCTURAL CONTINGENCY RESEARCH PARADIGM

Almost all of this pioneering structural contingency research was published between 1960 and 1970 and was the fruit of a burst of research conducted mainly in the 1960s. Thus by 1970 there was a well-established research paradigm.

The theory is sociological functionalism (Burrell and Morgan 1979). Just as biological functionalism explains the way the organs of the human body are structured so as to contribute to human well-being, so sociological functionalism explains social structures by their functions, that is their contributions to the well-being of society

(Merton 1949; 1975; Parsons 1951; 1964). The organizational sociological branch of functionalism posits that organizational structures are shaped so as to provide for effective functioning by the organization (Pennings 1992). Structural functional organizational theory proceeds in the following way. Variations in organizational structures are identified. These are explained by each different organizational structure functioning effectively in its situation. The structure fits the contingency which in turn fits the environment. Fit is the underlying key. Organizations move into fit by adjusting their structure to their contingencies and this produces the observed association between contingency and structure. The emphasis on the adaptation by the organization to its environment makes structural contingency theory part of adaptive functionalism.

The functionalist theoretical base has meant that the contingency paradigm can be pursued both by sociologists interested only in the explanation of organizational structure, for whom the functionality of a structure is purely a cause, and management theorists for whom the effectiveness outcomes of structures inform their prescriptive advice to managers. In the history of contingency theory both values have motivated researchers (Hickson, personal communication).

The method used in contingency research tended to follow that used by Woodward (1965). A comparative study is made across a number of different organizations (or across different sub-units within the same organization if they are the object of theoretical interest). Each contingency and structural factor is measured, either as a quantitative scale or as a series of ordered categories. Each organization is allotted a score on each contingency and structural factor. The cross-distribution of scores of the organizations on a pair of contingency and structural factors is then examined to see whether there is an association; this is done by cross-tabulation or correlation. The theory that associations between contingency and structure reflect an underlying fit is then tested. Organizations conforming to the association are contrasted with those that deviate. If the conforming organizations outperform the deviant organizations then this signifies that the association is a fit between contingency and structure. Thus in much research the empirical association is taken as approximating the fit (Child 1975; Drazin and Van de Ven 1985; Woodward 1965); however in other research the fit model is derived from theory (Alexander and Randolph 1985; Donaldson 1987). It is desirable to unite the empirically and theoretically derived fit models over the course of the research programme.

As the research progressed it became more sophisticated in at least four senses. Firstly, increasing attention was paid to the operational definitions of concepts. For example, Woodward (1965) measured organizational performance in a vague way. Later researchers were more precise and recorded their definitions more explicitly, for example Child (1974). Secondly, there was increasing attention to reliability of measurement. Woodward (1965) did not report the reliability of her measurements and used approaches that yield low reliability, such as single item measures. Later researchers sought to boost reliability by using multiple item measures, for example the Aston Group (Pugh et al. 1968). It is now commonplace among research reported in the better journals to report the reliabilities of variables. Thirdly, the theoretical models used to explain any particular aspect of organizational structure went from using one contingency factor, for example technology in Woodward (1965), to using several, such as in Pugh et al. (1969), that is from mono-causality to multi-causality. Fourthly, the analysis of data uses more sophisticated statistics. Woodward (1965) used only simple statistics whereas, by the late 1960s, multivariate statistics and statistics that took account of sample size were being used (e.g. Pugh et al. 1969).

Pioneering structural contingency theory work often used surveys of organizations at one point in time, that is a cross-sectional method. From these data inferences were made that causation flowed in particular ways, that is from contingency to structure. This adaptive functionalist interpretation is a convention in structural contingency research. Nevertheless, the correlational method left room for other causal interpretations. For example, Aldrich (1972) reanalysed the Aston data and argued the correlations were compatible with a model in which structure caused size – the opposite of the causal interpretation advanced by the Aston Group (Pugh et al. 1969). These alternative interpretations constitute challenges to the paradigm. There has been some progress in resolving some of these questions of causality in favour of contingency determinism, as will be seen below.

