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MANAGERIAL CAREERS AND BUSINESS STRATEGIES

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This article examines the link between managers' careers and the strategic behavior of the companies they manage. We argue that despite the theoretical and practical importance of this topic for the strategic management of organizations, the results of research to date have been contradictory and confusing, partly because of two substantial gaps in the underpinning theory. Implicit theories about the impact of work history on managerial characteristics are not made explicit, and a conceptual bridge is needed between individual and organizational levels of analysis. Ideas from research on decision-making studies, top management team behavior, and the strategic management literature are reviewed to yield an integrative model that specifies a set of propositions defining a program of research designed to shed light on the nature of the link.

Scholars and practitioners have long been concerned about the influence of career backgrounds on the strategic behavior of organizations. Does top management career background affect strategic choice and the success of these strategies? If any such effect can be demonstrated, does it come about because of the influence of individuals such as CEOs on corporate behavior? Are demographic phenomena (such as top management team [TMT] composition) more important, or are there other forces at work? From a practitioner's standpoint, what effect do different approaches to executive development and succession management have on the strategic direction of the organization?

To many writers, the link between careers and strategies has been so obvious as to be self-evident (e.g., Fligstein, 1990): Someone who has spent his or her working life in the finance function, for example, must surely have a very different approach to running the company compared to someone who has come up through an R&D route. Thus, Porter (1980) asserted that new strategies called for managers with different and appropriate backgrounds. One CEO, he argued, was unlikely to be able to see a company through the different stages of its life cycle.

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In view of the strength of such assertions, it may sound odd to question the link between careers and strategies. Yet it is the central postulate of this article that the nature of the link has not been firmly established, and we aim to explain why this might be. Our purpose is programmatic: We examine a number of branches of the literature that have linked career backgrounds and strategic behavior and propose a model that defines a set of general propositions, each of which is intended to provide a source of research hypotheses designed to set out a systematic approach to studying the link between careers and strategies.

What might have brought about this need for clarification? There is an extensive literature on the topic of careers and their relationship to managers and organizations. For example, as we will discuss, the impact that insider and outsider CEOs have on firm performance and strategy choice has been studied extensively, but the pattern of findings that has emerged has not been clear and consistent. The fundamental problem, we believe, is that there have been few attempts to cast specific research questions within a general organizing framework. There is little consistency in the way in which basic concepts are used, and the focus of writing and research varies widely. Some writers have concentrated on the individual, whereas others have been more concerned with the behavior of organizations as open systems through which people pass. They differ in the kind of causality in which they are interested, some concentrating on the impact careers have on strategic behavior and others concentrating on the reverse. Taken together, these influences have made it very difficult to acquire a coherent, clear picture of how careers relate to strategies.

The situation is exacerbated by the fragmented and confused state of the study of careers (Arthur & Lawrence, 1984; Arthur, Hall, & Lawrence, 1989; Gunz, 1989a) and the cross-disciplinary nature of the problem. Several disciplines are involved, for example, developmental psychology, the sociology of interorganizational networks, and strategic management. Even within the careers literature, it is by no means uncommon for writers on similar careers subjects to be unaware of each other's work or to cover the same topic in strikingly different ways (Boehm, 1981). When all the other potential disciplinary contributors have been added, it is no surprise that the field is in need of organization.

In this article, we have selected what we believe to be the main currents of thought in the field. First, we need to explain two important foci for the paper: our concentration on managers as the population of concern and our choice of strategies as the outcome measure.

We are concerned with the careers of managers. We do not mean to assert that nonmanagers do not have careers, nor that it is only managers who influence corporate direction. However, a number of writers in the field of strategy have identified what they believe is an unhealthy focus on CEOs in the literature, and we will argue the case for extending the population beyond the top management team to the cadres of junior executives. Our central concern is with the impact of careers at the organizational level of analysis, because of the role they play in renewing the management hierarchy, that is, the people who shape business policy. So, the population we are interested in are those who participate in managerial labor markets.

We have identified business strategy as the outcome measure of choice rather than firm success or failure, because we interpret the latter as a subset of the former. There are many different ways of conceptualizing strategy (and we will explain the sense in which we use it here), but the literature we examine typically has been focused on one or the other of two possibilities. The first is the impact of managerial careers on the kind of strategy that firms choose, and we refer to this as a *main effect of careers on strategies*. The second is the impact of careers on the success with which given strategies are implemented, which we will treat as a *moderating effect of careers on strategic outcomes*. It is not that performance in a success/failure sense is less important than strategy choice, but rather that it is a consequence of certain kinds of managers choosing and executing certain kinds of strategy.

CLARIFYING KEY CONCEPTS

This article addresses the link between careers and strategies. However, both are used to denote many different things. In this section, we clarify what we mean by careers and strategies. In addition, we address a key difficulty that faces any author in this area, concerning the level of analysis.

The careers literature is complicated by the multiplicity of levels of analysis from which the study of careers can be approached (Gunz, 1989b; Lawrence, 1990). Careers can be examined at the individual level of analysis, in which the object of interest is the person and his or her career, or the organizational level, in which the object of study is the flow of people through the organization seen as an open system (von Bertalanffy, 1968). Indeed, many writers have pointed out that the two levels of analysis are really two sides of the same coin: The study of one informs an understanding of the other and vice versa (Grandjean, 1981; Hughes, 1937; Mills, 1959).

Careers: Individual Level of Analysis

Most writing on the subject of managers and their careers tends to focus on individuals. An example of an individual-level research issue is the study of how the behavior of individuals as managers is explained by their work history. Organizations are not the object of interest, except insofar as they provide the context for the jobs in question.

Any interest in the impact careers have on the way people behave implies an interest in managers' so-called subjective careers (Hughes, 1958), the way in which they have developed as individuals over the course of their lives. But the most readily observable career is the objective, the observable sequence of posts they have occupied, often referred to as the manager's career *background*. Thus *career* at the individual level usually means the work history of the individual in question, although education (e.g., degree major and level of degree) may be included. Other aspects of background, for instance social class and parents' occupation, generally have not been considered (and, indeed, are defined in strikingly different ways in different literatures), even though they have been of interest to social scientists in other fields (Carroll & Mayer, 1986; Erikson, Goldthorpe, & Portocarero, 1983; Harrop, 1980; Pahl & Pahl, 1971; Snipp, 1985; Watson, 1964; Willis, 1977). Subjective aspects of career usually are not considered.

In this article, the terms *career* or *background* at the individual level refer to the work history of managers.

Careers: Organizational Level of Analysis

At the organizational level of analysis, *career* refers to the *flows* of people through and between organizations, rather than to the individuals themselves. The pattern of these flows are called here *career streams;* they differ from the broader concept of *career systems* (Sonnenfeld & Peiperl, 1988), which tends to encompass the human resource management practices that drive the flows (e.g., the ways in which people are recruited, compensated, chosen for advancement, developed by lateral moves, or sidelined).

The flows may be in many different directions. Traditionally, they have been thought of as vertical ladders: systems of progression through which one advances by moving up to the next rung as it falls vacant. However, there are many possible kinds of moves in organizations other than straight up. An organization's *career streams,* as we define them here, are the patterns discernible in these flows. The patterns may be straightforward, such as when the predominant move is upward through clearly defined hierarchies, or more complex, as in companies in which different kinds of lateral moves can be found at all levels.

Several kinds of streams have been identified. Perhaps the best known is the fast track (Cawsey, Nicholson, & Alban-Metcalfe, 1985; Hall, 1986; Kovach, 1986; Stewman & Konda, 1983), presumably because its occupants provide members for the future upper echelons of companies. Other widely studied streams include plateaued managers (Evans & Gilbert, 1984; Ference, Stoner, & Warren, 1977; Hall & Isabella, 1985; Near, 1984; Slocum, Cron, Hansen, & Rawlings, 1985) and technical specialists (Dalton, Thompson, & Price, 1977; Goldberg & Shenhav, 1984; Gunz, 1980; Mainiero, 1986; Raelin, 1987; Sofer, 1970). Managers in different career streams within the organization are rewarded in different ways and have differing kinds of access to the firm's power structure. In any organization, certain streams typically lead to top positions, whereas others do not. In some companies, it is the accountants who succeed at the expense of their more product-oriented colleagues, whereas in other companies, it is the engineers.

Examples of organizational-level writing include work on (a) the way reward systems motivate managers (Whitley, 1987), (b) internal and external labor market theory and demography (DiPrete, 1987; Doeringer & Piore, 1971; Hachen, 1992; Osterman, 1984; Pfeffer, 1985), (c) organizational ecology (Haveman & Cohen, 1994), and (d) the use of labor market theory to link career systems with the strategic behavior of companies (Sonnenfeld & Peiperl, 1988).

Strategies

Strategies are organizational-level phenomena in the sense that they relate in some way to the behavior of the organization. Although one may observe the role of individuals, for instance the CEO, in initiating and directing a firm's business strategy, the outcome measures of field studies of strategic behavior typically have been focused on either the choice of strategy (e.g., the diversification patterns that a firm has followed) or its outcome (measured, e.g., using some index of business success) (e.g., Reed & Reed, 1989; Smith & White, 1987; Song, 1982).

