Studies of Managerial Work: Results and Methods

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RESULTS AND METHODS

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Abstract

This is a review of diary and observational studies of managerial work. It attempts to answer some of the questions about what managers do and to examine some ways of studying managerial behavior.

The review begins by identifying ten general characteristics of managerial work that are consistently supported by research. For example, the work of managers consists of numerous brief episodes in which the important and unimportant are capriciously interspersed. Much of the work involves giving and receiving information, mostly through oral communication.

Six additional issues are raised on which there are no definitive answers. It is not clear, for example, how much control managers have over their own activities. Nor is it clear how the activities of effective and ineffective managers differ.

Interview, survey, diary, and observational techniques for studying managerial work are compared, and the strengths and weaknesses of the direct methods are contrasted. For a variety of reasons, diary and observational methods for studying managerial behavior are superior to survey techniques. Still, all methods have different strengths and weaknesses. The critical challenge is, as always, matching the method to the question. In most cases, complex questions can be answered only by using multiple methods.

The implications of the studies and methods are broad. Several areas requiring more research are highlighted; some explanations for typical managerial problems are offered; and changes in training, appraisal, and selection practices are suggested.

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Introduction

> A typical chief executive day may begin with a telephone call from a director who asks a favor...; then a subordinate calls to tell of a strike at one of the facilities...; this is followed by a relaxed scheduled event at which the manager speaks to a group of visiting dignitaries...; the manager returns to find a message from a major customer who is demanding the renegotiation of a contract...; and so on.
>
> (Mintzberg, 1971, B-100)

Was this manager initiating structure or showing consideration? Was he planning, organizing, controlling? In spite of literally thousands of studies on and articles about leadership and management, surprisingly little effort has been devoted to learning what managers actually do (Kelly, 1969; Nealey & Fiedler, 1968). The global categories of behavior typically generated by surveys of managers bear little resemblance to observable behaviors. Even more important, the findings from survey and interview studies may be misleading, creating views of what managers do that result in ineffective training programs, inaccurate appraisal procedures, irrelevant job descriptions, marginal selection criteria, and misperceptions by manager and researcher alike on what managers should be doing.

Mintzberg (1975), for example, directly observed five chief executives and interpreted his results to explode four "myths" about management: that managers are reflective, systematic planners; that effective managers have no routine duties to perform; that managers need and use the aggregated information provided by a formal information system; and that management is a science.

Rosemary Stewart (1968b), looking at data collected through managerial diaries, challenged several assumptions common in management education, among them that: All managers should have common training; the most important aspect of a manager's job is making decisions; quantitative methods are essential for managers; relations with subordinates are the most important thing for a manager to understand; and the main difference among managerial jobs is organizational level.

The challenges posed by people like Stewart and Mintzberg are important to pursue. This review attempts to pull together what is known about the actual on-the-job behavior of managers by examining the results of observational and diary studies. Further, the research methods used to collect such data are evaluated, particularly as they contrast with the more frequent survey methods. In studies of managerial work, the methods used and the results obtained appear intimately related.

Method

Several criteria were laid out in advance to guide the search for and inclusion of articles on what managers do. First, only studies using relatively direct methods of data collection were included--specifically various forms of observation, diary, and to a lesser extent, anthropological methods. Second, emphasis was placed on articles actually reporting quantitative data. Third, articles were sought that focused on the behavior of managers on the job (as opposed to "leadership" studies using various student samples in the laboratory).

The search for such studies involved a computer-assisted review of psychological, business, and educational abstracts; compilation of references from review and research articles; and suggestions from management researchers. The search generated well over a hundred articles and books which, for various reasons, appeared relevant. Of these, about 80 survived initial review against the criteria; these were abstracted by the research team. Only about 40 articles and books presented data in sufficient detail to be included in the substantive section of this report. A sample of the articles is presented in Figure 1 (see pages 3 and 4).

As Figure 1 demonstrates, the studies of managerial behavior cover virtually all levels of management and a variety of organizational settings. Sample sizes are generally small (relative to survey methods), an inherent limitation of diary and observational methods.

Many of the studies were conducted overseas, primarily in Britain and Sweden. The findings of such studies are quite similar to the results of research done in the United States.

Organization of the Review

This review focuses on (1) what managers do and (2) methods for finding out what they do. The first section, Replicated Findings, examines ten characteristics of managerial work that are supported by replicated research. The

AUTHOR(S)	METHOD	N	LEVELS	ORGANIZATION(S)
CARLSON (1951)	DIARY & OBSERVATION	10	CHIEF EXECUTIVES	10 DIFFERENT ORGANIZATIONS
BURNS (1954)	DIARY	4	4 LEVELS (low to middle)	1 MANUFACTURING PLANT
BLAU (1954)	OBSERVATION	16	MID-LEVEL AGENTS	1 GOV'T LAW ENFORCEMENT AGENCY
GUEST (1956)	OBSERVATION	56	FOREMEN	1 ASSEMBLY PLANT
JASINSKI (1956)	OBSERVATION	56	FOREMEN	1 ASSEMBLY PLANT
BURNS (1957)	DIARY	76	TOP-LEVEL MANAGERS	8 DIFFERENT FIRMS
PONDER (1957)	OBSERVATION	24	FOREMEN	1 MANUFACTURING PLANT
DALE & URWICK (1960)	DIARY & OBSERVATION	10	CHIEF EXECUTIVES	10 DIFFERENT ORGANIZATIONS
LANDSBERGER (1961)	OBSERVATION	?	MID-LEVEL MANAGERS	2 ENGINEERING PLANTS
BREWER & TOMLINSON (1964)	DIARY	6	MID-LEVEL MANAGERS	6 DIFFERENT FIRMS
DUBIN & SPRAY (1964)	DIARY	8	SENIOR & JUNIOR EXECUTIVES	2 MANUFACTURING & 1 SAVINGS & LOAN ASSOCIATION
KELLY (1964)	OBSERVATION	4	FOREMEN	1 MANUFACTURING PLANT

Figure 1

A Sample of Studies Reviewed

AUTHOR(S)	METHOD	N	LEVELS	ORGANIZATION(S)
HINRICHS (1964)	DIARY	232	NON-SUPERVISORY TO MIDDLE MANAGEMENT	1 COMPANY (?)
HORNE & LUPTON (1965)	DIARY	66	MIDDLE MANAGERS	10 DIFFERENT ORGANIZATIONS
THOMASON (1966)	DIARY & OBSERVATION	30	LOW-MIDDLE LEVEL MANAGERS	7 DIFFERENT ORGANIZATIONS
THOMASON (1967)	DIARY & OBSERVATION	26	LOW-UPPER MIDDLE LEVEL MANAGERS	4 DIFFERENT ORGANIZATIONS
MARPLES (1968)	DIARY	8	LOW-MIDDLE LEVEL MANAGERS	1 INDUSTRIAL ORGANIZATION
LAWLER, PORTER, & TANNENBAUM (1968)	DIARY	105	LOW-MIDDLE LEVEL MANAGERS	1 MANUFACTURING ORGANIZATION & 4 SOCIAL SERVICE
MINTZBERG (1970)	OBSERVATION	5	CHIEF EXECUTIVES	5 DIFFERENT ORGANIZATIONS
COHEN & MARCH (1974)	OBSERVATION	42	COLLEGE PRESIDENTS	42 DIFFERENT COLLEGES
DAHL & LEWIS (1975)	DIARY	12	MID-HIGH LEVEL ADMINISTRATORS	1 COLLEGE
STEWART (1976)	DIARY & OBSERVATION	16	LOW-HIGH LEVEL MANAGERS	9 DIFFERENT ORGANIZATIONS
HINRICHS (1976)	DIARY	142	LOW-MIDDLE LEVEL MANAGERS	1 CHEMICAL RESEARCH PLANT

Figure 1 (Continued)

A Sample of Studies Reviewed

second section, Some Questions about Managerial Work, raises some issues on which data are contradictory, inconsistent, or scarce.

A third section, Methods for Studying Managerial Behavior, looks at some of the problems with survey and interview data, and contrasts the strengths and weaknesses of diary and observational techniques. The final section, So What Does It All Mean?, explores the applied and research implications of this set of studies.

As has been said repeatedly in the literature, there is no "typical" manager (e.g., Carlson, 1951). Managerial work varies as a function of many temporal, organizational, structural, and individual factors. In some cases the ranges of results, as well as the averages, have been included in this review.

Replicated Findings

Results from a number of systematic observation/diary studies support the following ten statements about the nature of managerial work. These broad conclusions are well documented and summarize the characteristics of managers and managing that can be described with some assurance.