The theory and empirical evidence deployed in the structural contingency theory paradigm are positivist. The organization is seen as being forced to adjust its structure to material factors such as size and technology. Ideas and values do not figure prominently as causes. Moreover, little scope is seen for choice or human volition. There is little information in most contingency analyses about who exactly makes the structural decisions or what their motives are or how the structures are implemented (Pugh et al. 1969;

Blau and Schoenherr 1971). Thus the analysis is depersonalized and at the level of the organization as a collective entity pursuing its objectives. There is thus the absence of an analysis at the level of the human actors (Pennings 1992). Such an analysis would identify actors in the processes of redesigning organizations, their beliefs, ideals, values, interests, power and tactics. Much of the criticism from outside of the paradigm revolves around the perceived neglect of an action-level analysis in structural contingency theory research (Silverman 1970). Indeed the validity of talking about 'the organization' rather than the individuals that compose the organization has been challenged sociologically and philosophically (Silverman 1970). However, Donaldson (1985a) has offered a defence of organizational-level constructs, arguing that they are cogent and indispensable in organization theory. Key phenomena such as organizational centralization and organizational performance cannot even be discussed unless a collectivity-level analysis of the organization as a system is made (see also Donaldson 1990).

The adaptive functionalism, contingency-fit model and comparative method constitute the core of the paradigm of structural contingency theory. They provide a framework in which subsequent researchers work.

THE NORMAL SCIENCE PHASE: REPLICATION AND GENERALIZATION

By about 1970 there was an established contingency theory paradigm and those coming afterward could orientate their efforts within this tradition and contribute to its evolving literature (for a collection see Donaldson 1995b).

The pioneering contingency studies had produced evidence of connections between contingencies and organizational structure, but these might be flukes or idiosyncrasies or reflect biases of their authors. Therefore there was a need for replication, that is for studies by other, independent researchers to see whether or not they found the same phenomena. Replication studies are seldom on the same organizations, so the studies provide also a test of generalization, that is whether the original findings hold in studies of new organizations, in settings that differ in some way, such as type of organization or country, from the pioneering studies (Fletcher 1970). For instance, during the 1970s there arose an interest in whether different national cultures require different forms of organizational structure that render the general structural contingency theories false (Hickson et al. 1974;

Lammers and Hickson 1979; Mansfield and Poole 1981; McMillan et al. 1973). This interest continues through to the 1990s and has spawned a great deal of research in the intervening period (as examples, Conaty et al. 1983; Hickson and McMillan 1981; Routamaa 1985). The initial orientation of most researchers is that they expect that they may find the contingency-structure relations of the pioneering studies but that such general assertions are to be treated cautiously until verified empirically in each particular, new setting. The studies of replication and generalization constitutes much of the normal science research in the structural contingency literature.

The Aston Group gave emphasis to replication (Child 1972a; Hinings and Lee 1971; Inkson et al. 1970). The multiple dimensions of organizational structure found in the pioneering study were not found in some replication studies, some of which found a single main dimension (Child 1972a; Grinyer and Yasai-Ardekani 1980; 1981; Hinings and Lee 1971). This is a major difference in the Aston Group literature and there have been attempts to resolve it, through examination of method issues, such as the measurement of the variable and whether the status of the organization (as between independent or dependent) affects the results (Donaldson et al. 1975; Greenwood and Hinings 1976; Mansfield 1973; see also Reimann 1973; Starbuck 1981). The different findings are seen as supporting different theoretical views and as refuting or confirming Weber (1968).