We follow Mintzberg and Waters' (1985) conception of strategies as patterns in streams of actions and use their distinction between *intended* and *realized* strategies. Intended strategies have to do with plans and intentions; realized strategies are those that, ex post, are seen to have happened. This distinction mirrors the one we made previously between strategic choice and strategic outcome. In other words, we are interested in the main effect of careers on intended strategies and the moderating effect of careers on realized strategies.

The way in which intended or realized strategies are labeled is more complex. Miles and Snow's (1978) typology is widely used in the literature, in particular when strategies are compared with careers. Other labels have been used, many of them derived from Chandler's (1962) work and based on typologies of diversification and life-cycle stages. Table 1 lists

TABLE 1
Strategy Typologies Used to Study the Relationship Between Careers and Strategies

Life-cycle stage of the firm	Gerstein & Reisman, 1983; Ibrahim & Kelly, 1986; Porter, 1980; Stybel, 1982; Wissema, Brand, & Van Der Pol, 1981
Four-strategy model of Miles and Snow (1978)	Gunz, 1989a; Gupta, 1984; Sonnenfeld & Peiperl, 1988
Diversification extent and type	Bouchet, 1976; Leontiades, 1982; Reed & Reed, 1989; Smith & White, 1987; Song, 1982; Tichy, Fombrun, & Devanna, 1982
Porter's (1980) generic strategies	Gupta, 1984
Build versus *harvest*	Gupta, 1984; Gupta & Govindarajan, 1984
Innovation, marketing differentiation, and focus	Miller & Toulouse, 1986
Steady state versus *evolutionary*	Leontiades, 1982

the typologies used in studies to which we refer, to demonstrate the range that is found in the literature and to highlight the need for caution in comparing findings.

To summarize, authors who attempt to link careers with strategic behavior must not confuse the levels of analysis of the various phenomena. Careers can be viewed at individual and organizational levels of analysis, but strategy is fundamentally an organizational-level phenomenon. Any theory linking the work history of individuals to the strategic behavior of organizations needs to have some way of linking these two levels.

PREVIOUS WORK ON CAREERS AND STRATEGIES

We discuss the literature on the careers-strategy link in three steps. First, we consider research on the impact that the career background of individuals, typically CEOs, has on the choice of strategy and the effectiveness of its implementation. Second, we examine what has been said about the effect that careers at the organizational level of analysis have on the effectiveness with which strategies are implemented. Finally, we discuss some recent observations on the impact that strategic outcomes have on the careers of individual CEOs and on the organization's career streams.

The Impact of an Individual's Career Background on the Firm's Strategic Behavior

Of all the ways in which the career-strategy link might be studied, perhaps the most obvious is the impact of individual career backgrounds on strategic behavior. Superficially, it is the easiest to study, because if the individual is the CEO, much of the data are in the public domain. The underlying assumption of such studies (which has been challenged by a number of writers, e.g., Hambrick & Mason, 1984; Reed & Reed, 1989) normally is that the CEO "usually exerts the dominant influence" (Song, 1982: 378); CEOs are, it seems, different from the top management teams from which they emerge (Norburn, 1989).

Career background and choice of strategy. We start the account with Chandler's (1962) observation that the managers who turned the companies he studied into decentralized, divisionalized structures did not have much experience outside their firms. As "organization builders," they nevertheless had "more outside experience than their successors or the professional executives of today" (Chandler, 1962: 315). The implication is that their broader experience made them more likely to adopt diversification. Similarly, Gabarro watched 14 executives working themselves into new jobs and found that for 13, "their initial actions were in areas where they . . . had functional experience, and the most significant changes they made during the three years [of the study] also were in the areas where they had experience" (1985: 116). Admittedly, this is not strictly a study of strategic behavior, and the number in the sample is small, but it is a rare report of the impact of background on managerial behavior.

There have been a number of larger scale studies. Fligstein (1990: 357) regarded it as self-evident that for people who had "spent their [lives] attempting to market products, then their central concern will be tactics that increase the sale of products. . . . Having spent careers analyzing business problems in a certain way, managers come to view all problems through a certain theoretical lense [sic]". Data from U.S. firms for the period 1919–1979 showed that presidents' backgrounds were linked to the organizational field in which their leadership was already dominant and to the strategy of the firm. However, the direction of causality cannot be inferred from the data because of the analytical method used (logistic regression): Did the firms, having chosen their strategic directions, pick CEOs with appropriate backgrounds, or did the CEOs' backgrounds influence the strategic directions they chose?

Song (1982) examined 53 firms that had diversified and found that a firm whose CEO had a background in production or marketing ("operational") was more likely to be an internal diversifier than an acquisitive diversifier. The opposite was true for firms with CEOs who had backgrounds in finance, accounting, or the law ("nonoperational"). A more recent study, however, found no correlation between a CEO's background and the diversification strategy the firm selected (Reed & Reed, 1989). The authors were careful to say that this was not necessarily because there was no relationship, but it might simply be a reflection of the "complexity of other factors that modify the importance of CEO experience in the strategy selection process" (Reed & Reed, 1989: 267). This is not a very encouraging start on our search for a relationship between careers and strategies.

To summarize, the evidence for a causal link between an individual top manager's career background and choice of strategy is based mainly on case-based methodologies, such as those used by Gabarro (1985) and Chandler (1962). Cross-sectional studies have either not been able to establish the direction of causality or have produced directly contradictory results.

Career background and strategy realization. This aspect of the issue has been studied much more intensively but without very consistent results. Some of the literature explicitly examines CEOs, whereas some deals more generally with top managers without invoking the TMT concept; for this reason, it is still at the individual level of analysis.

Theoretical arguments have been advanced for expecting successful strategic implementation to depend inter alia on choosing a manager who has the appropriate career background. Szilagyi and Schweiger (1984) put forward a complex model based on a careful analysis of the literature that suggested the factors that should be taken into account when matching managers to strategies. Many of their variables related to personality or personal characteristics, but career-related variables included specific industry knowledge, knowledge of organizational functions, knowledge of overall company, past performance, and number and quality of internal networks. An interesting variant of this argument was put forward by Kerr and Jackofsky (1989). They developed a contingent view of managerial selection, arguing that there were features of a firm's situation, such as evolutionary growth (Leontiades, 1980), structures that were not highly integrated, or market cultures (Ouchi, 1980), in which selection (i.e., an outsider) produced good results. Under circumstances such as steady-state growth, highly integrated structures, or clan cultures, it was better to develop managers to fit the roles rather than to select "ready-developed" managers.

Some research has directly examined the impact of differing backgrounds on effectiveness of strategy implementation. Marketing/sales experience (in addition to personality variables such as risk propensity and tolerance of ambiguity) among general managers contributed to the success of *build* strategies but detracted from *harvest* strategies, for example (Gupta & Govindarajan, 1984). Reed and Reed (1989) found an interaction effect between a CEO's experience and the chosen method of diversification that affected performance. Firms diversifying by acquisition tended to be more successful if their CEOs had nonoperational backgrounds. For internal diversifiers, the opposite seemed to be the case, although in both instances the effect was weak.

Much of the work in this category falls within the *insider/outsider* succession literature, which has sought the elusive answer to the deceptively simple question: Are CEOs better chosen from within or without the corporation? The question's deceptiveness comes from the multiplicity of confounding factors and problems of inferring causality encountered by researchers in this field (Gunz, 1989a; Lubatkin, Chung, Rogers, & Owers, 1989).

Early work suggested that too many insiders were not good for corporate health: Two insider chief executives in succession were associated with lower growth rates (Helmich, 1974). However, more recently, the pendulum seems to have swung in the opposite direction. There is some evidence, for example, that insider knowledge is a help in highly technical industries. A study of the minicomputer industry showed that CEOs with backgrounds in electronics ran more successful firms than those without this experience (Virany & Tushman, 1986), although, in this case, "insider" knowledge appears to be occupational rather than organizational. This finding seems to be supported by an earlier, more general study, except that the difference in return on capital invested, the only statistic quoted, did not significantly differentiate between insiders and outsiders ($p > 0.5$; Shetty & Peery, 1976). Similarly, Brown (1982) found no difference between the success of insider or outsider American football team managers.

In his study of executives at work, Kotter (1982) argued that it was hard for a general manager to be effective without a deep knowledge of his or her organization: In other words, he concluded that insiders were more effective than outsiders. However, he had no comparison group of outsiders, which would have allowed him to draw such an inference with confidence. Gabarro's (1985) study also drew inferences about the success or otherwise of insider and outsider managers: Failure was defined as being fired within three years of starting the job in which they were being observed. Although on the surface it seemed that insiders were more successful than outsiders, unfortunately because the numbers were small ($n = 14$), the significance of this finding is low ($p > 0.2$). A further limitation of both studies concerns the definition of success in internal terms, which neglects the possibility that "successful" executives may still be leading their firms to failure. Managerial effectiveness is a complex construct, and its relationship to career success is far from straightforward (Gunz, 1989a; Offe, 1976; Smith & White, 1987). A more thorough discussion of this point, however, is beyond the scope of this article.