1. Managers Work Long Hours

Findings from several studies (Carlson, 1951; Cohen & March, 1974; Copeman, 1963; Dahl & Lewis, 1975; Dale & Urwick, 1960) indicate that the executive's workweek typically consumes at least 50 hours and can go up to 90 hours for certain individuals. The "excessively heavy" work load of executives (Carlson, 1951) is carried outside the office during evenings and weekends in the form of deskwork done at home, business meetings, "social" events, etc. (Burns, 1957; Carlson, 1951; Cohen & March, 1974). A few studies, however, have shown shorter workweeks for executives (Burns, 1957; Horne & Lupton, 1965; Mintzberg, 1970) ranging from 28 to 47 hours (although one of the five chief executives studied by Mintzberg put in 53 hours during the week).

The variability in length of the working week may be due to rank and functional responsibility. The length of the workweek tends to increase as rank increases, with the heads of organizations (such as company or college presidents) working the longest hours (Copeman, 1963; Dahl & Lewis, 1975; Horne & Lupton, 1965). Managers with well-defined functions, such as accounting, tend to work shorter hours (Burns, 1957; Stewart, 1967).

2. Managers Are Busy

The activity level of managers is surprisingly high, particularly at low levels of management. A number of studies of the activity rate of first-level supervisors have shown at least 200 separate activities (incidents or episodes) during a typical 8-hour day. These studies reported averages of up to 583 incidents per day and individual rates as high as 1,073 per day (Guest, 1956; Ponder, 1957; Thomason, 1966, 1967). The number of contacts, or interactions, in a foreman's day ranged from 300 to more than 450 (Jasinski, 1956; Ponder, 1959; Walker, Guest, & Turner, 1956). Guest (1956) found that foremen "sit" only 0.2 percent of the time, or about 58 seconds in an 8-hour day.

Activity rate tends to decrease as rank increases. For example, a study reported by Thomason (1967) of several levels of management found the following:

Position	Average Number of Activities Per Day
Foreman (n = 6)	413
Superintendent (n = 3)	309
Area Superintendent (n = 2)	274
General Manager (n = 1)	91

The activity rate appears to drop further for senior executives. Mintzberg (1970) found that for 5 chief executives the individual rate was 86-160 activities per week, or 19-32 activities per weekday.

There is also some evidence that the activity level is fairly constant throughout the day for most managers (Dubin & Spray, 1964; Lawler, Porter, & Tannenbaum, 1968).

3. A Manager's Work Is Fragmented; Episodes Are Brief

Brevity. As would be expected, given managers' rates of activity, most activities are very brief. A study of foremen showed one incident every 48 seconds, with individual foremen averaging from 26 seconds to 2 minutes per incident (Guest, 1956). The vast majority of foremen's contacts lasted less than 2 minutes each (Guest, 1956; Ponder, 1959; Walker et al., 1956).

Mintzberg (1970) reported that half of a chief executive's activities lasted less than 9 minutes each and only 10 percent of all activities lasted an hour or more. Scheduled meetings, with an average duration of 68 minutes, constituted much of this latter category. Telephone conversations were short (average duration of 6 minutes); tours, unscheduled meetings, and deskwork were conducted during periods averaging 10 to 15 minutes each. Stewart's (1967) managers had an average of 12 fleeting contacts (under 5 minutes) each day.

Interruptions. Interruptions may account at least in part for the brevity of managers' activities because they disrupt planned or ongoing activities. At lower levels, "unplanned informal contacts" took up nearly 20 percent of a manager's time, increasing from 12 percent for foremen to 26 percent for third-level managers (Hinrichs, 1964). At the executive level, Carlson (1951) noted that while in his office one chief executive went undisturbed for 23 minutes or more only 12 times in 35 days. Luijk's (1963) observations of senior executives indicated it was not unusual for executives to have 40 telephone conversations and 30 visitors a day, for a total of 70 interruptions in a day.

Discontinuity. Discontinuity is characteristic of managerial work at all levels (e.g., Guest, 1956; Martin, 1956; Mintzberg, 1970; Ponder, 1957). The tendency from foreman to chief executive levels is to handle problems in "rapid-fire order," interspersing the significant and trivial matters in no particular pattern.

Executive decision-making patterns in particular appear to be more fragmented than those at lower management levels. Martin (1956) reported that although decision situations tended to occur more frequently at lower levels, decisions at higher levels took longer and were more discontinuous. At higher levels, each decision stage took longer and was more susceptible to interruptions. Problems were delegated to subordinates who reported back later, and decisions were thus broken into bits which were interspersed with other decisions and activities.

4. The Manager's Job Is Varied

Types of activities. Five discrete types of activities are relatively easy to identify: paperwork, phone calls, scheduled meetings, unscheduled or informal meetings, and inspection tours/visits. On the average, an executive's day was spent processing 36 pieces of mail, attending 4 scheduled meetings and 4 unscheduled meetings, making 5 phone calls, and conducting 1 tour (Mintzberg, 1970).

Paperwork, or deskwork, includes such activities as handling mail, reading reports and journals, and drafting documents. Deskwork took up between 22 percent (Mintzberg, 1970) and 36 percent (Stewart, 1967) of an executive's time. Mail is a minor, routine part of the job, usually taking less than 5 percent of a manager's time (Brewer & Tomlinson, 1964; Dubin & Spray, 1964; Mintzberg, 1970; Stewart, 1976). Executives reacted to only about 30 percent of the mail they received, or 20 to 65 pieces a week; and they initiated only 15 or fewer pieces a week. Most of their responses were to written requests and most were directed to subordinates (55 percent) or peers (17 percent) (Mintzberg, 1970). At lower levels of management, the proportion of time spent on deskwork varies. Marples (1968) found that one factory manager spent 40 percent of his time reading and analyzing reports from his own employees. Foremen, however, appear to spend very little of their time on paperwork; most of their time is spent on the shop floor talking to people, observing, experimenting with the machinery, etc. (see, e.g., Guest, 1956).

Most managers use the telephone routinely for brief conversations. Although phone calls typically consume a small proportion of a manager's time (Dahl & Lewis, 1975; Dubin & Spray, 1964; Mintzberg, 1970; Stewart, 1967), they enable a manager to handle a large number of individual contacts. Mintzberg (1970), for example, found that 36 percent of executives' contacts were handled by telephone.

While many managers comment on the importance of visits and inspection tours, these activities consume only 3-10 percent of a middle to upper level manager's time (Carlson, 1951; Marples, 1968; Mintzberg, 1970; Stewart, 1967).

Meetings generally consume more of a manager's time than any other activity. Unscheduled meetings, or informal contacts, represent the largest time-consuming activity at middle to lower management levels. For example, Stewart (1967) found that middle and upper level managers spent 43 percent of their time in informal discussions and another 7 percent in committee meetings.

Scheduled meetings take up much of an executive's time. Chief executives spent almost 60 percent of their time in 15 to 30 scheduled meetings a week; these meetings lasted on the average more than an hour each (Mintzberg, 1970). Unscheduled meetings, about 10 to 55 each week, usually with only one other person, took about 10 percent of chief executives' time (Mintzberg, 1970). Carlson (1951) reported that most executives attended regular meetings of at least 4 internal committees (ranging from 12 to 400 meetings a year). Dale and Urwick (1960) found that a bank president spent 16 hours a week in committee meetings.

Contacts. Even at lower levels, managers routinely are in contact with a variety of people. Foremen interact with an average of 25 to 50 different people each day, including their own subordinates, other foremen, their superiors (general foremen, department superintendents, and others), service personnel (in maintenance, inspection, materials, work standards, etc.), and other foremen's subordinates (see, e.g., Guest, 1956). At higher management levels, more contacts are made with people outside the organization, including government officials, members of peer and trade organizations, consultants, suppliers, clients and customers, etc. (Dale & Urwick, 1960; Mintzberg, 1970). Mintzberg reported that few of an executive's contacts were on a routine basis.

Content. Managers also deal with a variety of content, although the subject of a manager's activities tends to reflect the manager's functional area of responsibility or job description (Horne & Lupton, 1965; Thomason, 1967). That is, personnel managers tend to spend much time on personnel matters, sales managers deal mostly with sales or commercial matters, etc.

Foremen spent most, if not all, of their time on current production matters, usually concerning the close details of work, minor failures, or breakdowns in the system--various problems arising from the shop floor (Marples, 1968; Ponder, 1957; Thomason, 1967). Foremen are described as "task specialists" (Kelly, 1964) whose production problems concern quality, work scheduling and progress, tools and fixtures, materials and safety, among others (Guest, 1956; Thomason, 1967).

As rank increases, a larger proportion of managers' time is spent on fewer problems, but they cover a greater number of content areas. At mid to upper levels, managers deal with nine or more broad content categories, including research and development, accounts and wages, recruitment and personnel, general management policy, sales/commercial matters and external interests (Brewer & Tomlinson, 1964; Burns, 1957; Hinrichs, 1976; Horne & Lupton, 1965; Marples, 1968; Thomason, 1967).