In contrast, the main contingency-structure findings of the original study have been supported: size is the major contingency of the bureaucratic structuring of the activities aspect of organizational structure. Replication studies bear this out (Pugh and Hinings 1976). Further studies show that this finding generalizes across organizations of many types and nations in diverse locations. For example, Donaldson (1986: 74) reviews thirty-five studies of the relation between the contingency of organizational size and the structural variable of degree of specialization by function; all the studies found a positive correlation. The studies include organizations from fifteen countries: Algeria, Canada, Egypt, Finland, France, Germany, India, Iran, Japan, Jordan, Poland, Singapore, Sweden, the UK and the USA (respectively, Zeffane 1989; Hickson et al. 1974; Badran and Hinings 1981; Routamaa 1985; Zeffane 1989; Child and Kieser 1979; Shenoy 1981; Conaty et al. 1983; Azumi and McMillan 1981; Ayoubi 1981; Kuc et al. 1981; Tai 1987; Horvath et al. 1981; Bryman et al. 1983; Blau et al. 1976). Thus the size-functional specialization relationships generalizes globally and is not confined to Anglo-

Saxon nations such as the UK or the USA where these sorts of relationship were originally identified (for a review see Donaldson 1996).

The topic area of strategy and structure has been studied in greater detail and so is a suitable one to examine for causality.

CAUSAL DYNAMICS

The discussion thus far has concentrated on the results mainly from cross-sectional studies that correlate contingency and structure at the same point in time. The contingency literature interprets these associations according to its own theoretical paradigm of adaptive functionalism and contingency determinism. The question arises as to whether this interpretation is correct.

Each of the major theories in structural contingency theory focuses on only certain couplings of contingency and structural factors (for example, size and bureaucracy or strategy and structure); indeed, critics object that there is no singular contingency theory, only a collection of contingency theories that constitute at best a contingency approach. However, it is possible to abstract from these disparate offerings one common, underlying theory. This may be termed the structural adaptation to regain fit (SARFIT) theory (Donaldson 1987). This holds that there is fit between each contingency and one (or more) aspect of organizational structure such that fit positively affects performance and misfit negatively affects performance. An organization initially in fit changes its contingency and thereby moves into misfit and suffers declining performance: this causes adoption of a new structure so that fit is regained and performance restored. Hence the cycle of adaptation is: fit, contingency change, misfit, structural adaptation, new fit. This causal model underlies many structural contingency theories (Burns and Stalker 1961; Lawrence and Lorsch 1967; Williamson 1970; 1971; Woodward 1965).

Commentators have argued against the SARFIT type of idea and have contested each component part. They reason that the correlations between contingencies and structure signify causal processes different to those in the SARFIT model (Aldrich 1972). The errors or uncertainties in theoretical interpretation are seen as made possible by limitations in the cross-sectional method. The call is made by commentators for structural contingency theory studies to move beyond cross-sectional or synchronic research designs into those that study organizational change through time, that is longitudinal or diachronic studies (Mansfield and Poole 1981; Galunic and Eisenhardt 1994). Thus part of normal science has been the move to make studies through time in order to reveal the actual causal paths.

Dynamics of Strategy and Structure

The explanation of the correlations between strategy and structure is the functionalist theory that there is a fit between certain strategies and certain structures (Chandler 1962). Research into performance has initially focused on whether divisional structures outperform functional structures (for example, Armour and Teece 1978). However, this is not the same as contingency theory, which holds that it is not the structure *per se* but rather whether or not it fits the strategy, that is salient for performance. This requires the operationalization of a model that specifies certain combinations of strategy and structure as fits and other combinations as misfits. Donaldson (1987) advanced such a model drawing on the work of Chandler (1962) and others.

Corporations in fit are shown to outperform those in misfit, providing empirical validation (Donaldson 1987). Moreover, fit is at a period prior to performance, adding confidence that fit is a cause and performance an effect. Hamilton and Shergill (1992; 1993) have also empirically validated a very similar fit model by showing that it relates positively to performance. Organizations in fit for a number of years have superior growth in performance during those years to those in misfit over the same period. This means that being in fit leads to increasing performance and so fit should be seen as a cause and performance as a consequence. Hill et al. (1992) have also shown that the fit of strategy and structure is positively related to performance. Thus the proposition that the fit between strategy and structure affects performance receives support and some of this is from research in which the temporal dimension lends support to the causal inference that fit affects performance. The functionalist theory that corporations align their structure with their strategy because of the underlying fit is supported empirically.