A number of studies have examined the impact of insider and outsider CEO succession on stock prices and systematic risk (the beta coefficient in the capital asset pricing model). In this case, the "success/failure" that is being used as outcome measure is seen through the eyes of the capital markets. Again, the findings are contradictory. Some studies have found no difference between the outcomes of insider or outsider successions (Beatty & Zajac, 1987), but others have. One study found that capital markets looked for new directions for firms in trouble but did not like too much change of the kind that an outsider might bring to firms that were doing well (Trifts & Winkler, 1987); however, another found that the market seemed to prefer outside appointments for financially healthy firms, but that it was indifferent about insiders or outsiders when the firm was less healthy (Lubatkin et al., 1989). The situation is even more complex in small firms (Dyl, 1985; Reinganum, 1985a, b), and the debate continues.

No clear message comes through from this work. The indications are that a top manager's career background does make a difference to the success with which a strategy is implemented, but it is probably also the case that the precise nature of the difference is contingent on other factors.

The Impact of Career Systems on the Firm's Strategic Behavior

Unlike the individually based literature, writing at the organizational level of analysis, which examines the impact of career systems on strategic behavior, has tended to focus solely on the effectiveness with which strategies are implemented, that is, on business success.

Some of the writing has been prescriptive, such as that of Stumpf and coworkers (Stumpf, 1988; Stumpf & Hanrahan, 1984), who listed in some detail the career management practices that corporations should adopt to support their particular business strategies.

A more recent and analytical approach was proposed by Sonnenfeld and Peiperl (1988), who proposed a four-way categorization of career systems defined by two binary dimensions: the extent to which higher level recruitment was supplied by the external labor market and the criteria used for promotion (as individuals or as team players). Using Miles and Snow's (1978) typology, they argued that each strategic type should be supported by the appropriate career system. Case material was used to illustrate their analysis, but an empirical test of the underlying proposition has yet to be reported.

Kanter (1984) described career systems that depress or stimulate innovation. Innovation policies that involved the importation of senior executives to introduce change tended to have depressing effects on the insiders, who felt undervalued and made their corporations less innovative. By contrast, lower turnover among senior executives was significantly associated with higher levels of corporate innovativeness (Kanter, 1984: 149–150). A similar example can be seen in Peters and Waterman's (1982) argument that the career systems of firms like 3M play a key role in innovative corporate behavior.

So, although some interesting theoretical ideas are available for testing the notion that career systems affect a firm's strategic behavior, little systematic evidence has been accumulated to support it, other than Kanter's case-based study. Our last step in examining the literature linking careers to strategies is to examine evidence for the opposite direction of causality: the impact of strategies on careers.

Feedback: The Impact of Strategies on Careers

A number of studies have examined the impact of the strategies that firms adopt, and the success with which they are realized, on the careers of firms' managers. We do not include what might be called the prescriptive school in this *strategy-led* literature. By *prescriptive* we mean the stream in the literature that takes the firm's intended strategy as given and prescribes the "right" kind of executive for implementing it (e.g., Gerstein & Reisman, 1983; Stumpf, 1988; Stumpf & Hanrahan, 1984; Wissema, Brand, & Van Der Pol, 1981). First, although it seems that strategies are affecting careers, in fact, the assumption is that a rational management will pick the most appropriate manager for the strategic situation. The key relationship here is still the concern with the impact of career backgrounds on strategies.

A second reason for excluding the prescriptive school is that associated with it are severe conceptual and empirical problems. At the simplest level, the prescriptive school ignores the question of how the strategy was chosen in the first place. Gupta (1986) made a number of telling points. He argued that a management team in a highly unpredictable context might not have confidence in any one strategy, so carefully selecting a general manager because of his or her suitability for a particular strategy might constrain the organization unnecessarily. Management development processes, he pointed out, typically call for managers to be given a breadth of experience, which means that there are bound to be mismatches between managers and strategies from time to time. Some strategies, for instance harvesting, can be very demotivating and are unlikely to form a vocation for anyone. Finally, Gupta (1986) argued that in some contexts there is little, if any, room for managerial discretion anyway, so matching becomes a nonissue. From an empirical point of view, Kerr (1982: 59) argued that "there does not seem to be a single piece of evidence cited by proponents which would support the contention that a given personality type or managerial style works best in a given product-life cycle state."

Two studies have been reported of the strategy-career link, one at the individual level of analysis and the second at the organizational level. We consider them briefly before reviewing our observations.

Strategic outcome and choice of CEO. Perhaps one of the most thorough empirical studies of careers and strategies was an examination of the extent to which incoming CEOs have backgrounds that are similar to that of their predecessors (Smith & White, 1987). The authors operationalized *specialization* by examining two dimensions of the CEO's career: functional specialism (production, sales, management, finance, and law) and *institutional* specialism (company, industry, and generalist). They predicted, for instance, that a single and vertically integrated strategy (Rumelt, 1974) should be associated with CEOs with single-company and production or sales experience, whereas an unrelated and conglomerate strategy should be associated with a generalist and financial or legal background. Not only did they find that "the specialization of the former CEO and his [or her] successor tend to be the same . . . [but] . . . that there is a relationship between the previous strategy and the successor's specialization" (Smith & White, 1987: 277).

Although the authors were careful not to infer too much about the direction of causality of their findings and argued for further work, the evidence was highly supportive of the conclusion that firms select CEOs whose backgrounds are compatible with the strategy that is currently in place. Unlike what we have termed the prescriptive school, they were descriptive and made no assumptions about the appropriateness of these personnel choices.

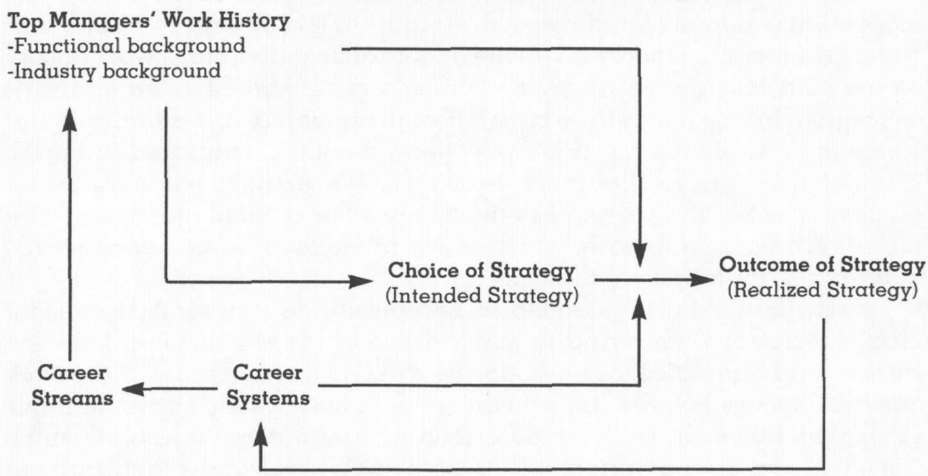
Strategic outcome and career streams. Gunz (1989a) drew on Karpik's (1978) concept of *logics of action* and proposed that firms have characteristic organizational career logics (OCLs). These were defined as the logic that an observer infers to lie behind the pattern of moves he or she sees managers making in a given organization. Metaphorically, they were likened to organizational "jungle gyms" or climbing frames, in which the rungs are the managerial posts; managers make their careers by scrambling over the jungle gym. An OCL represents an observer's subjective interpretation of the career moves taking place. OCLs were linked in Gunz's (1989a) model to both structure and strategy. Two types of strategy were distinguished: growth into territory that was either unfamiliar to the firm or familiar to the firm (Abell, 1980; Miller & Friesen, 1984; Quinn, 1980). Firms that typically have grown by starting new ventures (growth into the unfamiliar) should have a series of local labor markets as each venture's founders build their own business (*evolutionary* OCL). By contrast, firms that have tended to grow into familiar domains would have one of two kinds of OCL, depending on their structures. Firms with complex structures, in which there were many kinds of managerial jobs, were predicted to have career logics in which managers tended to amass many different experiences over the course of their careers (*constructional* OCL). Alternatively, firms in which there were a high proportion of similar posts tended to have career logics in which managers moved from one similar post to another, and if these managers were successful, each post would have more responsibilities (e.g., a bigger plant or a group of plants; *command-centered* OCL). Firms can have more than one OCL; the stream typically leading to top positions in the firm is the *modal organizational career logic* (modal OCL). Gunz (1989a) showed in a small sample of large manufacturing firms that the different structures and strategies were reflected in distinctive OCLs and career streams that, in turn, produced managerial cadres with career backgrounds distinctive of each particular OCL.

There seem to be some indications, then, that at both individual and organizational levels of analysis, strategies have an impact on careers. Certainly, this is not a strong claim: The number of studies reported in this area is small, and they suffer from the usual problems of unproven causality or small sample size.