Thus, low level supervisors deal with variety within content areas (e.g., numerous production problems), while higher level managers experience variety across content areas. Senior managers are less "specialized" and spend less time on any particular topic than lower level managers (see, e.g., Burns, 1957; Dubin & Spray, 1964).

5. Managers Are "Homebodies"

Managers at all levels spend most of their time within their own firms. Foremen and other low level managers spend virtually all their time inside the company, mostly within their own departments. Foremen in one study (Kelly, 1964) spent an average of 54 percent of their time in their own department. Burns' (1954) results indicated that low level managers, including foremen, spent 84-94 percent of their time inside their departments. Of this time, managers spent between 11 percent and 78 percent in their offices, with time spent at one's desk increasing with rank (Burns, 1954; Kelly, 1964).

Stewart's (1967) middle and upper level managers spent 75 percent of their working hours in their own establishments, with 51 percent of their time at their own desks. The executives studied by Horne and Lupton (1965) spent an average of 75 percent of their time inside the firm, 52 percent of that time in their own offices. Chief executives appear to spend even more time in their offices. Luijk (1963) found that directors spent 85 percent of their time in their own offices. Mintzberg's (1970) chief executives spent 39 percent of their contact time in their offices, and 62 percent of their contact time in the firm; these figures do not include time spent on deskwork. These executives handled 75 percent of all their contacts in their offices. Cohen and March (1974) found lower figures for college presidents--35 percent of their time in the office and another 12 percent elsewhere on campus.

There appears to be movement outward from lower to higher managerial ranks. Martin (1956) found that over 90 percent of foremen's contacts were with their own work groups; at slightly higher levels, managers had "out-group" contacts within the company (about 15-30 percent of all contacts) as well as some external contacts. The proportion of time executives spent outside the company increased with rank from 4 percent to 21 percent across 4 levels of management (Horne & Lupton, 1965).

To generalize from these few studies it appears that as rank increases:

1. Less time is spent on the shop floor.

2. More time is spent outside one's department.

3. More time is spent in one's own office.

4. More time is spent outside the organization.

6. The Manager's Work Is Primarily Oral

The verbal nature of managerial work at all levels is the best documented characteristic of the job. Studies of foremen have shown that between 28 percent and 80 percent of their time is spent in oral communication (Burns, 1954; Guest, 1956; Hinrichs, 1964, 1976; Jasinski, 1956; Kelly, 1964; Ponder, 1957). At low to middle levels of management, researchers have generally found that well over half the time was spent in verbal communications, with a range of 27 percent to 82 percent (Brewer & Tomlinson, 1964; Hinrichs, 1964; Lawler et al., 1968; Stewart, 1976; Thomason, 1966).

Managers at higher levels spent up to 90 percent of their time in oral communication, with 65 percent to 75 percent being most typical (Burns, 1957; Carlson, 1951; Cohen & March, 1974; Dahl & Lewis, 1975; Dale & Urwick, 1960; Dubin & Spray, 1964; Horne & Lupton, 1965; Mintzberg, 1970). One chief executive, for example, spent 42 hours of the workweek in verbal contacts (Mintzberg, 1970).

Telephone conversations normally account for less than 10 percent of a manager's contact time (Brewer & Tomlinson, 1964; Copeman, 1963; Dahl & Lewis, 1975; Dubin & Spray, 1964; Guest, 1956; Hinrichs, 1976; Horne & Lupton, 1965; Mintzberg, 1970; Stewart, 1967).

Most verbal interactions are face-to-face, through formal and informal meetings. Foremen's "meetings" appear to be fleeting contacts with individual subordinates, peers, and other factory employees. As rank increases, more time is spent in scheduled meetings with groups of people (Cohen & March, 1974; Copeman, 1963; Hinrichs, 1976; Horne & Lupton, 1965; Lawler et al., 1968; Martin, 1956; Mintzberg, 1970). Stewart (1967) found 32 percent of the managers' time was spent in meetings with 1 other person and 34 percent was spent in meetings with 2 or more.

7. Managers Use a Lot of Contacts

It has already been mentioned that most of a manager's contact time is spent within the organization. It is also evident that most of a manager's contacts are with "insiders."

Internal contacts. Studies across a range of management levels have shown that 26-28 percent of a manager's time was spent with subordinates (Kelly, 1964; Stewart, 1967); 32 to 46 percent of their contact time was spent with subordinates (Kelly, 1964; Ponder, 1959); and subordinates represented 60 to 70 percent of the supervisor's internal contacts (Lawler et al., 1968; Martin, 1956).

In contrast, contacts with superiors took only 3-13 percent of a supervisor's time (Guest, 1956; Kelly, 1964; Ponder, 1957; Stewart, 1967; Walker et al., 1956), or 9-22 percent of their contact time (Jasinski, 1956; Kelly, 1964; Marples, 1968). About 25 percent of a supervisor's internal contacts were with superiors (Lawler et al., 1968; Martin, 1956).

The pattern is similar for chief executives, with a third to two-thirds of their contact time spent with subordinates (Cohen & March, 1974; Copeman, 1963; Mintzberg, 1970); in Mintzberg's (1970) study, subordinates represented 64 percent of all contacts. College presidents had only 8 percent of their contacts with trustees (Cohen & March, 1974).

The pattern of line contacts between subordinates and superiors suggests that managers supervise more than they are supervised. Some research on foremen, however, challenges this supposition. Studies by Ponder and Walker et al. (summarized in Sayles, 1964) indicate that foremen spent only 14-18 percent of their time (or about 18 percent of their contact time) with their own subordinates as opposed to other operators or employees of lower rank over whom they had no formal authority. Although foremen had contacts with their subordinates more frequently than with any other group of employees, these contacts were among the shortest, lasting on the average less than one and one-half minutes each. Guest (1956) also examined foremen's contacts with their own subordinates, finding that while foremen spent about a quarter of their time with their subordinates, this amounted to less than five minutes per day with each subordinate. The foremen in Guest's study spent more time with the general foreman than with any other individual.

Horizontal relations are an important part of a manager's job, as reflected by the extent of interactions with peers. Foremen spent 4-7 percent of their time with other foremen (see Sayles, 1964) and 12-32 percent of a foreman's contact time was spent with peers inside the firm (Guest, 1956; Kelly, 1964). Through low to middle levels of management, contacts with peers generally consisted of about a third to a half (or more) of a manager's internal contacts (Blau, 1954; Burns, 1954; Lawler et al., 1968).

Although the data are not entirely consistent, findings from a number of studies suggest a pattern of internal contacts that varies by level. As managers move from foremen to middle levels of management, the amount of time they spend with people outside their own work group or department (with staff and service personnel, etc.) increases from none or little (Guest, 1956; Martin, 1956) up to perhaps half of their time (Burns, 1954; Marples, 1968; Martin, 1956). The majority of contacts outside the work group or department, 58-75 percent, are with peers (Burns, 1954; Jasinski, 1956).

At higher management levels, executives have fewer peers. While contacts with subordinates remain extensive (Cohen & March, 1974; Mintzberg, 1970), contacts with peers may be replaced by interactions with outsiders.

External contacts. Managers at low to middle levels appear to have virtually no business contacts with outsiders (see, e.g., Martin, 1956), with the exception of managers in "boundary positions" such as sales (see, e.g., Stewart, 1967). Contacts with outsiders tend to increase with rank. Horne & Lupton (1965) found that time spent on external contacts increased from 15 to 28 percent for managers across 4 levels. Dubin and Spray's (1964) senior executives spent more time on outside contacts than did junior executives.

Chief executives spend more time than other managers on external contacts, but it normally does not exceed 30 to 40 percent of their total contact time (Cohen & March, 1974; Mintzberg, 1970). One exception was the bank president (Dale & Urwick, 1960) who spent about 30 hours of his 58-hour workweek with outsiders.

The scope of executives' external network is broad. The bank president's contacts included outside economists and bankers, government officials, customers, and board members, among others (Dale & Urwick, 1960). Mintzberg's (1970) executives had contacts with members of peer and trade organizations, suppliers and associates, clients, and others. The importance of scheduled meetings is again apparent--more of the bank president's contact time with outsiders was spent on external committees than on any other activity.

8. Managers Are Not Reflective Planners

Managers at all levels spend little time on reflection and planning, perhaps because they have very little time to themselves between meetings, informal contacts, tours, etc. Carlson (1951) reported that executives had between one-half and one and one-half hours a day working alone, but this time was composed of brief, uninterrupted periods averaging eight minutes for one executive, fourteen minutes for another. Many managers, foremen included, spend only a third or less of their time alone (see, e.g., Cohen & March, 1974; Kelly, 1964). Stewart (1967), for example, found that managers averaged 34 percent of their time alone. Only nine times in four weeks, however, were they uninterrupted for half an hour or longer.