Some studies of organizational change have sought for a correlation between contingency change and structural change, during the same time period or the immediately following time period. Their results have been mixed and have tended to throw into doubt structural contingency theory (Dewar and Hage 1978; Dyas and Thanheiser 1976; Inkson et al. 1970; Meyer 1979). While contingency theory states that contingency causes structure, this is the long-run effect which flows through intermediary stages

such as misfit. Thus contingency change initially only leads to misfit which eventually leads to structural change and new fit. This more elongated and closely specified causal model better represents structural contingency theory. This should be the subject of empirical tests in studies of organizational change.

Donaldson (1987) combined data from studies of strategy and structure in five countries (France, Germany, Japan, the UK and the USA). First the data were analysed in the traditional way: an association was sought between change in the contingency of strategy and change in structure in the immediately following period. There was no positive strategy-structure association (1987: 13), thus reproducing the null finding of previous studies of organizational change.

Then the data were analysed by examining each of the separate stages of the SARFIT model and this was confirmed. Of the 87 corporations that moved from fit into misfit, 83 per cent did so by changing their level of the contingency of strategy, typically by diversifying (1987: 14). Thus the cycle of structural adaptation is initiated by contingency change, as SARFIT holds. Turning to the second step in the SARFIT model, the data were analysed to see whether misfit led to structural change. Of those corporations in misfit 39 per cent subsequently changed their structure, whereas of those in fit only 9 per cent did so (1987: 14). This confirms that misfit causes structural change. Of the corporations that changed their structure, 72 per cent moved from misfit into fit and only 5 per cent moved from fit into misfit (1987: 14). Thus the structural change was overwhelmingly adaptive, that is, adoption of the divisional structure to fit with the more diversified corporate strategy. Hence the misfit causes structural adaptation as SARFIT holds. Thus each separate stage of the SARFIT model was validated.

When organizational change is examined by a model that more accurately captures the full processes involved in structural adaptation then structural contingency theory is confirmed. Where the simplistic model that contingency change leads to structural change is used to analyse data it leads to the erroneous conclusion that structural contingency theory is not supported. This is normal science at work: resolving findings contrary to theory by showing that the empirical testing procedure was erroneous, in this case by not examining a properly articulated model of the theory.

Contingency theory holds that strategy leads to structure. However, Hall and Saias (1980) argue that structure leads to strategy. Bourgeois (1984) criticizes contingency research for failing

to consider reverse causation in which the presumed contingency factor actually results from the structure. The possibility arises, therefore, that the positive correlations between strategy and structure arise through structure causing strategy. However, Donaldson (1982) examined this and found no effect of divisionalization on subsequent diversification. The correlation between strategy and structure does not arise through structure causing strategy. This adds confidence that the causal dynamics are those identified in the SARFIT model.

STRATEGIC CHOICE

Structural contingency theory is deterministic in that contingency causes structure (albeit with time lags). The organization bows to the imperative of adopting a new structure that fits its new level of the contingency factor in order to avoid loss of performance from misfit. This determinism has been much criticized. Some authors reject such situational determinism, asserting instead that organizational managers have a free choice (Whittington 1989) and some speak of 'free will' (Bourgeois 1984). Child (1972b) argues, more moderately, that the contingencies have some influence but that there is a substantial degree of choice, which he terms 'strategic choice' (see also Reed 1985; Pennings 1992).

Child (1972b) argues that choice for managers and other organizational controllers arises from several sources. He points out the decision-making process that intervenes between contingency and structure, so beginning to sketch an action-level analysis. Managers (and other organizational controllers) vary in their response to the contingency according to their perceptions, their implicit theories, preferences, values, interests and power (Child 1972b). The pioneering structural contingency theorists make some mention of these factors but nevertheless assert the contingency imperative (Woodward 1965).