MAKING SENSE OF THE LITERATURE: TOWARD A THEORY OF CAREERS AND STRATEGIES

We have discussed evidence for the links shown in Figure 1. A CEO's (or, sometimes, called top manager's) work history affects the choice of an organization's strategy (the intended strategy: Mintzberg & Waters, 1985) and the process by which intended strategies are realized. Career systems, too, affect the way strategies are realized. Finally, the realized

FIGURE 1
Previous Work on Careers and Strategies



strategy affects the top manager's work history and the organization's career streams, although Figure 1 depicts these links in a modified way, for the following reasons.

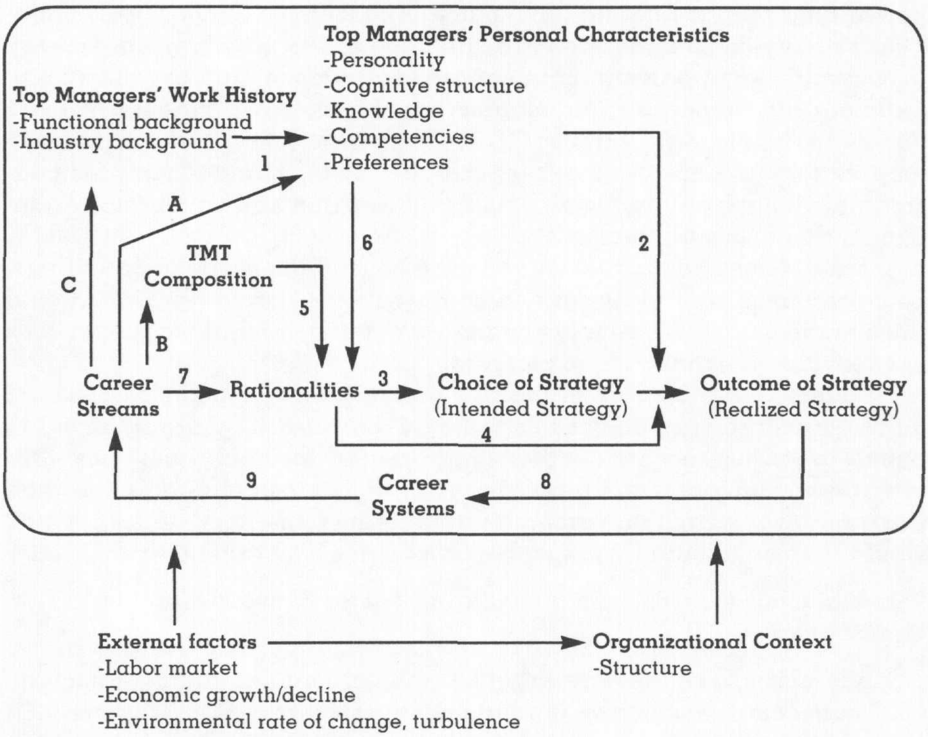
As we explained previously, *career system* is the term typically used in the literature to encompass the human resource management practices that drive career streams. So, Figure 1 shows the strategy-career stream link mediated by career systems. Furthermore, because it is the shape of the firm's career streams that defines the route people take to fill top management positions, career streams mediate the link between realized strategy and top managers' work history. For example, if the firm has an internal supply flow (Sonnenfeld & Peiperl, 1988), then members of the top management team are likely to have built their careers within the firm's modal organizational career logic. If it has an external supply flow, then members may have been recruited from outside, perhaps (depending on the industry) from within the industry. Turnaround situations may disrupt the prevailing career logic and bring about atypical top management replacements, causing either temporary or permanent shifts in the shape of the firm's career streams. Figure 1 summarizes these links by showing that realized strategies affect career systems, which, in turn, drive career streams. These career streams shape the work histories of the firms' top managers.

The evidence for most of the links in Figure 1 is ambiguous; sometimes evidence emerges that backgrounds influence choice of strategy, and then more careful follow-up studies fail to duplicate the findings. Sometimes, especially in the case of the insider-outsider debate, there are so many competing influences that it is very difficult to distinguish empirically the impact of background on strategic choice or implementation success from the other factors that might be at work. Sometimes, as in the organizational-level model linking career systems with implementation effectiveness, empirical evidence is not yet very convincing.

Next, we argue that one reason for this state of affairs is that the model that is implicit in this research (Figure 1) has at least two important gaps: (a) an implicit theory about the impact of an individual's work history on the kind of manager he or she is needs to be made explicit and (b) a conceptual bridge needs to be built between individual and organizational levels of analysis (Burns, 1966). We offer a model, summarized in Figure 2, which we believe fills these two gaps. We explain our reasons for proposing links, and we express the key links as a set of propositions for future research. First, however, we need to make three points about the nature and limitations of the model.

First, the model is intended to be *episodic* in nature. A significant problem arises when trying to make sense of the relationship between careers and strategies, concerning the direction of causality. Most work has been focused on the impact careers or career systems have on firms' strategies. However, we have described an alternative viewpoint, which considers the reverse direction. At both individual and organizational

FIGURE 2
Integrated Model[a]



[a] Numbered arrows refer to the propositions in the text.

levels of analysis, this approach examines the ways strategic outcomes affect the careers of the firms' managers. In order to capture these two directions of causality, the models in Figures 1 and 2 represent a sequence of events. For example, Figure 1 implies that a new CEO with a career background that is different from that of his or her predecessor may affect the firm's intended strategy and the success of its implementation. The resulting changes in the realized strategy may, over time, change the firm's career systems, and they might also change the selection process when the CEO is eventually replaced (Jalland & Gunz, 1993).

Second, the model does not claim to account for every factor that affects the careers-strategy link. It is evident that Figure 2 defines a comparatively closed system, but it is equally evident that there are many other forces at work, acting from *outside* the loop in the figure, on the link between careers and strategies (Guth, 1993). The external labor market clearly provides a context that influences the variables shown in the model. For example, there are labor markets, such as those for certain classes of professionals, dominated by cosmopolitan careers (Gouldner, 1957, 1958), and there are those in which interfirm moves are far less common. Economic growth or recession tightens or loosens labor markets and encourages or discourages corporate growth, any of which has the potential to change internal labor markets considerably. Classical contingency theory considerations draw attention to the structural impacts of, for example, environmental change and turbulence, and organizational structure has important implications for the shape of careers in firms (Gunz, 1989a; Martin & Strauss, 1956; Vardi & Hammer, 1977). Within the loop, certain aspects of career systems, such as top management compensation, will have an impact on strategy choice and implementation, independently of career streams.

A full discussion of these impacts is beyond the scope of this article, because our aim is to discuss the nature of the career-related internal links in the model. We simply wish to make the point that our model does not provide an exhaustive explanation.

Finally, the propositions that we derive from the model in Figure 2 do not have the specificity of hypotheses, because they are intended to define areas for research rather than specific research questions. Our intent is to show how the propositions fit together to form an integrated program for research on careers and strategies, the next steps of which would involve defining, for specific propositions, testable hypotheses.

Personal Characteristics as a Mediating Factor Between Careers and Strategies

Any account of the way in which the careers of managers such as CEOs affect strategy choice or implementation carries with it an implicit assumption that the managers' personal characteristics (e.g., cognitive structures, knowledge, competencies) are, in some way, affected by their career backgrounds. The first gap in the model in Figure 1, in other words, is the way it ignores the role that personal characteristics play in mediating between managerial career and managerial behavior.

There is an extensive amount of literature that links managerial characteristics with strategic behavior. Some is empirical (e.g., Gupta & Govindarajan, 1984; Ibrahim & Kelly, 1986; Miller & Toulouse, 1986; Miller, Kets de Vries, & Toulouse, 1982), some is theoretical (e.g., Gupta, 1984; Stybel, 1982; Szilagyi & Schweiger, 1984), and much is prescriptive (e.g., Eastlack & McDonald, 1970; Gerstein & Reisman, 1983; Leontiades, 1982; Wissema et al., 1981). There is also growing interest within the strategic management literature in the role that the cognitive frameworks or schemata (Norman, 1976) of top managers play in shaping the way strategies are developed (Burgelman, 1988; Huff, 1990; Porac, Thomas, & Emme, 1987; Schwenk, 1988, 1989). We therefore expect executives' personal characteristics to affect both the kind of strategies they choose (intended strategies) and the way in which intended strategies are realized.

From the perspective of this article, we focus on those personal characteristics that are shaped by career background and for which there is evidence that they are important in affecting the way executives shape their firms' strategic behavior. It is commonly observed, for example, that "past experience, prior knowledge, and existing schemata create frameworks [which] are used to reduce ambiguity and create meaning" (Thomas & McDaniel, 1990: 287, who drew on suggestions of Lyles, 1987; Ramaprasad & Mitroff, 1984). What evidence is there that this is the case?