Time alone is spent on various activities such as reading and writing, not just on reflective planning. Managers must keep up with their correspondence, handle administrative paperwork, read reports from subordinates, scan journals and other periodicals, etc., during the time they have to themselves. Reading takes up 2-13 percent of a manager's time, and writing takes up 2-35 percent (Burns, 1957; Copeman, 1963; Guest, 1956; Hinrichs, 1964; Horne & Lupton, 1965; Thomason, 1966). Even technical and professional managers in a research setting were found to spend only about 15 percent of their time writing and 10 percent reading (Hinrichs, 1964). Foremen appear to spend the least time (one percent to five percent) on both (Guest, 1956; Walker et al., 1956).

Thus, the little time that managers have alone is used for different activities, leaving even less for planning or thinking. Several studies reported that managers spent only two to five percent of their time thinking, reflecting, or planning (Copeman, 1963; Dahl & Lewis, 1975; Dale & Urwick, 1960; Horne & Lupton, 1965; Luijk, 1963).

Although some researchers report more time for thinking (e.g., 8-29 percent in Burns, 1957, and Copeman, 1963), the weight of the data clearly supports a comment reported by Dahl and Lewis (1975): "'I'm paid to think,' said an executive of Control Data in England; 'the system caught me at it once in 28 days.'"

9. Information Is The Basic Ingredient Of The Manager's Work

Several research efforts indicate that the major function of managerial work is getting information. Carlson (1951) and Brewer and Tomlinson (1964) found that, on the average, managers spent about 25-50 percent of their total time getting information. Horne and Lupton (1965) reported that an average of 42 percent of managers' time was spent on getting and receiving information.

The classification structure used by some researchers appears to be that managers get "pure" information, but give information in the form of advice or explanations. If these two categories are considered as information exchange, then the total time spent on giving and receiving "information" comprises about half of the manager's time (see Table 1, page 16).

In contrast, managers spent much less time making decisions and giving orders or instructions. Only 8-13 percent of managers' time was spent in decision making (Brewer & Tomlinson, 1964; Horne & Lupton, 1965). Mintzberg (1970) found that 21 percent of executives' contact time was spent on "strategy" (13 percent) and "negotiations" (8 percent), which he classified as decision-making functions. Managers spent only 5-14 percent of their time giving orders or instructions (Carlson, 1951; Brewer & Tomlinson, 1964; Horne & Lupton, 1965).

Table 1

Time Spent on Informational Activities

	INFORMATION			ADVICE			EXPLANATIONS			
	Give	Receive	Both	Give	Receive	Both	Give	Receive	Both	TOTAL
Carlson, 1951		39%		8%			8%			55%
Brewer & Tomlinson, 1964		24%		18%						42%
Horne & Lupton, 1965			42%			6%			15%	63%

10. <u>Managers Don't Know How They Spend Their Time</u>

A number of researchers have used multiple research methods to determine how accurately managers describe their working patterns. The most common strategy is to compare managers' responses to an interview or questionnaire with results from systematic observation conducted soon thereafter. It is apparent from these comparisons that managers do not have a clear picture of how they spend their time.

Managers consistently overestimate the time spent on:

	Estimated	Actual	Source
Production	53-55%	34%	Burns, 1954, 1957
Reading & Writing	32%	25%	Hanika, 1963
	30-39%	24-29%	Hinrichs, 1964
Phone Calls	9%	4%	Dahl & Lewis, 1975
	9-11%	6-8%	Hinrichs, 1964
Thinking (and Calculating)	6%	2%	Dahl & Lewis, 1975
	19%	5%	Hanika, 1963

Managers consistently underestimate the time spent on:

	Estimated	Actual	Source
Meetings and/or	47%	69%	Dahl & Lewis, 1975
Informal Discussions	44%	54%	Hanika, 1963
	16-46%	22-54%	Hinrichs, 1964

There are also some inconsistencies in the estimates made by managers for other activities. For example, one group of managers overestimated the proportion of time they spent on "research" (17 percent estimated vs. 9 percent actual; Dahl & Lewis, 1975), but another group underestimated the time they spent on "research and development" (5 percent estimated vs. 16 percent actual; Burns, 1957).

In general, the data suggest that managers perceive themselves as spending more time than they really do on technical, cognitive, and singular activities, and less time on formal and informal interactions. All that can be counted on is that managers make errors--sometimes quite large errors--when they try to estimate how they spend their time.

Questions About Managerial Work

In addition to contributing to generalizations about managerial practices, the findings reviewed here have also raised some issues that have yet to be resolved. It is recommended that these questions be considered in drawing further conclusions about managerial work, and that research efforts be directed toward answering them.

The following six questions represent some major issues that should be examined for a clearer understanding of managerial work.

1. Do Managers Control Their Work?

Mintzberg (1971) claimed that although it appears differently on the surface, managers can control their own affairs by defining their own long-term commitments and exploiting their obligations. It may be that only chief executives have this ability, since Stewart (1976) concluded that senior managers have more freedom than junior managers to decide what they will do. She points out, however, that managers tend to overestimate the amount of choice they actually have to decide what to do.

The manager's job includes a number of routine (and presumably necessary functions) such as answering mail, hosting visitors, etc. Managers' contacts with numerous people both inside and outside the organization represent a core part of the job, and a sizeable proportion of those contacts are initiated by the other party. Findings have generally indicated that managers initiate most contacts with their subordinates, but contacts with superiors in the organization are more frequently at the others' initiation (see, e.g., Burns, 1954; Dubin & Spray, 1964). Mintzberg (1970) found that chief executives initiated less than a third of all their contacts.

The impression is that managers perform a set of functions that is essentially responsive to the requests of others and to the requirements of the job itself. It may be that managers, particularly at higher levels, can and do create opportunities through or between their job commitments. Or it may be that the perception of having control is an illusion.

In his study of executives, Carlson (1951) reached the following conclusion:

> Indeed, even had the executives wanted to change their behavior, they did not have much chance to do so. The content of their working day is determined only to a small extent by themselves, and it is difficult to change it without making considerable alterations in the organizational structure of which they are parts. Before we made the study, I always thought of a chief executive as the conductor of an orchestra, standing aloof on his platform. Now I am in some respects inclined to see him as the puppet in a puppet-show with hundreds of people pulling the strings and forcing him to act in one way or another.
>
> (p. 52)

Viewing the same kinds of evidence about quantity and pace of work, Cohen and March reached a different conclusion (1974, p. 150): ". . . we believe the college president has difficulty saying 'no' because much of the time he does not really want to do so."

It is clear that the managerial job is hectic and fast paced. Many of the job's characteristics are determined by the work flow (Chapple & Sayles, 1961; Landsberger, 1961). Just how much control an individual really has is an important and as yet unresolved research issue.

2. Do Effective Managers Do Things Differently?

It is particularly difficult to distinguish between the behavior patterns of effective and ineffective managers because the criteria of "effectiveness" are difficult to define and measure. Most of the research reviewed here made no attempt to go beyond pure description. Results from a few studies, however, suggest that effective managers' activities are somewhat different from those of less effective managers.

Most researchers relied on supervisors' ratings, either formal (as on a performance appraisal form from the files) or informal. Ratings used by Guest (1956), Jasinski (1956), and Blau (1954) were obtained with these strategies. Ponder (1957, 1959), however, used a composite rating to determine effectiveness, incorporating suppervisors' and subordinates' ratings as well as production records. With the exception of Blau's (1954) study, foremen were the subjects of all the studies mentioned above.

Foremen classified as most-effective were found to exhibit behavior patterns more characteristic of higher level managers than did less effective foremen. Examples include:

a. Most-effective foremen had a lower overall activity rate (activities and contacts) and spent more time with other people (Guest, 1956; Ponder, 1957).

b. Most-effective foremen spent less time on short-range production matters (Ponder, 1957).

c. Most-effective foremen spent more time with people outside the work group, particularly other foremen and staff and service personnel (Jasinski, 1956; Ponder, 1957).

d. Most-effective foremen initiated fewer contacts (Ponder, 1957; Blau, 1954).

e. Most-effective foremen gave fewer specific work orders (Ponder, 1957).

In reporting his findings, including the great variability of activities on different days, Guest (1956) cautioned that "unpredictable operational factors" may be just as important as "effectiveness" in determining a foreman's behavior patterns. Brewer and Tomlinson (1964) also noted three factors that are probable causes of distortions in a manager's work pattern: a weak subordinate, the absence of a functional specialist, and the appearance of a serious issue.

Thus, the circumstances of the work may significantly affect a manager's performance, just as do a person's job skills. Clearly, more investigation into the processes and conditions of effective and ineffective managers is needed.

3. What Is The Content Of Managerial Work?

Determining the content of managers' work is one of the most difficult tasks encountered in this area of research. Many activities do not readily lend themselves to the category choices included on diary or questionnaire forms. Also, individual managers have different perceptions about what the subject categories mean and what subject is being covered in any particular activity. Stewart (1968b) pointed out that " . . . neither self-estimating nor diary-keeping, in which the manager ticks subject classifications, can be reliably used to compare content of manager's activities."