For Child (1972b) these action-level factors gain strength from the room for manoeuvre afforded by weaknesses in the systems imperatives. An organization in misfit may suffer performance loss, but this may be of small degree relative to other causes of performance. A corporation in a dominant market position, such as monopoly or oligopoly, or a corporation in a protected industry, has sufficient excess profit, or organizational slack, that it can absorb a decrement in performance, due to structural misfit, without the profit level becoming unsatisfactory, that is, dropping below the satisficing level. Thus managers of such organizations may

retain a misfitting structure that they prefer for a long time. Again, Child (1972b) argues that when a misfit is no longer tolerable and fit must be restored this can be done by retaining the structure and altering the contingency to fit the structure. Thus there is no imperative to adapt structure to contingency for there is an alternative route to regain fit. In these ways the imperative to adopt a structure for a given contingency is softened considerably and a larger role for choice is seen. The strategic choice theory has been widely received and constitutes a considerable challenge to structural contingency theory. It thereby becomes a candidate for refutation in the normal science program of structural contingency theory.

The argument of Child (1972b) that the systems imperatives are weaker than pioneering structural contingency theory supposed has been examined and is not as valid as generally presumed. Commentators point out that in the Aston research into bureaucratic structure, the contingency factors accounted for only about half the variance in structure, so that much variance may be due to strategic choice. However, the variance in structure explained by contingencies is understated due to measurement error. Donaldson (1986: 89) showed that the true correlation between size and functional specialization after correcting for measurement error is 0.82. This means that 67 per cent of variance in structural specialization is accounted for by size, which is well over half. Of the remaining 33 per cent of the variance in structure, some will be due to other contingency variables and some will be due to time-lags in adaptation of structure to size and the other contingencies. Thus the proportion of structural variance available to be explained by choice is under 30 per cent at best. And it may well be less than 30 per cent because of any other causes of structure that might exist.

Research into strategy and structure shows that organizations in misfit may delay adoption of a new, fitting structure for lengthy periods, up to decades (Channon 1973; Donaldson 1987; Dyas and Thanheiser 1976). Structural adaptation empirically tends to occur when the organization in misfit has low performance (Donaldson 1987). This is consistent with the strategic choice argument (Child 1972b). However, the study that reveals this phenomenon (Donaldson 1987; Rumelt 1974) is of large *Fortune* 500 corporations, that is, the pillars of American capitalism. Many of the studies of structural adaptation to changing contingencies are of large corporations (Channon 1973; Donaldson 1987; Dyas and Thanheiser 1976; Fligstein 1985; Mahoney 1992; Palmer et al. 1987; 1993; Pavan 1976; Rumelt 1974; Suzuki

1980). It is therefore false to see large corporations as seldom having to make structural adaptations. For example, Fligstein (1985: 386, Table 2) shows that, among the largest 100 US corporations, 71 adopted the multidivisional structure, over the years 1919 to 1979. Even large, wealthy corporations can face performance downturns that lower their performance below the satisfying level. This may arise in part through an economic recession, increased international competition, deregulation of industry and so on.

Critics assert that, whereas contingency theory depicts the organization as having to respond to the environment, the organization may alter the environment to make it more munificent for the organization (Perrow 1986; Pfeffer and Salancik 1978). This makes it easier for the organization to be profitable and thus to avoid having to make structural alterations. Perrow (1986) draws on the analysis of Hirsch (1975) which shows that organizations enjoyed greater profitability in the pharmaceutical than the phonograph industry, because the greater government regulation of pharmaceuticals is a barrier to entry that reduces competition. Presumably such a benign environment would be attractive to many organizational managements, yet they have not all succeeded in bringing such a favourable alteration of the environment into place. This indicates the resilience of the environment and of powerful institutions such as the government. The degree of regulation of the US pharmaceutical industry is atypical, reflecting public concern about drugs being more harmful than pop records. In fact, governmental policy in several countries (Australia, New Zealand, the UK and the US) is increasingly to deregulate industries in order to increase competition with the intent of curbing organizational slack and forcing organizational adaptations. Thus the idea that environmental re-engineering is a ready alternative to organizational adaptation is overstated and becoming less feasible with time.