Career background and personal characteristics. Many people regard the link between career background and personal characteristics as self-evident: A particular kind of work history is bound to develop certain characteristics in the person who has gone through it. Someone who has spent a lifetime in marketing, surely, must know a lot more about marketing than someone who has not, and, similarly, someone who has spent many years in the fast-food industry is likely to know a great deal more about fast food than someone who has not. As Hall (1987: 307) suggested, "There is probably a socialization process at work . . . the longer a person stays in a certain field, the more he or she will be socialized to fit the occupation better." However, it has not proven easy to uncover the characteristics that are affected by career background.

There is some evidence that work experience affects personality (Brousseau, 1983; Lueptow, McClendon, & McKeon, 1979), although the evidence for any such connection is thin. This is to be expected, given that personality normally is considered to be that characteristic of an individual's psychological makeup most resistant to change. Kohn and his associates (1982) examined the link between role characteristics and personality. In a 10-year longitudinal study of a group of 750 American men, these authors found that such traits as self-confidence, authoritarianism, anxiety, and conformism were affected by the men's jobs. In particular, "jobs that facilitate occupational self-direction increase men's ideational flexibility and promote a self-directed orientation to self and to society; jobs that limit occupational self-direction decrease men's ideational flexibility and promote a conformist orientation to self and to society" (Kohn & Schooler, 1982: 1281). Longitudinal studies by Brousseau (1983) and Mortimer, Lorence, and Kumka (1986) yielded similar findings, although in none of these studies was information collected on the nature of the subjects' work history, for instance, the organizations or roles they passed through (Nicholson & West, 1989).

However, the point of interest in this article is not *what* executives know—the knowledge, expertise, competencies, and abilities they bring to their jobs—or how their personalities might change, but *how* this knowledge affects the way they choose strategies and implement them. The theoretical origin of the small amount of work on this issue is March and Simon's (1958) concept of bounded rationality: the effect of background on the limited search used by managers who are trying to make sense of ill-structured, complex problems that challenge their cognitive capacities. As March and Simon (1958) and others have argued, managers can be expected to rely on simplified cognitive models that have their origins in prior experience, so that managers from different backgrounds should analyze a complex, messy problem in different ways.

The much-quoted study of Dearborn and Simon (1958) was an attempt to test this idea, and it has been cited as a demonstration that background affects cognitive structures (Hambrick & Mason, 1984; Miller, 1990). In this study, managers on an executive course were presented with a general business case study and asked to categorize the nature of the problem. They showed what Dearborn and Simon believed to be a strong tendency to describe the problem in terms of the business function in which they worked. If valid, this finding suggests a powerful mechanism mediating between career background and strategic behavior: A manager who defines every general problem as a marketing one, for example, is presumably more likely to develop strategies that overlook the needs of production systems compared to a manager who considers every problem a production one.

One difficulty of the study in the context of this article, which seems to have been overlooked by some authors, is that the independent variable was the manager's current job and not his or her previous work history. Rather, the findings could perhaps be better interpreted as an investigation of the way cognitive structures vary according to organizational position (Goodman, 1968; Zajonc & Wolfe, 1966). Moreover, a number of authors (e.g., Waller, Huber, & Glick, 1995; Walsh, 1988) questioned Dearborn and Simon's (1958) interpretation of their data. In a careful replication of their study, Walsh (1988) did indeed take work history into account. He collected brief biographies from executives who were enrolled in a part-time master's program, from which he computed a *functional diversity* index, which was based on the number of years the manager worked in a particular function and the total number of years of work experience. The more varied the career, the closer this statistic approached zero. He used multidimensional scaling techniques to classify his sample's belief structures into functional types from members' analysis of a general business case, and he found little relationship between background and belief structure. Specialists did not on the whole focus on their specialism, and although none of the managers had had a particularly varied background, the more generalist members among them were not significantly more likely to consider the issues in a broader way than were the specialists.

Walsh did, however, acknowledge that analyzing a 1,000-word case in an MBA classroom might not accurately simulate the way in which these executives consider problems in real life. In addition to the question of how representative executives studying for part-time MBAs might be of a broader managerial population, the simulation may not produce the information overload that would require the managers to invoke any experience-biased limited information processing.

In an attempt to make sense of these contradictory findings, Glick and colleagues (1993) examined the possibility that the key difference between Dearborn and Simon's (1958) work and Walsh's (1988) work was the goal set for the subjects. These authors found that it did indeed make a significant difference: Subjects who were given Dearborn and Simon's task, to look for the main problem faced by the company in the case they used (the same one that was used by Walsh), tended to look at less information than if they were asked to list all the problems the company faced. Background had no influence on the information they looked at, however. There was some relationship between career background and problems *identified,* although this was noticeable for only two kinds of background: human resources and production. There were no indications that this process was mediated by cognitive structures: Background seemed to have no influence on cognitive structure.

Glick and colleagues (1993: 13) concluded that even though there are reasons for expecting career background to affect managers' cognitive maps, "first, there may actually be no such effects. Second, it may be extremely difficult to measure cognitive structure. While it is appealing to posit a cognitive structure that influences problem identification, neither we nor Walsh (1988) have been able to actually demonstrate such a relationship." Further evidence that the cognitive connection, if it exists, may be hard to uncover comes from a qualitative cognitive mapping study of CEOs (Axelrod, 1976). Their maps did not seem to be affected by demographic factors such as tenure as CEO, education, or dominant functional experience (Tyler, 1993). Furthermore, Lyles (1987) did not find any relationship between the functional background of the top executives she studied and their approaches to strategic problem formulation.

A possible explanation for these apparently contradictory findings comes from recent work on a sample of CEOs of U.S. organizations (Waller et al., 1995), which showed that functional background affected some perceptions more than others. It appeared not to influence the CEOs' perceptions about changes in their firms' environments, but it did affect their perceptions of changes in their organizations' effectiveness. Waller and colleagues drew on a tradition in psychological research originating in operant and classical conditioning and continuing through to goal-setting studies, to argue that these findings make sense because changes in effectiveness are more directly associated with changes to executives' rewards than are changes in environments ("rewards amplify the salience of information related to these goals" [1995: 947–948]).

Thus, although it would seem intuitively obvious that there *must* be personal characteristics of managers that are affected by career background in such a way as to have an impact on strategic choice and the effectiveness of strategy implementation and that there is some evidence for this impact, this is clearly a difficult area to study, which perhaps explains why few clear findings have emerged. The personal characteristics that mediate have yet to be identified. Personality, if involved at all, is likely to have only a marginal influence; it seems more likely that cognitive structures are implicated and that it is worth continuing the search for appropriate methodologies for measuring them in the laboratory. These methodologies will almost certainly have to involve better ways of simulating the kind of cognitive overload that is hypothesized to generate the selective search behavior that managers demonstrate in real life. However, Hall's (1987) observation concerning the role of socialization processes has yet to be taken up in this context, and more ethnographic approaches may be fruitful (Waller et al., 1995). Our first proposition focuses on this aspect of the general problem:

Proposition 1: Top managers' career backgrounds have an impact on their characteristics as managers.

By *top managers* we are referring to all executives who are involved in some way with the choice and implementation of the strategy of the business unit in question. Precisely who these might be can only be determined empirically: In some cases, the CEO might be the dominant influence, whereas in other cases, which include highly decentralized ways of operating, it may be that a much larger proportion of the managerial ranks need to be considered (Bower, 1970). The term *characteristics* is used in a deliberately portmanteau sense to mean those aspects of managers' personality, cognitive structure, knowledge, competencies, and preferences that are relevant to the next links in the model, that is, that are affected by work history and that affect strategic behavior. Although there seems to be some evidence that personal characteristics are affected by background, we have yet to establish which ones and to understand the processes by means of which they become involved.

One such process that would have to be eliminated in any study of Proposition 1 is the direct impact of career streams on personal characteristics, by means of selection (see arrow A in Figure 2). It may be that the reason top managers have a given set of characteristics has nothing to do with their background but arises simply because the career stream they have followed has selected for people with those characteristics. For example, if a firm's modal OCL is command centered (Gunz, 1989a), perhaps a retail chain in which retail store management provides the route to the TMT, then a Proposition 1 study must be designed to distinguish between two possibilities, either of which predicts that TMT members will show characteristics that might be expected to result from having followed that career stream. They may, for example, have strong merchandising skills because of their long experience of store management (Proposition 1 supported), or because managers who have those skills get promoted over managers who do not have them (Proposition 1 not supported), or both.

The implication of the works of Walsh (1988) and Glick and coworkers (1993) is that managers' backgrounds affect the way in which they analyze complex business situations and, perhaps, the way in which their preferences might be expressed for certain types of action. It is possible at this stage to infer the existence of a moderating effect of top management personal characteristics on the link between intended strategies and realized strategies (Mintzberg & Waters, 1985). Therefore, *Proposition 2: Top managers' individual characteristics modify the way in which intended strategies are realized.*

The success of a company, for example, that is trying to diversify will presumably be very much influenced by whether it employs managers who know anything about the new business. American firms trying to open businesses in Japan must either employ managers or have access to managers who know something about Japan. A cognitive structure that causes a CEO to consider all problems as, for example, marketing issues (Dearborn & Simon, 1958) is likely to have some impact on the success with which his or her intended strategy is realized, although the nature of the impact is likely to be complex and, like the question of top manager involvement, empirically determined. In this connection, the role of the tacit and declarative knowledge, or its lack, which managers acquire during the course of their careers, would seem to be extremely important, albeit largely uninvestigated (Evans, Jalland, & Gunz, 1994).