This means that for any given set of content categories, such as Burns' (1954) nine subject areas, there will be differences in assigning activities to categories not only within a sample of managers but also across samples.

To further muddy the waters, different researchers tend to use different content classifications. For example, one content area frequently used in research studies is "production matters." To determine how much time or how many activities involved production matters, one would look at Burns's (1954) categories of "Current Production Problems, Maintenance" and "Programming and Production Control." In Guest's (1956) classification schema, production matters are covered by such topics as "Work progress," "Production schedule," "Quality," "Work standards," "Safety," and possibly others as well. Horne and Lupton's (1965) "Technical" category includes production as well as research, design, development, quality, etc.; their "Miscellaneous" category includes health, safety, etc. Clearly, comparisons even at the broad category level are difficult to make.

Another discrepancy involves the classification of activities that cover more than one subject. Sometimes these activities are classified as "complex" (i.e., involving two or more subjects; see, e.g., Dubin & Spray, 1964). Sometimes complex activities are handled by dividing the time period of each activity by the number of subjects covered and treating them separately (see, e.g., Horne & Lupton, 1965). Again, comparisons of content areas become difficult, if not impossible, because of different ways of handling the data.

Some method problems can be avoided by examining content in very general terms, but this information is not particularly meaningful or enlightening. For example, finding that executives spend a great deal of time on "Technical" and "Commercial" areas (Horne & Lupton, 1965), or "Pure administration" (Dahl & Lewis, 1975), or "Representation" (Dale & Urwick, 1960), does not contribute significantly to our knowledge of managerial work.

Certainly part of the difficulty with classifying the content of managerial activities is rooted in the characteristics of the job. The pace, brevity, variety, fragmentation, and oral aspects of activity suggest that content, too, is fragmented and varied. Three or four issues, from production to personnel, and several processes, from planning to delegating, may be covered in one fleeting contact. One problem reappearing at several times during the day may involve several subject areas. There is no reason to assume that the "content" of the manager's job is unambiguous and can be clearly labelled by discrete categories. Certainly one of the primary research challenges surfaced by this literature is the need to develop fresh approaches to the content of management work.

4. Do Organizational Variables Matter?

Some research findings suggest that different behavior patterns of managers are related to the size and type of their organizations. For example, Mintzberg (1973) compared his findings for five chief executives of large concerns with Choran's data from three presidents of small firms. Some differences were that executives of small organizations:

-- Had a higher activity rate (77 vs. 22 activities per day)

-- Spent more time on deskwork (35 percent vs. 22 percent)

-- Spent less time in scheduled meetings (21 percent vs. 59 percent)

-- Spent more time on phone calls (17 percent vs. 6 percent)

-- Spent more of their contact time with clients, suppliers, and associates (38 percent vs. 20 percent)

Ninety percent of the activities of Choran's executives lasted less than nine minutes each (compared with about half for Mintzberg's group), and less than one percent of their activities lasted more than an hour (versus ten percent for Mintzberg). Mintzberg concluded that there is less formality in small organizations and more emphasis on internal operating issues.

Cohen and March (1974) found that presidents of large universities spent more time playing administrative roles and had more time alone than did presidents of smaller schools. They concluded that in larger schools the president was more tightly linked to the university and less personal (i.e., more of their interactions were in groups rather than one-to-one).

Burns (1957) and Thomason (1966) suggested that managers spend more time in communication, particularly verbal, in organizations with a faster rate of change than in "old established" firms. Horne & Lupton (1965) concluded that the size and technology of an organization affects the nature of the managers' "organizing" tasks but not that of other tasks.

Dubin and Spray (1964) suggested that executives in client-centered firms have more outside contacts than executives in manufacturing firms, and Dubin (1962) concluded that decentralization shifts executives' focus to external problems.

The nature of the organization may significantly affect the nature of managerial work within the organization; organizational variables should be considered as research questions and investigated systematically.

5. Does Managerial Work Cycle?

Cohen and March (1974) concluded that the daily and weekly cycles of work play a large role in determining how college presidents spend their time. Their findings indicated that administrative work was done early in the day and early in the week; external contacts and problems were handled later in the day (e.g., at luncheon meetings) and later in the week, and political activities tended to be done toward the evening and on weekends.

While the pace of managerial work may remain fairly constant, the types of activities and their content may be cyclical for managers. The cycles may be daily and weekly as Cohen and March found, and they may also be monthly, yearly, etc. (as suggested by Stewart, 1967). Certainly, many organizations follow a business cycle in which budgeting activities are concentrated in one period during the year, sales in another or other periods, etc. Researchers have generally attempted to avoid such periods of concentration on only one type of activity so that more "typical" activity patterns could be examined within a short span of time. Within the brief periods of study, however, little attention has been paid to short-term cycles such as those found for college presidents. Daily or weekly cycles of activity may be a function of the job, the organization, or the external world; they could also reflect individual managers' attempts to organize their work and better manage their time.

Whatever the case, cyclical patterns in managerial work have not been adequately examined. In particular, short range cycles may help to explain the variability in behavior patterns between managers and across time (Stewart, 1967).

6. What Causes Stress?

Dahl and Lewis (1975) examined managerial work with regard to stress-inducing factors. They found that for college administrators the single largest source of stress was cutting back their workweek (from about 55 hours a week). Within the work itself, sources of stress appear to be concentrated in "pure administration" functions and in meetings, both of which involve a great deal of the managers' time. Judging whether or not to delegate assignments was also found to be stressful to managers.

These data suggest that certain activities in managerial jobs may be more stressful than others. Managers may postpone or avoid stress-inducing activities. For example, if the process of delegating assignments to subordinates is stressful to managers, they may opt to do the work themselves. Also, individual patterns of behavior may reflect different preferences for less stressful activities. And working within the time limits of business hours may be hazardous to the health of many managers.

The role of stress in determining or explaining managerial work patterns is uncertain. There are endless possibilities, and investigation into this relationship may well be fruitful.

Methods For Studying Managerial Behavior

The results obtained from the studies reviewed thus far are likely to be method bound. That is, the findings and conclusions drawn from diary and observational studies differ markedly from those yielded by survey and interview studies addressing the same issue. It is necessary, therefore, to examine in some detail the methods used to study managerial work. Diary and observational techniques are considerably more expensive and time consuming than surveys, and this raises important questions about their use. Are direct methods more accurate or do they simply answer different questions? How can various methods be used to complement one another in producing an accurate picture of the managerial job?

Interview, Survey, Observation, and Diary Methods

A look at the literature on managerial behavior reveals that the majority of studies in this area fall under a methodological paradigm having two main characteristics: (a) interview and/or survey techniques were used to gather information and (b) factor analytic or other data reduction techniques were used to obtain global themes or dimensions of behavior. A consequence of this paradigm has been the description of managerial behavior using hypothetical constructs (such as organizing, staffing, etc.) rather than actual, observable behaviors. Such process dimensions may be of heuristic interest, but they provide little direct information about the actual activities managers engage in and the behaviors they display. Whereas the data reduction methods of analysis are obviously responsible to some degree for the global nature of the dimensions, the interview/survey methodology may be the primary cause.

Interview/survey techniques can be viewed as indirect methods of gathering information about behaviors. They are based on asking managers to describe what they do rather than actually observing the managers at work. The filtered perceptions obtained from indirect methods have been shown to deviate considerably from information gathered by direct observational and reporting methods (Burns, 1954, 1957; Dubin, 1962; Hartley, Brecht, Pagery, Weeks, Chapanis, & Hoecker, 1977; Hinrichs, 1964; Horne & Lupton, 1965; Kelly, 1964; and Lewis & Dahl, 1976).

In a study of 12 mid-level administrators at a large university, for example, Lewis and Dahl (1976) asked for estimates of the proportions of time spent on certain activities. Then, a diary technique (based on activity sampling via a random signaling device) was used by the managers to record their actual behavior for five weeks. Whereas the administrators had guessed that they spent only 47 percent of their time in meetings, the diary record showed meetings occupied 69 percent of the working day. Other findings were that telephone calls consumed only 4 percent of the day (9 percent was estimated) and thinking/planning took up only 2 percent of their time compared to estimates of 6 percent.