A misfitting structure is seen as tolerable, given a modicum of organizational slack, because the negative effects of misfit on performance are seen as minor, especially for a wealthy organization enjoying market dominance such as an oligopoly (Child 1972b). However, a study by Hamilton and Shergill (1992; 1993) compared the performance effect of structural misfit with that of industry concentration, an index of market domination or oligopoly. Industry concentration accounted for 28 per cent of profitability, and structural fit (to strategy) accounted for 16 per cent (1993: 79). Thus the effect of organizational structural misfit is similar in magnitude to that of market domination. Structural misfit is not trivial in its performance effect relative to

market domination. For most firms, the degree of organizational slack enjoyed through market domination would be almost exhausted by structural misfit so that performance would decline below the satisficing level, leading to structural adaptation.

Strategic choice theory argues that an organization in misfit can regain fit by altering its contingency to fit its structure, thereby avoiding the necessity of changing a structure that the managers prefer. In fact, empirical research shows that 95 per cent of corporations that move from misfit to fit do so by changes involving structural adaptations (Donaldson 1987). Corporations overwhelmingly attain fit by adapting structure to the contingency of strategy. Only 5 per cent of corporations move from misfit into fit by altering just their strategy contingency to attain fit with their existing structure. Corporations do not in reality use the contingency adjustment route to fit. The difference is so marked as to raise doubts that contingency adaptation is an alternative route. Where strategy change produces a new fit, such as by the corporation reducing its level of diversification and thereby moving from misfit into fit with its existing functional structure, this may be caused by very poor performance forcing the sell-off of non-core businesses rather than be motivated by the search for fit with a preferred structure. Instead of alternative routes to fit and choice, the research supports the view that corporations select a strategy and then tailor the structure to fit (Chandler 1962; Christensen et al. 1978).

Thus the normal science programme of solving deficiencies identified in extant work in the paradigm of structural contingency theory has been able to answer to a substantial degree the criticisms advanced from the strategic choice camp. The systems imperatives are strong and constrain to a high degree the choice open to managers and others deciding upon organizational structures. Organizations, even large and wealthy ones, bow to the dictate of having to fit structure to contingency in order to avoid intolerable performance loss. If there is much choice it is mostly restricted to timing of structural changes (see also Donaldson 1996).

There have been some moves towards demonstrating the role of individuals in the shaping of organizational structure, through showing that characteristics of individuals add to the explanation of structure by the contingencies. For instance, Miller and his colleagues show that structure is affected by the personality of the CEO (Miller et al. 1988; Miller and Droge 1986; Miller and Toulouse 1986). However, the Miller et al. (1988) study is of small organizations wherein the effect of the CEO is

probably greater than in larger organizations, where the CEO has less influence, sharing it with staff specialists, and decision-making is more bureaucratized (as the authors accept (1988: 564)). Moreover, the effect of the size contingency variable is restricted in a study just of small organizations. Thus the Miller et al. (1988) study likely overstates the impact of CEO personality and understates the effect of the size contingency that would typically apply in organizations in general. Indeed Miller and Droge (1986: 552) found no relationship between CEO personality and organizational structure in large firms. Similarly, Miller and Toulouse (1986: 1397) found more numerous effects of CEO personality on organizational structure in small than in large firms. Thus the effect of CEO personality on organizational structure that is present in small firms fails to generalize completely to larger firms. Thus the effects of CEO personality is mainly restricted to small firms rather than the large corporations where institutionalization of the organizational structure means that impersonal contingency factors hold sway.