Linking Individual and Organizational Levels of Analysis

The second gap in the model in Figure 1 is the missing link between individual and organizational levels of analysis. Work histories are individual-level characteristics; strategy choice and strategic outcomes are organizational-level phenomena, as are career systems and career streams. We may or may not be able to show that career background affects an individual manager's characteristics (Proposition 1). However, this is only a first step in understanding the impact of career background on strategies. Managers do not function independently; they function as members of collectivities (Offe, 1976; Penrose, 1980).

The research summarized by the model in Figure 1 has demonstrated some empirical links between these different levels, although the findings do not yet form a satisfactorily neat picture. We start our attempt to bridge this theoretical gap by turning to an approach that has generated considerable interest in the past 10 years: upper echelon theory (Hambrick & Mason, 1984).

Upper echelon theory. We have referred to Reed and Reed's (1989) finding of no correlation between a CEO's background and the diversification strategy the CEO's firm selects. They suggested that further work should involve Hambrick and Mason's (1984) proposal that TMTs, rather than just CEOs, should be the unit of analysis when trying to understand the strategic behavior of corporations.

This suggestion was anticipated in an earlier but little-known study. Bouchet (1976) showed that in a sample of American firms there was a positive relationship between the diversity of experience represented on a board, in the form of the mixture of members from inside and outside, and the diversification pursued by the corporation. He interpreted this finding in terms of the effect background has on the limited search conducted by the board members when looking at growth possibilities. Boards whose members' experience had been limited to only the firm, he argued, were less likely to consider new opportunities than those who had outside experience, and his findings supported this idea.

Interest in this issue has been revived, and we give some examples of the kind of findings that have emerged. In a study of strategic persistence and reorientation, Lant, Millikin, and Bantra (1992) found that heterogeneous TMTs were more likely to reorient. There is evidence that the more integrated a firm's strategy, the greater the proportion is of the top management team who has the core functional expertise (marketing, R&D, or production-operations) connected with that strategy (Michel & Hambrick, 1992). The more educated a TMT, and the more that education was in the sciences, the more innovative the company appeared to be (Wiersema & Bantel, 1992). Long-tenured managerial teams followed more persistent strategies that conformed to central tendencies of the industry and exhibited performance that closely adhered to industry averages (Finkelstein & Hambrick, 1990). In a sample of high-technology firms, hiring TMT members from within rather than outside the company was associated with higher financial performance (Schnell, Olian, Smith, Scully, & Smith, 1993). Finally, Norburn's findings (Norburn, 1986; Norburn & Birley, 1988) on TMTs in British and U.S. companies showed some evidence that the functional background of the TMT was associated with differing levels of performance: The more output functional experience, multiple company employment, and wider educational training, the better.

There seems considerable evidence, then, that the TMT provides a useful unit of analysis in the study of the origins and implementation of strategy, with an emphasis, at least in the research reported so far, on strategy choice. The theoretical foundations for the approach are gradually being laid, and they mainly rely on comparatively straightforward deductive reasoning about the ways in which the decision-making behavior of small groups is likely to be affected by factors such as the demographic mix of the members, the length of membership, and so on (Ginsberg, 1990; Hambrick & Mason, 1984).

However, TMTs are not organizational-level phenomena: They are still small groups, albeit powerful ones, and although they are useful predictors of corporate behavior, they are not exclusively responsible for the success with which strategies are chosen or implemented. Middle managers also are involved in the processes of strategy formulation and execution (Bower, 1970; Burgelman, 1983; Fredrickson, 1986; Wooldridge & Floyd, 1990). In order to find more complete explanations for how career systems and career streams affect strategic behavior, we need a link among individuals, TMTs, career streams, and strategies. This problem is central to the question of the origins of strategic behavior. A consistent view is beginning to emerge from a variety of streams in the literature, to the effect that strategic behavior can be understood by examining systems of meaning shared by firms' managers. These belief systems have a number of names; we call them *managerial rationalities*.

Systems of shared meaning: Managerial rationalities. Previously, we suggested that managers' cognitive structures were important in the selection and implementation of strategies. Because managers at several different levels, potentially with diverse backgrounds and different personal characteristics, may contribute to strategy formulation and execution processes, we need a framework for understanding how these individual characteristics are translated into what appears as purposeful organizational action. This problem is typically defined as one of understanding the processes through which managers agree on ends and means. In the earlier bureaucratic tradition, shared goals were seen as drivers of action. Subsequent writing stressed the fragmented nature of organizational experience, the bounded rationality of strategic choices, and bias in search behavior (Cyert & March, 1963; March & Simon, 1958; Simon, 1976). More recently, the literature on consensus has sought to identify the circumstances that contribute to shared understandings and the relationship between consensus and performance (Bourgeois, 1980; Dess & Origer, 1987). This has led to a view of organizations with competing logics and evolving *paradigms* (Johnson, 1988), resulting in differences in perceptions between organizations, for example, of threats and opportunities, and thus the adoption of different courses of action (Whitley, 1987).

Thus, a number of writers, searching for means of accounting for the way organizations develop distinctive strategies, have identified a phenomenon variously called, for example, *dominant logics* (Prahalad & Bettis, 1986), *logics of action* (Karpik, 1978), *conceptions of control* (Fligstein, 1990), or *rationalities* (Whitley, 1987). Each writer has a particular version of the idea, but a common thread runs through all: that of a set of meanings, shared by the top managers of the enterprise, which shape the way they run their enterprises.

Fligstein (1990: 10) described conceptions of control as "totalizing world views that cause actors to interpret every situation from a given perspective. They are forms of analysis used by actors to find solutions to the current problems of the organization." He traced the history of American business during most of the 20th century in terms of a series of shifts of conceptions of control, setting them in the context of the success of the strategies they generated and the actions of government in response. Whitley's (1987) rationalities are the way managers make sense of their business world. A particular rationality is a collectively shared view that renders certain actions and possibilities "sensible" and "rational," whereas others are ignored or considered "unrealistic." Prahalad and Bettis (1986: 490) have a complex definition for their dominant logic, which is "the way in which managers conceptualize the business and make critical resource allocation decisions—be it in technologies, product development, distribution, advertising, or in human resource management. . . . The dominant logic is stored via schemas and hence can be thought of as a structure. However, some of what is stored is process knowledge (e.g., what kind of process should be used in a particular kind of resource allocation decision or how new technologies should be evaluated). Hence, more broadly, the dominant logic can be considered as both a knowledge structure and a set of elicited management processes."

In their subsequent commentary, Bettis and Prahalad (1995) focused on the adaptive behavior of complex organizations and proposed that the dominant logic is an emergent property, contingent on environmental conditions. They highlighted the link between organizational intelligence and organizational learning and suggested that instability and unlearning may be important for strategic adaptation.

Many writers, then, have identified rationalities (as we refer to them, after Whitley, 1987) as an important link in the chain leading to the emergence of business strategies. There is a strong implication, especially in Fligstein's (1990) and Prahalad and Bettis's (1986) formulations, that the rationality of interest to us here is that shared by the upper echelon or TMT. Therefore,

> *Proposition 3: Managerial rationalities are important in determining the type of strategies chosen by the top management team.*

Career streams are channeled by reward systems that reward certain kinds of behavior (Sonnenfeld & Peiperl, 1988; Whitley, 1987), and this has further implications for the relationship between rationalities and strategies. Reward-seeking behavior, together with processes of anticipatory socialization, spread the rationality of the dominant coalition throughout the organization in a kind of *trickle-down* effect, particularly among those whose careers are being built within the firm's modal OCL. Evidence for the trickle-down impact of rationalities on strategic choice comes from Bower's (1970; cf. Dutton & Ashford, 1987; Schilit & Locke, 1982) study, which showed how lower level managers' assumptions about what their TMTs are looking for in their capital budgeting plans affect the nature of the proposals they submit to the TMTs. Not surprisingly, these managers are reluctant to offer any proposals that do not fit the general view of what the TMTs are looking for, which leads to a high acceptance rate. We can expect this trickle-down effect to influence both strategy selection and strategy implementation.

Strategy selection is likely to be affected by the trickle-down effect because a multiplier effect is at work: Middle managers' beliefs about the dominant rationality cause them to constrain TMTs' strategic choices yet further (Proposition 3). In other words, it is not only the impact of TMTs' dominant rationality on their own collective decision-making processes that matters, but also the impact of the dominant rationality on the way strategies are presented for selection by lower level managers.