Similarly, Burns's (1954) diary study showed that " . . . the stereotype of their own and others' expenditure of time carried around by four factory executives was some distance from reality" (p. 82). Aptly, Mintzberg (1973) described this "time illusion" in the following way:

> It would appear that the simplest way to find out what managers do is to ask them, by way of interviews and questionnaires. The results are disappointing . . . to ask a manager what he does is to make him the researcher; he is expected to translate complex reality into meaningful abstraction. There is no evidence to suggest that managers can do this effectively; in fact there is ample evidence from empirical studies . . . that <u>managers are poor estimators of their own activities</u>.
>
> (p. 222, emphasis added)

Direct observational recording techniques can be classified into two approaches: diary (or self-observation and recording) and observation by others (or OBO, where someone other than the manager observes and records behaviors). While the diary approach has been slightly more popular than OBO for studying managerial behavior, neither approach has been used extensively. Both are relatively expensive in time and money and do not provide the anonymity of surveys. Just the same, the raw data they produce are the manager's actual behaviors and ongoing activities as they occur, and not the retrospective perceptions of these activities from a single point in time. Thus, direct observational methods do not suffer as much as survey methods from restrictions on the human processes of observation, recording, recall, and reporting. These are examined below.

<u>Constraints on observational input</u>. Managers' work activities are fragmented, brief, diverse, fast-paced and primarily oral. The sheer volume and nature of activities seriously hinders a manager's efforts to conscientiously observe and purposively memorize activities for accurate reporting on a future survey.

Most surveys, however, are preceded by no observational forewarnings. Thus, when managers are requested to report their activities in a survey, they must rely on memory of their past activities. Weick (1968) has noted that "the fallibilities of retrospective data are often reason enough for an investigator to attempt an observational study" (p. 364).

Diaries and OBO methods may also suffer from certain milder constraints on observational input. Weick (1968) pointed out that habitual or culturally patterned activities are often unnoticed by a person performing them. This implies that the diary method may not tap certain activities because the involved manager is not aware of them. These activities could be apparent to the detached observer.

The OBO method has been criticized by some authors for being incapable of assessing the nonobservable activities such as planning, thinking, etc. (Carroll & Taylor, 1968; Hemphill, 1959; Kelly, 1969; O'Neill & Kubany, 1959; Penfield, 1974; Stewart, 1965; and Stogdill & Shartle, 1956). As Hemphill (1959) put it:

> One of the things I am suggesting here, of course, is that we cannot understand a position simply by watching the man who holds it do things. The knowledge that he answered such and such a telephone call at 10:30, discussed such and such a project with Jones and Smith at 10:40, and so on through the day does not tell us nearly enough. There is more to a job than that.
>
> (p. 56)

To reduce such problems, researchers occasionally use a "warm-up" period during which they ask the target manager to explain what he or she is doing. Once familiar with the rationale underlying activities, the observer can become an unobtrusive recorder.

Other researchers precede systematic observation with intensive interviews and unstructured observation. This allows them to interpret the behavioral record in the context of the manager's objectives. Use of diaries, of course, allows managers to record the "unobservable" aspects of their activities at the same time the activities themselves are recorded.

Certainly there is more to management than observable activity. The issue is how to conjoin purpose and activity so they make sense together. Combined interview, diary, and observational approaches seem to hold the most promise for accomplishing that goal.

Constrained recording. Managers work at a hectic pace. Consequently, they are often too involved in activities to record their behavior (either physically in a diary or mentally for later reporting on a survey form). Brief, fleeting contacts are often overlooked and not recorded (Marples, 1967; Stewart, 1965).

A problem specific to diary studies is ensuring the commitment of managers to recording their activities consistently and continuously over the period of investigation. Stewart (1967) suggested that reliable recording could be obtained from managers for at least four weeks. Carlson (1951), however, reported reliability problems after one to two weeks of recording. Apparently the way the research is handled has a great deal to do with managerial cooperation. In some cases, managers may need to be offered certain incentives (such as training based on the data) to maintain long-term diary keeping.

Diaries may disrupt the pace and flow of managers' work activities. According to Mintzberg (1973), "The manager is far too busy to record properly . . . . Managing is a complex, full-time job, and, as I was to learn, so is recording" (p. 271).

The most serious problem involved in the recording of behaviors and activities is shared by all techniques. The development of descriptively accurate, unambiguous, and comprehensive categories for classifying activities is a necessary goal that is probably never achieved in any study. A certain paradox underlies this problem of ambiguous dimensions. If one is trying to design a research form (questionnaire, diary code, etc.) to study what managers do, one must first go out and study what managers do to develop the definitions and categories needed for one's form. Hodgson, Levinson, and Zaleznik (1965) discussed this paradox in connection with their study of three senior executives:

> To construct questionnaires, we had to know the salient dimensions of the situation we were studying. It took about a year of field work to find them out, and by that time we were already obtaining so much data that questionnaires would have been of no incremental value.
>
> (p. 481)

Similarly, Stewart (1965) reached the following conclusion in connection with the results of several experiments she conducted with different types of diaries:

> The most important conclusion I reached was that it is impossible to design a diary of kinds of

> action . . . which would yield comparable results. The seminar discussions showed that an individual could be consistent in his classification of kinds of action, and might find it helpful to make such a classification, but that it seemed impossible to produce definitions that would be interpreted in the same way by a number of different individuals.
>
> (p. 230)

Mintzberg (1973) advocated the use of "structured observation," an OBO technique, as a solution to the problem of classification:

> Structured observation can draw also on the chief strength of unstructured observation, namely, the development of categorization schemes during and after observation . . . . Such an approach can offer the best of both worlds--the inductive power of observation coupled with the structure of systematic recording.
>
> (p. 227)

The problem of how to develop adequate classification schemes for distinguishing managerial activities remains a fundamental methodological issue for researchers. Survey methods are probably more prone to the effects of this problem than are direct observational techniques. Survey methods have usually proceeded from general intuitions about what managers do to even more abstract "dimensions" of managerial behavior. The Ohio State Leadership studies, for example, concluded that nearly all managerial behavior can be explained by the two dimensions "consideration for others" and "initiation of structure." Such dimensions are so abstract that it is nearly impossible to actually observe and classify activities with them. The data reduction methods of analysis surely deserve some blame for the production of these abstract dimensions. Just the same, the retrospective perceptions assessed by the survey paradigm represent the products of an earlier "factor analysis"--not the statistical variety, but a type of cognitive "factor analysis" based on managers' retrospective perceptions (Eden & Leviatan, 1975). Campbell (1958) described this mental "factoring" process as follows:

> Through an anticipatory monitoring of his own intended output, he makes an active effort to produce a coherent output, by suppressing remembered detail that does not now seem to fit and by confabulating detail where gaps are conspicuous . . . .

> Output, if imperfect, will on the average be shorter, simpler, and less detailed than input.
>
> (p. 342)

Constrained recall. Survey methods require managers to recall past activities and behaviors. This process of data retrieval is subject to forgetting. The manager may once have had the requested information readily available, but at the time of the survey it may have "receded from easy recollection or may be completely unavailable" (Cannell & Kahn, 1968, p. 541).

In his discussion of the disadvantages of survey methods, Smith (1975) summarized the methodological literature on this subject as follows:

> Memory decay is greater with (1) more elapsed time since the event, (2) lesser occurrence of the event, (3) relative unimportance of the event, (4) stronger personal connection of the question to a person's self-esteem, and (5) less accessibility to relevant data. Thus, much data is inaccessible to the researcher since respondents often cannot recall events, or misrecall various events.
>
> (p. 194)

> . . . recall of past behavior and events through questionnaires and interviews is often highly unreliable. Thus, a preferable alternative may be to directly observe behavior and events. Direct observation is often more reliable than recall instrumentation.
>
> (p. 203)

Constrained report. Managers tend to censor their reports of activities to show themselves in a good light. Activities and behaviors which reflect unfavorably on a manager are "played down." Thus, defensiveness operates to reduce the accuracy of self-report data concerning activities which managers: (1) are ashamed of, (2) wish to keep secret, (3) believe to be confidential, or (4) think contradict what is expected of them.

Distortions can occur within any one or more of the following dimensions concerning the behaviors of activities of interest:

(1) Frequency

(2) Duration

(3) Location

(4) Time and date

(5) Contact parties

(6) Content

(7) Method

For example, Weiss, Davis, England, and Lofquist (1961) found that descriptions of work history tend to become less accurate over time. The errors in the descriptions were not random; there was a general upgrading of the work history through the reporting of higher level jobs and higher salaries than found in actual records.

Direct Techniques

In general, direct observational techniques do not appear to suffer as much from dysfunctions in observation, recording, recalling, and reporting as the survey methods. Just the same, observational and diary methods do have the following weaknesses:

(1) Cooperation and commitment are sometimes difficult to obtain and maintain over extended periods.

(2) It is difficult to ensure anonymity.

(3) They are relatively expensive in time and personnel (unless some of the new technologies are used, in which case the hardware itself can be expensive).

(4) They tend to be feasible only with small samples (although this is less of a problem for diaries than OBO's).

(5) They produce voluminous data that are unwieldy to analyze (with the exception of certain methods which use precoded computer punch cards as actual diary records).

(6) Determining a representative period for observation may be difficult due to various cyclical patterns in work activities.