Fligstein (1985) shows that the functional background of the CEO affects structure. However, the functional background of the CEO is itself affected by the structure and by the corporate strategy, that is by a contingency of structure (Fligstein 1987). Thus it is not clear that CEO background is a cause of structure that itself is independent of structure and of the structural contingencies. Many of the individual-level factors that Child (1972b) and others see as shaping structural decisions may themselves be affected by organizational structure, strategy, size, or other contingency. For instance, power to affect selection of structure is presumably itself affected by the existing organizational structure; similarly, the interest of a manager would be affected by their position in the structure (see also Donaldson 1996).

The main attempt by Child (1973) to forge an actor-level theory of structure holds that bureaucratic formalization is affected by the degree of specialization and qualifications among the administrative staffs who are the architects of bureaucratization – specialization leads to formalization. Thus the theory is itself structural, explaining structure by structure. This adds to our knowledge yet is not a replacement of structural by an action-level analysis.

The strategic choice theory has provided the stimulus for a closer examination of several issues in structural contingency theory. The results support structural theory in its original form with the determinism intact.

Strategic choice theory often has a negative aspect in that it seeks to assert a role of

managerial choice by showing that managers select structures that are less than optimal for the situation (Child 1972b), thereby exercising a capriciousness for which they should be held morally culpable (see especially Whittington 1989). Thus choice is manifested by selecting a structure different from that which the contingencies determine to be most effective. However, a second, more positive, sense of choice is that managers select the structure which moves the organization into fit with the contingencies thereby increasing organizational effectiveness through bowing to the system imperatives. Thus they exercise choice and are the human actors making the system respond but the outcome is beneficial for the organization and in conformity with contingency theory.

Support for this positive view of managerial choice is provided in research by Palmer et al. (1993). They show that the adoption of the multidivisional structure in large US corporations was greater among corporations whose CEO had a graduate degree from an elite business school. Palmer et al. (1993) argue that such CEOs would have acquired the idea of the multidivisional structure through such education. The adoption of the multidivisional structure by large US corporations was overwhelmingly rational adaptation to changes in the strategy contingency. They adopted the multidivisional structure to bring themselves into fit between strategy and structure (Donaldson 1987). Thus the effect of business education on divisionalization is encouraging evidence that the education of managers in the results of structural contingency research hastens their adoption of more effective organizational structures, as the pioneering researchers hoped (Woodward 1965).

FIT AND PERFORMANCE

As has already been pointed out, contingency theory centrally holds that there is a fit between the organizational structure and the organizational contingency that affects organizational performance. There has been renewed interest in the conceptualization and operational measurement of fit during the 1980s and subsequently. This is quite marked among researchers in the US. Such developments include the critical work of Schoonhoven (1981). Others have sought to investigate the empirical relationship between their operational definition of fit and organizational performance, assessed in various ways (Alexander and Randolph 1985; Argote 1982; Drazin and Van de Ven 1985; Gresov 1989; Gresov et al. 1989; Van de Ven and Drazin 1985).

Drazin and Van de Ven (1985) have modelled fit as a line of iso-performance and have measured the degree of misfit between a contingency variable and several different structural variables of each organization. This brings out the desirability of considering fit not just between a contingency and a structural variable, but between a contingency variable and all of the structural variables for which it is a contingency. Such a multistructural concept of fit more fully reflects the underlying fit notion and so is to be welcomed. In turn, it opens the door to a more fully multivariate model in which all the contingency factors and all the structural variables for which they are contingencies are considered simultaneously for each organization (Randolph and Dess 1984). This multidimensional model of fit would more richly capture the idea of fit. It would be more complex, but not too complex, as each structural variable has in practice only a limited number of contingencies. Many structural variables have as their contingencies only a limited set of contingency variables, mostly restricted to one or a few out of the variables of size, strategy, task uncertainty and public accountability. Clarifying the exact few contingencies that apply to each different aspect of structure and including them in multivariate models that exhaustively capture fit and then measuring this multivariate fit and its impact on performance is the next step in fit research. It constitutes an important agenda item for future contingency research.