In addition, we can expect the trickle-down effect to modify the implementation of strategies. Suppose a TMT has decided to implement a strategy that represents a new departure for the firm: Using Miles and Snow's (1978) typology, for example, an analyzer might wish to become a prospector. The firm's career system has been rewarding its managers by promoting them on their abilities to make an analyzer strategy work (arrow A in Figure 2). The firm simply may not have a managerial cadre capable of working as prospectors: The abilities and mindsets are just too different. In addition, given the inertia of organizational systems such as those associated with performance appraisal, it may well be that—despite the stated desires of the TMT—it is evident to middle managers that the old behaviors are still being rewarded. Alternatively, skepticism and cynicism about the new order may have the same effect. So, regardless of whether the managerial cadre is capable of working as prospectors, they may see no point in trying to do so. The trickle-down effect of managerial rationalities, in other words, has many ways of working through the *realpolitik* of organizational life to have a major impact on the way in which intended strategies are implemented. Thus,

> *Proposition 4: Managerial rationalities modify the way in which intended strategies are realized.*

Where do these rationalities come from? Fligstein (1990) took a political view, which had echoes of Ginsberg's (1990: 521) account of the way in which TMTs adopted a *negotiated belief structure* (Walsh & Fahey, 1986): "The power struggle within the firm determines which conception of control will dominate and how that conception will be translated into concrete strategies. The winners of this struggle will push the organization in a certain direction and maintain that direction as long as their strategies bring positive results." Prahalad and Bettis (1986: 490) used an organizational and individual learning-based approach. Specifically, they referred to the role of managers' backgrounds in shaping rationalities: "The ability of a top management group . . . to manage a diversified firm is limited by the dominant general management logic(s) that they are used to. In other words, the repertoire of tools that top managers use to identify, define and make strategic decisions, and their view of the world (mind sets), is determined by their experiences."

Both types of explanation, based on political and career background reasonings, are helpful. Fligstein's (1990) and Ginsberg's (1990) political models may account for *how* the rationalities take shape, whereas Prahalad and Bettis's (1986) reference to managerial experiences may begin to explain *what form* the rationalities might take. In this article, we concentrate on the latter.

If rationalities are the precursors of intended strategies, as their proponents argue, we expect the relationships identified in a number of studies between TMT composition and strategic choice to be mediated by rationalities. For example, heterogeneous TMTs, which Lant and colleagues (1992) showed were more likely to reorient, presumably do so because this heterogeneity produces a dominant rationality that is more accepting of alternative viewpoints and new ideas, as opposed to a homogeneous TMT, which is less receptive to anything other than corporate orthodoxy. Therefore, *Proposition 5: The composition of the top management team, in terms of its demographic heterogeneity and the range of backgrounds represented among its membership, affects the firm's dominant rationality.*

As arrow B in Figure 2 indicates, the composition of the TMT is, by definition, determined to a considerable extent by the structure of the firm's career streams. Implicitly, therefore, Proposition 5 suggests a link between career streams and rationalities mediated by TMT composition. However, in Figure 2 we also propose two direct sources of influence of careers on rationalities: top managers' personal characteristics and career streams.

It seems reasonable to assume that executives' career backgrounds will influence the rationality of the group of which they are a member. For example, managers who have a background in R&D will probably have a number of characteristics in common, one of which is likely to be a preference for developing innovative technical products. They will probably reinforce each other in the belief—the rationality—that new product development is "good" management, whereas cost containment and concentration on marketing existing product lines are "bad" (Helmich, 1974; Miller, 1990). Starting from the notion, then, that a set of shared meanings will be affected by the beliefs individual members bring to the group, we suggest

Proposition 6: Top managers' individual characteristics have an impact on the organization's managerial rationalities.

Finally, rationalities are likely to be directly shaped by the career streams followed by the managers sharing them. We can expect each career stream to generate its own shared definitions of good management and sound business practice, that is, its own rationality, based on the criteria that seem to govern career success within the stream. If it is evident that the best engineers get promoted within an engineering stream, members are likely to believe that high professional standards are the key to success. In contrast, if engineers who manage to shake off their specialist labels are successful, perhaps by proving that they are versatile enough to function effectively in various nonengineering roles, then members will be anxious to show that they are "more than" good engineers. Hayes and Abernathy (1980) criticized career streams that reward so-called professional managers, whose rationalities result in what they described as myopic, risk-averse corporate behavior. Therefore,

Proposition 7: Managerial rationalities are shaped in part by the career streams of the executives sharing the rationalities.

In this section on the links between individual and organizational levels of analysis, we discussed evidence concerning the role that personal characteristics may play, mediating between work history and strategy choice and implementation. Next, we argued that managerial rationalities link individual careers and strategic behavior. We also proposed that they mediate between the organizational-level phenomena of career streams and strategies, drawing on arguments in the literature that link rationalities to TMT composition.

DISCUSSION: DEFINING A RESEARCH PROGRAM ON CAREERS AND STRATEGIES

Our aim has been to develop a series of researchable propositions that we believe define a program for studying the relationship between careers and strategies. By arranging the studies within the framework of the model in Figure 2, we have taken Nystrom and McArthur's (1989) advice in their review of research on careers and organizations. They concluded that future research should involve ideas stated explicitly as propositions and that these propositions should be linked to form multivariate causal models. Furthermore, "scholars should consider specifying contingency models rather than the prevalent universal models . . . [and] . . . consider casting organizational variables into the role of moderators" (Nystrom & McArthur, 1989: 501).

The model we suggest represents a step in this direction. It is a causal model that attempts to link an important set of organizational phenomena that, we argue, have hitherto been examined mainly in isolation. Furthermore, it proposes both moderating and mediating influences of managers' personal characteristics and managerial rationalities on the strategic behavior of organizations; it traces both back to organizational phenomena, rather than considering them as exogenous givens. Because the model defines a closed loop, it has less to say explicitly about organizational and environmental contingencies, although we have acknowledged that these are clearly important. In this section, we first discuss research questions that are implicit in Figure 2 but not yet formalized as propositions. Next, we consider some of the methodological problems and solutions surrounding work in this area.

Further Research Questions

Figure 2 shows a number of connections that we have not formalized as propositions, usually because they follow from the definitions of the phenomena in question. For example, a top manager's work history is, as we have discussed, necessarily a function of the shape of the organization's career streams (arrow C), as is the composition of the TMT (arrow B). Similarly, career systems, by definition, are highly influential in shaping career streams, although, as we have discussed, there are many external and structural factors that also influence this relationship.

However, there are unanswered questions regarding identifying the structure of career streams and the organizational influences that shape them. Although organizational demographers and others have started to study the shape of career streams (e.g., Forbes, 1987; Gunz, 1989a; Mahoney & Milkovich, 1973; Pfeffer, 1985; Rosenbaum, 1984; Stewman, 1986; Stewman & Konda, 1983), much work remains. Controversy exists, for example, about the meaning of career streams to the managers within them. There are many interpretations of the reasons for and meaning to the manager of being plateaued (i.e., whether the plateaued group is, in fact, several groups: Slocum et al., 1985) and whether one maintains one's position in a fast-track group by means of a tournament process (in which "success" at gaining promotion from each level in the hierarchy merely allows one the chance of competing in the next "round" and "failure" disqualifies one from further chances of promotion) (Forbes, 1987; Rosenbaum, 1984).

Taxonomic models, such as those of Sonnenfeld and Peiperl (1988) and Gunz (1989a), appear promising for characterizing career streams, but they should be extended in a number of directions. For example, they are solely concerned with intraorganizational moves, treating the external labor market simply as a source of managers or managerial recruits. However, there is plenty of evidence that interorganizational moves are not the random, unknowable events that this suggests (Miller, 1980; Pfeffer & Leblebici, 1973; West & Nicholson, 1989), and it is clear that a complete model of career streams should encompass interorganizational as well as intraorganizational flows. Furthermore, the existing models are comparatively parsimonious in terms of the variables they consider (both taxonomies referred to are two dimensional). There is an obvious need for comparative studies of career streams in larger organizational samples, with the objective of enriching the models in this sense too.

Figure 2 shows two links that we discussed previously but which need to be formalized as propositions because they define important research questions. These are

> *Proposition 8: The outcomes of strategies, as realized, influence the organization's career systems.*

> *Proposition 9: Career systems affect the shape of the organization's career streams.*

These propositions have hardly been studied, yet to us they form a crucial link in the model. In addition, because the loop closes at this point, we have defined a mechanism of organizational learning, in the sense that the organization's past actions constrain and enable its future ones (Burgelman, 1988; Jalland & Gunz, 1993).

Work on Proposition 8 should include two kinds of impact of strategic change on career systems, dealing with both intended and unintended consequences. How, in other words, do organizations intentionally adapt their approaches to hiring, promoting, transferring, releasing, and other career management matters in the light of changes to their strategy, and what unexpected changes also happen? Similarly, work on Proposition 9 is needed to trace through the consequences that these two types of change have for the structure of organizations' career streams.