Diary and OBO techniques can be compared to one another in terms of their individual strengths, weaknesses, and appropriate uses for studying managerial work. Figure 2 (see pages 34 and 35) presents a summary listing of some of the more important conclusions about these methods which have emanated from empirical studies of managerial activities as well as from the relatively "content-free" methodology literature.

Multiple Methods

Survey techniques and their associated data reduction methods (e.g., factor analysis) have formed a constricting paradigm that has guided the overwhelming majority of past research into managerial work. Based on input which is already deficient in the rich variety of details which make up the actual content of managerial behavior, certain statistical methods distort the picture even more as they raise the data to yet another, higher level of abstraction. As a result, our knowledge of managerial behavior is at once very limited and overgeneralized.

To break with this methodological parochialism of the past, researchers must begin to adopt multiple method research designs. Each of the techniques discussed here has some unique strengths and weaknesses. For describing managerial behavior, no method clearly shows itself superior for all potential research circumstances and settings. The use of multiple methods should allow the researcher to capitalize on the combined strengths of a collectivity. If a description can be shown to agree with those provided by complementary methods, then it contains a degree of accuracy unattainable by a description that is consistent with only one method.

DIARY

STRENGTHS	WEAKNESSES	APPROPRIATE USES
Can assess the non-observable activities (thinking, planning, etc.)	Recording is disruptive of managers' normal work activities; time consuming and laborious	To assess frequency of certain known activities
Can assess emotional & stress reactions to activities	Subject to defensive biases in recording & reporting activities	To assess activities of managers who engage in many confidential or non-observable work activities
Feasible for large samples	Subject to differing interpretations of activities by different managers	Useful where managers are likely to distort their activities if watched by others
Less expensive than observation	Not efficient for determining actual content of activities	To complement and cross-validate the results found with other methods
Useful for assessing time distribution of pre-selected activities	Managers may not be aware of habitual or very brief activities	
Categories can be modified and structured to fit activities actually occurring	Difficult to maintain cooperation and commitment of managers after two weeks	

Figure 2

A Comparison of Diary with Observation by Others

OBSERVATION BY OTHERS

STRENGTHS	WEAKNESSES	APPROPRIATE USES
Does not interrupt the normal work activities of managers and take up their time	Cannot assess the non-observable activities (thinking, planning, etc.) without observer intervention	If continuous, to assess the fragmentation, brevity, and patterning of managers' activities
Most accurate and reliable method for determining time distribution among observable activities	Managers may distort their styles as a reaction to being watched	To assess work activities if there is a good possibility of defensive reactions
Not subject to defensive biases in self-report	Feasible only for small samples	To assess work activities where diary would be too disruptive of managers' work
Can capture brief activities and the flow, brevity, and fragmentation of work	Complex activities are difficult to record and classify by observer	To complement and cross-validate the results found with other methods

Figure 2 (Continued)

A Comparison of Diary with Observation by Others

So What Does It All Mean?

The small body of accumulated research on what managers do supports ten generalizations: managers work long hours; they are busy doing a lot of things; their work is fragmented and episodes are brief; the job contains a lot of variety; managers spend the bulk of their time within their own parts of the organization; the work is predominantly oral; managers have contact with a variety of people (by no means all in the direct chain of command); managers are not reflective planners; information is the core of the job; and finally, managers really don't have an accurate picture of how they spend their time.

Because of the nature of their jobs (particularly the variety, brevity, fragmentation, and orality) and because they do not know how they spend their time, managers' responses to survey questions about their jobs tend to produce global generalizations. While such survey results are interesting, they are at best remote abstractions of managerial work, and at worst misleading characterizations of a complex job.

The results of the observation and diary studies have a number of implications for research on management, managerial behavior, and organizational design. While the number of studies is small, their implications are quite broad.

Research on Management

Perhaps the most important research implication of these studies (one echoed by virtually all the researchers using diary and observation methods) is that we know very little about actual managerial behavior. Survey methods and their associated data reduction techniques frequently suffer from what Steinbeck describes as "teleological thinking," which

> presumes the bettering of conditions, often, unfortunately, without achieving more than a most superficial understanding of those conditions.
>
> (Steinbeck, 1962, p. 135)

Most of the diary and observational studies represent what Steinbeck describes as "non-teleological thinking":

> Non-teleological thinking concerns itself primarily not with what should be, or could be, or might be,

> but rather with what actually "is"--attempting at most to answer the already sufficiently difficult questions what or how, instead of why.
>
> (Steinbeck, 1962, p. 135)

Many of the problems with existing approaches to leadership and management can be traced to a superficial understanding of the what and how. As Blau (1963, p. 6) has pointed out, "Data do not speak for themselves but only answer questions the investigator puts to them." The importance of matching method to question cannot be overemphasized. If one hopes to find out about the behavior of managers, questionnaires are weak tools to do so.

Any method that requires predetermination of content (subject) categories assumes an a priori knowledge of the content of managerial work. Neither direct nor indirect methods have successfully confronted the problem outlined by Mintzberg (1970) of finding out what should go in. Even with her carefully developed diary instrument, Stewart (1967) found unreliability in the content categories; the vast majority of her managers used "general management" as a catchall. More distressing yet, Burns (1957) found that people involved in the same episode disagreed on the subject of the episode 40 percent of the time. The difficulty with deriving reliable and usable content categories may not be a function of method. To the extent that managerial behavior is fragmented, brief, high in variety, etc., the content of the work may well be described the same way. In other words, getting hold of the content of managerial work is like trying to measure a molecule that "under the Heisenberg principle resists attempts simultaneously to locate it and time its velocity" (Riesman, cited by Kornberg & Perry, 1966, p. 68). On an abstract level, managers do plan. But the data show conclusively that whatever planning is done is not done in long reflective periods. It somehow takes place in between or during a huge variety of activities. The same is true of "decision making." Our knowledge of managerial work cannot advance until we understand how such processes play out in the context of managerial activities. This may be the most important research challenge emphasized by the diary and observational studies.

Another critical area requiring extensive investigation is the degree of control managers have over their work. Efforts to train managers or to appraise their performance assume that managers in fact can control what they do. As we have seen, the behavioral evidence raises questions about this assumption. Some researchers have gone so far as to suggest that "performance is an act of God or at least not directly under the control of the president" (Cohen & March, 1974, p. 149). Carlson (1951), Mintzberg (1971), and Stewart (1967) all confront the issue of control, but there has been no resolution. It appears that a substantial portion of the manager's job is controlled by other people, the work flow, and external demands. Before organizations prescribe behavior for managers, they need to look closely at the degree of control that is possible and at the consequences of changing existing activity patterns.

Another major issue raised by these studies is the classification of managerial jobs. As Stewart (1967, 1976) pointed out, managerial jobs vary dramatically. Traditional approaches to clustering jobs by function and/or level are on the right track, but Stewart suggests other methods. The nature of the contacts required and the work patterns (e.g., how brief and fragmented they are) may be more useful bases for contrasting jobs than are more global slices such as level. The practical implications of such an approach are as yet untested.

Several other exciting research directions were surfaced, including the impact of organizational variables on managerial work, whether effective managers have different activity patterns than less effective, how work cycles and varies over time, and the relationship of work demands and managerial stress. Observational and diary findings provide a foundation for tackling such issues. Survey methods can be bolstered enormously if they are rooted in actual managerial behavior.

Managerial Behavior

The studies reviewed in this paper provide substantial insight into questions about management that emerge time and time again across organizations:

-- Why don't our managers have a broader perspective? They seem to be fire fighters, but not fire preventers.

-- Why don't our managers delegate?

-- Why doesn't information pass up the hierarchy?

-- Why are managers constantly complaining about paperwork?

-- Why are our managers out of date?

-- Why don't our managers manage people better?

1. Reactive managers. Mintzberg (1973) argued that managers focus on current events and information. To the degree that the demands placed upon managers result from the work flow itself and from contacts initiated by others, the job is reactive. Information is primarily oral, managers spend most of their time in their own establishments, there is little uninterrupted time for reflection or planning. All of these elements suggest that the job itself pressures managers into a current, fire-fighting mode. Stewart (1968b) has described the "grasshopper" nature of the job, the jumping from one thing to another. To the extent that managers want to plan, to look ahead, to keep a broader perspective, it is not an easy thing to do.

2. Managers and delegation. Most of a manager's time is spent talking. A large proportion of a manager's contacts are lateral, non-chain-of-command. To the extent that the information managers have is carried in their heads and gleaned from their own networks of contacts, transferring that information to others is difficult. Because episodes are brief, delegating to someone else may take more time than handling the issue alone. Possibly only straightforward, well-defined problems and activities can be delegated easily. Cohen and March (1974) found "very little evidence . . . that the overload on the president is related in any consistent way to the apparent complexity of the problems facing the institution, to the size of the staff available to the president, or to the organization of the presidency" (p. 152). The problems of delegation are not simply a result of poor management practices, lack of staff, or lack of training. They involve the nature of the job itself.