THE CHALLENGE OF OTHER PARADIGMS

As part of the growing pluralism in the study of organizations, since about the mid 1970s new paradigms have arisen in sociology and economics which offer explanations of organizational structure additional to those available in structural contingency theory (Pennings 1992; Davis and Powell 1992). These include resource dependence (Pfeffer and Salancik 1978), institutional (Powell and DiMaggio 1991), population-ecology (Hannan and Freeman 1989) and agency (Jensen and Meckling 1976) theories and transaction cost economics (Williamson 1985). Some of these theories are outlined in other chapters of this *Handbook*. Elsewhere a detailed discussion and critique is offered of each of these organization theories and arguments in favour of contingency theory are presented (Donaldson 1995a). Our view is that while these newer organization theories have something to contribute that supplements contingency theory it remains the core explanatory theory of organizational structure (see Donaldson 1995a).

REFLECTIONS ON THE STRUCTURAL CONTINGENCY THEORY PARADIGM

The normal science of structural contingency theory has been pursued by a number of scholars, as we have seen. However, it is not popular in all quarters and has probably declined in popularity since 1970. There have arisen many new and different approaches, for example, institutional theory in the US (Meyer and Scott 1983) and action theory in the UK (Silverman 1970). The US has witnessed a particular profusion of new organizational theories (see Donaldson 1995a). Much organizational structural research has been conducted under their ambit. It has been suggested that career incentives lie more in innovating a new paradigm than in persevering with an older paradigm (Aldrich 1992; Mone and McKinley 1993). Moreover, awareness of alternative views has combined with specific negative findings within the structural contingency research so that some researchers interpret their findings as challenges to the paradigm and advance fundamental changes. For example, Cullen et al. (1986) restudied the Blau (1970) theory and variables across time; they interpret their negative findings as meaning that Blau's theory needs to be seen only as a theory of static scale rather than the size change dynamics that Blau claimed. In such cases, the researchers are not treating negative findings as puzzles to be solved, as is the way in normal science mode.

Thus the normal science of structural contingency theory has been pursued only by some students of organization. Nevertheless their results have indicated that considerable progress has now been made in solving puzzles and advancing a strengthened structural contingency theory. Moreover, while structural contingency theory is but one of several theories in the research literature, the teaching literature is quite opposite. Books on organizational structure and design continue to rely greatly on structural contingency theory and findings (Bedeian and Zammuto 1991; Child 1984; Daft 1986).

Given the increasing theoretical pluralism of the field of organizational structure studies, many contemporary empirical researchers take the contingency-structure relationship as basic and then add on variables and interpretations from the newer structural paradigms, such as institutional theory, in eclectic fashion (for examples, Fligstein 1985; Palmer et al. 1993). In this way the contingency theory endures in the mainstream of research among researchers who maintain allegiances to more than one organization theory. This eclecticism between theories marks the breakdown of each as a distinct

theoretical paradigm. Such eclecticism is to a degree resisted by the hard-core adherents of each of the organization theory paradigms (see Aldrich 1992). However, the more typical contemporary researchers seek to accommodate these differing ideas within their research models (Fligstein 1985; Palmer et al. 1993). While there are difficulties in realizing integration between the diverse contemporary paradigms (see Donaldson 1995a), the attempt to re-integrate the field is greatly to be commended. This eclectic use may be becoming the largest use of structural contingency theory.

Since structural contingency theory began as a synthesis between the opposed ideas of the classical management and human relations schools, it is not inappropriate that it in turn should become synthesized with other organization theories in a wider model. The issue then becomes whether structural contingency theory is to be a minor or major part of that new synthesis. Proponents of structural contingency theory will see it as providing the major component of the new synthesis (Donaldson 1995a). Proponents of the other organization theories will see structural contingency theory as providing only a minor part and their own preferred theory as providing the major component of the new synthesis. This may well be one of the main debates in the immediate future of organization studies.

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