For example, anecdotal evidence suggests that downsizing corporations try to find ways of moving executives laterally to substitute for the lack of vertical promotions that result from flatter structures (intended consequences), but it is not clear that they find it as easy as they expected, leading to increases in plateauing (unintended consequences). A study on Proposition 8 would focus on the impact that the downsizing has on formal and informal processes connected with the lateral movement of managers. Examples of these processes could include systems managed by the human resource function or the workings of informal networks, which often play an important role in determining who gets key jobs. A study on Proposition 9 would concentrate on the impact of changes in these processes, if any, on the patterns of moves managers were experiencing.

Methodological Issues

The program we propose raises a number of methodological issues that we do not wish to minimize. We briefly draw attention to four: the hypothesized nature of certain of the constructs in the model, the existence of large numbers of confounding variables, difficulties in inferring causality, and practical problems connected with collecting data of the appropriate type.

First, it is important to recognize that Propositions 3, 4, 5, and 6 deal with hypothesized entities, namely, certain personal characteristics and rationalities; indeed, Proposition 6 defines a link between both. We have described how hard it has been to identify personal characteristics that might affect managerial decision making and that are influenced by work history. Rationalities are, in a sense, one stage further removed from the empirical map, because thus far they have the status of mediating theoretical constructs that have been used by a number of authors to account for the way in which different firms develop distinctively different strategies. However, there have been few reported attempts to identify them empirically, and indeed the question of how one might do this is far from being resolved. It has been argued that the problem is one of identifying some form of shared cognitive map (Ginsberg, 1990; Prahalad & Bettis, 1986). However, rationalities are essentially social phenomena, that is, properties of collectivities in much the same way that organizational cultures are typically defined, so social methods of inquiry also are needed.

Second, as we have stated (notably in the insider/outsider succession literature), there are many potential confounding variables that research designs must take into account (Nystrom & McArthur, 1989). The problem is especially acute at the organizational level of analysis, because a multitude of factors come into play in the strategy-making process. The introduction of personal characteristics and managerial rationalities into our model represents an attempt to address some of the more troublesome areas, but we do not imply that they will make the problem disappear.

Researchers should pay particular attention to the role of exogenous variables that might affect the proposition currently under investigation. For example, studies of Propositions 8 or 9 are bound to have to control, inter alia, for organizational structure because of its influence on the shape of career streams (Gunz, 1989a).

Third, it can be extremely hard to infer causality. For instance, when an outsider CEO is hired, it is not easy to be sure whether the changes he or she typically makes are a consequence of his or her background or of the tensions surrounding the role of the successor (described in Gouldner's, 1954, classic study). Again, one rarely knows whether CEOs select strategies or whether boards of directors approve strategies and select compatible CEOs. Methodological problems of this type are especially acute in cross-sectional studies, most particularly when they involve published data. Longitudinal research designs are an obvious solution to the problem of establishing both causality and whether individual characteristics are shaped by background or selection, but they pose problems of their own. Retrospective studies depend on detailed historical data about individuals and organizations, and these data are hard to acquire. Prospective studies are expensive and require stable research groups; the work of Kohn and Schooler (1982), Wakabayashi and Graen (1984), and Wakabayashi, Graen, and Graen (1988) stand out as rare examples.

Finally, variables can be hard to define and data difficult to obtain. Research at the organizational level is especially tricky, because the variables are hard to characterize and measure. Sometimes the problems are conceptual, and sometimes they are practical. What, for instance, does it mean to measure business strategy (e.g., Ginsberg, 1988; Snow & Hambrick, 1980)? How should the structure of a managerial labor market be characterized; alternatively, how can this be done without needing data gathering on the scale undertaken, for example, by Rosenbaum (1984)? Key informant survey methods are more economical, but they are potentially misleading because standard biases such as the availability heuristic (Kahneman, Slovic, & Tversky, 1982) can seriously distort individual perceptions of the structure of a labor market: It only takes a few unusual careers in a firm to bias the picture of careers in that firm in the mind of the informant. How can the dimensions of Sonnenfeld and Peiperl's (1988) model be operationalized? What, if anything, does it mean to talk of shared cognitive maps? At the individual level, even classifying careers, an apparently straightforward activity, is fraught with methodological problems (Gunz, 1989a). Lively debates are in progress in many of these areas, and progress is likely to be best served if researchers take care in the definition of constructs that are used in specific studies.

To summarize, progress in the field is likely to come from the use of methodologies (a) that provide access to elusive social and individual phenomena, (b) that provide the chance to control for many confounding variables, (c) that are rich enough to infer causality, and (d) that measure complex organizational-level phenomena at reasonable cost, so that comparative studies can be conducted across organizations. The choice between rich studies of one or two organizations and large-sample surveys that do not include enough data from each individual firm to answer good research questions is a familiar dilemma to social researchers. Which methodologies are likely to provide the best answers? We believe that two approaches are likely to prove fruitful: cognitive mapping and comparative case studies. Neither, hitherto, has been used extensively to study careers and strategies.

Cognitive mapping, a term that covers a wide variety of techniques (e.g., Huff, 1990; Walsh, 1995), may provide a useful middle way between the massive data-gathering exercises required by demographic techniques and the potentially unreliable key-informant approach. Because it is less resource intensive than normal organizational demographic techniques, larger sample sizes of organizations are possible. If used with care on comparatively small samples of organizational members, it seems to have the potential to provide revealing insights into organizational-level phenomena, such as the competitive environment perceived by top managers (see, e.g., Calori, Johnson, & Sarnin, 1991; Porac & Thomas, 1990) or the structure of managerial labor markets (Gunz & Jalland, 1995). However, more research is needed to validate these approaches or find better ones. In particular, the question of the ontology of shared cognitive maps is still little understood, but if cognitive mapping is used to study rationalities, this question must be tackled (Ginsberg, 1990).

Comparative case studies using ethnographic methodologies have historically provided some of the most revealing studies of complex phenomena (e.g., Burns & Stalker, 1966; Gouldner, 1954). We believe that they are likely to be useful at this stage of the study of careers and strategies because of their utility in generating the insights needed for developing specific hypotheses. It has been argued that causality can best be inferred by studying the social processes by means of which strategies are constructed (Pettigrew, 1987). For example, although it is clearly important to continue to explore ways of identifying collective cognitive maps to study rationalities, ethnographic methodologies will allow researchers to study how rationalities are expressed in the discourse of TMTs. Detailed case studies, for example of organizations going through strategic change to study its effect on career systems (Proposition 8), or of firms changing their career systems (perhaps by downsizing) to see what influence this has on their career streams (Proposition 9), may well be the best way of studying many of the propositions we have set out. They are, of course, resource intensive and therefore have some of the disadvantages of the data-intensive demographic approaches; they also have problems of access and generalizability. However, they are not so resource intensive as to make multiorganizational studies impossible (e.g., Burns & Stalker, 1966; Hickson, Butler, Cray, Mallory, & Wilson, 1986; Kanter, 1984).

CONCLUSION

It may seem that theoretical and methodological complexities point to the futility of attempting research on the link between career backgrounds and strategic behavior. However, we began this article by emphasizing the importance of studying the link, and our aim has been to summarize the state of the field's development and suggest new directions for research without minimizing the difficulties. Our intentions were to make a first attempt at drawing together many of the theoretical and empirical studies that examine the link between careers and strategic behavior; additionally, we wanted to show how these studies can be linked to form a coherent agenda for future research.

For researchers, the model we have described represents an attempt to sketch out the complexity of the field. It emphasizes, for instance, the need to build on studies such as those of Dearborn and Simon (1958) and Walsh (1988), by examining the impact of career background on type of manager rather than inferring this by looking at the behavior of the corporations the managers have a hand in managing. It brings out the need to clarify the unit of analysis by differentiating between organizational and individual levels and identifying phenomena at each level for study. The model emphasizes the need to recognize that all of these phenomena must be considered as part of a general causal loop, because of the way they form part of a process of social reproduction.

We have identified a number of avenues of research we believe are important. These include identifying the shape of career streams and the organizational influences that shape them, searching for the elusive cognitive processes that seem to mediate between career background and managerial behavior, establishing which individual characteristics have an impact on the processes of choosing and realizing strategies, finding ways of characterizing the shared cognitive maps that seem to form so-called managerial rationalities, and developing new methodologies that allow researchers to conduct cross-sectional studies of a larger sample of managerial internal labor markets than is now practicable.

For practitioners, the model has important implications for the process of strategic change. As we suggest, it is commonplace to argue that changes in corporate direction often require a change in top management, in particular, the CEO. However, the model points out the need for more profound changes than this. It postulates a further link in the strategy-structure-performance model, the career streams of the organization, which are shaped by the firm's realized strategy and its structure and which, in turn, affect its ability to perform within its chosen strategy.

We began this article by identifying the problem of relating managerial careers to strategic behavior as one that is important to scholars and to practitioners, that has been of wide interest in the literature for a long time, and that is now receiving increasing attention. The article traces the ways in which this problem has been previously studied and argues that the incomplete nature of our present understanding arises in large part because of the multiplicity of phenomena that have been studied and because of the way few studies have been designed to build on the findings of those that examined related phenomena. The resulting conceptual framework is offered as a first step in organizing knowledge in the area and suggesting directions for future research.

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