3. Information bottlenecks. The oral nature of managerial information, coupled with the little time devoted to reading and writing, builds in information unevenness across managerial positions. Further complications arise because (a) relatively little time is spent with superiors and (b) subordinate contacts are frequent but brief. Only part of the information a manager has can be transmitted, and an even smaller percentage can be transmitted upwards. Again, the problem with information is as much a function of the nature of the information (oral) and of the contact pattern as it is of the individual manager. Devoting more time to documenting information means less time for gathering new information.

4. The burden of paperwork. The data show that managers in general spend little time writing. Further, managers overestimate the amount of time they do spend. Writing takes time away from gathering current information and appears to be anathema to many managers. As more forms have to be filled out, especially as they require information

available only to the manager, the increased time on administration forces a change in work activity patterns. If Mintzberg (1973) is right, managers much prefer live action; paperwork is contrary to their perception of "getting the job done."

5. Managers get out of date. Managers spend little time reading. Hinrichs (1964), in a study of 232 technical employees (covering entry-level to third-level managers), found that only 9-12 percent of their time was spent reading. Over half of this time was devoted to materials (letters, progress reports, etc.) generated within the company. In short, even managers in technical jobs devote little time to reading technical material. Most of their time is spent on other matters, and predominantly in oral communication. It is no surprise, then, that managers lose touch with technical information, especially if their areas are complex and fast changing. If technical expertise is critical to the job, periodic sabbaticals or internships represent one approach to preventing professional obsolescence. Apparently, being simultaneously a manager and a technical expert are conflicting aims in most managerial jobs.

6. Managers and their people. Perhaps the strongest statement in this literature was made by Guest (1956) after an intensive study of foremen. Looking at the demands of the job in relation to prescriptions for human relations practices, Guest noted, "You could dispose of all the leadership training courses for supervisors in American industry today without anyone knowing the difference" (p. 478). His point was that the demands of the job make most "human relations" activities virtually impossible. His point may be overstated, but the activity patterns of managers lend support to his reasoning: While a majority of managerial contacts are with subordinates, they tend to be very brief. Further, the time a manager spends with any one subordinate is quite short. In one study (Ponder, 1957), more effective supervisors spent less time with subordinates and more time with external contacts. Participative decision making, group maintenance activity, etc., may require a drastic change in most managers' work patterns. To the extent that work patterns result from job demands rather than from individual preferences, human relations approaches are unlikely to have much effect.

Organizational Systems

In general, the studies suggest that what a manager does is determined more by the demands of the job than by the individual or the organization (Stewart, 1967). Managers have some control over their activities, but just how much is not clear. As Carlson (1951, p. 71) noted:

> There is a tendency for business executives to become slaves to their appointment diaries--they get a kind of "diary complex." . . . One should never ask a busy executive to promise to do something, e.g., "next week" or even "next Friday." Such vague requests do not get entered into his appointment diary.

Mintzberg (1975) acknowledged the ease with which the job can control the managers and surmised two strategies for gaining some control: turning obligations into advantages (e.g., if required to make a speech, use it as a chance to lobby for a cause) and turning what you want to do into obligations (e.g., having subordinates report on projects at specific intervals to keep the manager involved).

Many organizational systems do not acknowledge either the activity patterns of managerial jobs or the strategies managers use to cope. Training programs, for example, typically assume that managers have a lot of control over their activities (e.g., they would plan more if they knew how). Performance appraisal often rests on a similar assumption, holding managers responsible for a variety of outcomes to which they contribute only a part.

Managerial training.

> "Too little time" is the most respectable reason for neglecting some aspect of one's job, but it is rarely a sufficient explanation.
>
> (Stewart, 1967, p. 159)

At first blush, the hectic nature of managerial work suggests a need to train managers in time management. A closer examination reveals that (a) managers probably _prefer_ to spend their time as they do (Mintzberg, 1973) and (b) they probably don't have much choice. Many managers, by using their appointment books, secretaries, and staff, and by taking work home or coming in early, are already "managing" their time as well as can be expected. The interruptions, pace, and other-initiated contacts all mitigate against enforced time control. The processes of diary keeping and receiving feedback have provided valuable insight for managers (e.g., Stewart, 1967, 1968a), but the existing research is inadequate to prescribe time allocations for general management jobs.

On the other hand, the work patterns of managers suggest some dramatic changes for the content of training programs. For the sake of example, these implications can be clustered around (1) training managers to deal with specific activities, (2) training managers to deal with general responsibilities, and (3) rotating managers through jobs according to work characteristic (as opposed to functional) differences.

First, what kinds of activities might managers be trained to deal with? Diary and observational studies suggest that trainers might focus on such things as:

-- How to handle a two-minute interaction.

-- How to use staff assistants and consultants.

-- How to handle ceremonial events.

-- How to decide when a meeting is necessary and who should attend (as opposed to how to run a meeting).

-- How to delegate in an oral environment.

Second, general responsibilities could be approached from the frame of reference of managerial work patterns. Planning, decision making, and coordinating, for example, might become courses on:

-- How to plan in the midst of chaos.

-- How to be proficiently superficial (Mintzberg, 1973).

-- How to negotiate for resources with nonhierarchical others.

The focus of many management training courses is on how to deal effectively with subordinates. Most of the techniques advocated require managers to spend substantially more time in contact with their subordinates. This is not only difficult for managers to do, but may not be effective anyway. Perhaps managers should be spending more time with nonsubordinates in an effort to buffer the subordinate group and smooth the workflow. Recall the results suggesting that more effective foremen spent more time with people outside the work group (Jasinski, 1956; Ponder, 1957). By definition, more time with subordinates means less time with others either inside or outside the organization. Some tough questions remain as to which is more important.

Finally, job rotation is a very common management development tool. Generally, the strategy involves exposing managers to a variety of functional areas such as finance, marketing, sales, production, etc. It may be just as important to expose trainees to managerial jobs varying in amount of brevity and fragmentation, the extent of oral contact, the variety of ceremonial and external roles, etc. A carefully designed rotational program could help managers prepare for complex general management jobs by learning, over time, how to cope with the various characteristics they will eventually face.

Appraising managerial performance. If simply describing the managerial job is difficult, measuring such an elusive entity is even tougher. The data from observational and diary studies suggest some reasons why accurate appraisal is so hard. For example, no one, including managers themselves, has a clear idea about the content of managerial work. The sheer variety of subjects and contacts, compounded by the pace and fragmentation, reduce the possibilities of objective assessment of processes or outcomes. The extremely limited time superiors spend with individual subordinates and the limited number of tours or inspections mean that superiors are in a poor position to even see, much less judge, subordinate performance.

Neither general processes (such as decision making) nor specific outcomes (such as increasing production by 10 percent) are adequate appraisal criteria. Processes are sometimes impossible to observe, embedded as they are in the fragmented world of managerial activities. Outcomes--the natural alternative if processes are "invisible"--assume that managers have unilateral control. Clearly, this is not the case, if only because so much oral information is held by others and so many managerial contacts and activities are initiated externally.

Information, the giving and receiving of which is a major managerial activity, appears to be a key criterion on which to assess managerial effectiveness. Unfortunately, little is known about measuring such an intangible entity.

Selection. One reason assessment centers are useful selection devices (MacKinnon, 1975) may be that they partially replicate managerial work characteristics. The exercises tend to be short, fragmented, and varied. Much of the activity is oral. The days are fast paced. Perhaps the assessment center method identifies people who can handle the managerial environment, and perhaps such an ability is the key to managerial success. If so, selection on the basis of past performance is reliable only when the past job was similar in activity demands to the target managerial job.

Further, individuals who fail in one managerial job might succeed in another with different activity demands. The long list of skills derived by Mintzberg (1973) from his observational studies might provide a useful starting point for selection and training of managers. These skills could be matched to Stewart's (1976) taxonomy of job types, yielding a potentially valuable matrix for selection and training.

Only a Beginning

Direct studies of the on-line behavior of managers represent a miniscule proportion of the research in leadership and management. Given their small number, the implications are surprisingly broad. Still, the results are more tantalizing than complete, more suggestive than prescriptive. Clearly, many important questions remain unanswered.

If managerial behavior is of interest, it is clear that questionnaires are not a good way to get at it. And behavior should be of interest. This is not to say we need more studies cataloging the minute-by-minute activities of managers. Rather, multiple method research designs are needed to reconcile how general management responsibilities (such as planning) play out within the chaotic activity patterns in a manager's daily life. For too long we have accepted the generalities--used them to design training, classify jobs, evaluate performance, build theories--without examining their meaning in a behavioral context. Perhaps this is why the vast research on leadership has yielded so little.

> The things of our minds have for us a greater toughness than external reality.
>
> (Steinbeck, 1962, p. 181)

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