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20. ABSTRACT (cont.)

Three dimensions are presented as useful in understanding managerial performance:

(1) Complexity/simplicity

Complexity--generating large numbers of problem dimensions, shifting gears as situations change, and forming novel viewpoints (which may be creative leaps);
Simplicity--having few dimensions which are not integrated; closure on problems is done quickly; rigid, almost yes/no, kind of problem solving.

(2) Use of structures

Setting up mechanisms for feedback, judgment, and stable/unstable conditions to get a fix on organizational problems.

(3) Use of power

Using social skills, rewards and punishments to control organizational events.

A way to study leaders is to simulate the variety of stimuli confronting them and observe how their activities relate to effectiveness in the use of these dimensions. A typology is suggested for doing this.

LOOKING AT LEADERSHIP: SOME NEGLECTED ISSUES

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Abstract

This paper reviews some of what is known about leadership, focusing on the data collected about the nature of managerial work. These findings point to the unrelenting pace and capricious, fragmented, and oral nature of the job.

If it is accepted that Mintzberg and others have described the managerial job accurately, what would contribute to effectiveness under such conditions?

Three dimensions are presented as useful in understanding managerial performance: complexity/simplicity, use of structures, and use of power.

A way to study leaders is to simulate the variety of stimuli confronting them and observe how their activities relate to effectiveness in the use of these dimensions. A typology is suggested for doing this.

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Michael M. Lombardo

Introduction

Recent leadership research, and its offshoot, leadership training, has traditionally focused on leader-group relationships (e.g., Fiedler, 1967; House, 1971). The implicit assumption is that group productivity, group satisfaction, group turnover--these are what leadership is all about.

But are they? Do leaders really have that much influence over their immediate group? Even if they do, is this the stuff of which organizational outcomes are forged?

The evidence is equivocal. Overwhelming external factors such as the economy, regulatory agencies, politics, competition, and labor unions can influence organizational outcomes more than organizational leadership (Lieberman & O'Connor, 1972; Pfeffer & Salancik, 1975; Salancik & Pfeffer, 1975). Within the organization, the usual clusters of leadership behavior which are studied--consideration and initiating structure for the group--bear little consistent relationship to leadership effectiveness, even at a group outcome level (e.g., Korman, 1966). Overall, the evidence of leadership effects is sketchy; the evidence of the magnitude of these effects, nonexistent (Hall, 1972).

In Stogdill's (1974) review and analysis of more than 3,000 books and articles on leadership, he concludes:

Four decades of research on leadership have produced a bewildering mass of findings. Numerous surveys of special problems have been published, but they seldom include all the studies available on a topic. It is difficult to know what, if anything, has been convincingly demonstrated by replicated research. The endless accumulation of empirical data has not produced an integrated understanding of leadership. (p. vii) (italics added)

The subordinate group focus of leadership research has also led to training programs which focus on human relations, attitudinal, internal sorts of changes. Attitudes such as "consideration" or employee-centeredness are taught, but there is little consistent evidence that such attitudes are related to performance (Campbell, Dunnette, Lawler, & Weick, 1970; Korman, 1966). Even if they are, the causal arrow could point either way. It makes as much sense to say that performance leads to considerate attitudes (actually self-report behavior) as that considerate attitudes lead to performance. Recent studies (Porter & Lawler, 1968; Schwab & Cummings, 1970; Sheridan & Slocum, 1975) indicate that under different conditions the arrow does point both ways.

This example points up the central dilemma in applying leadership research to leadership in organizations. It is fantasy to expect a simple, linear relationship between attitudes and performance (Fisher, 1959, said the relationship looked like "a twisted pear"); it is even more fanciful to expect that other internal and external criteria relate in some simple fashion--job attitudes and turnover, for example (Kraut, 1975).

The relatively few studies (e.g., Dubin, 1962; Mintzberg, 1973) which describe what leaders actually do also question the leader-group focus of leadership research. Leaders generally spend as much of their time with non-subordinates (peers, colleagues, etc.) as with subordinates. Indeed, at the highest levels of organizations, they often spend much of their time with outsiders.

The nature of the managerial job is a reactive one. Managers spend their days assimilating, sifting, and responding to fragmented, varied, and brief inputs. They suffer a constant overload of information of which they retain perhaps 1/100th. There is little time for the calm, rational decision making or the cozy group techniques recommended by researchers and trainers. Managers operate in an atmosphere which can best be described as frenetic; the unexpected is ordinary, ill-structured problems predominate, and subordinates are simply one of many critical factors contributing to or detracting from their effectiveness.

Atomistic, leader-group research has focused on apparent relationships and passed over the context of organizations--the intricate, fuzzy demands of the economy, peers, government, and the organization itself.

Leaders and their groups are embedded in complex, often contradictory, organizational systems, and to examine them

outside of this context ignores the richness of reality. Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964) present this argument at length. How subordinates feel about themselves and their leader is influenced by the context of the tasks they are performing and by the varied demands of the organization.

Leader-group-system relationships are not easy to tackle. Systems are both rational and irrational, subjective and objective, random and purposive, cognitive and affective. If leaders face an infinite variety of ill-structured situations, catching this phenomenon and studying it is difficult.

One mechanism for studying organizations and their leaders is the organizational simulation. Simulations offer several advantages. They order the events of the real world into a vehicle which allows for systematic study. They allow control over the important variables to be studied. Inputs can be varied, time compressed, and the pace quickened or slowed to simulate the conditions managers face. Simulation paradigms allow detailed examination of the complex forces impacting on organizations from without and within. In short, simulation can bring the richness and complexity of ongoing organizations into the laboratory for systematic study.

This paper is an attempt to provide some conceptual underpinnings for understanding the complexity of the leadership role. First, what do we know about leadership in organizations? What have decades of research revealed? Second, what are some other ways of looking at leadership? What other variables might tell us something about leadership effectiveness? Third, what hypotheses should be included for study in an organizational simulation? Other papers in this series will explore the organizational/environmental context leaders work in and the use of simulations to study leadership in organizations.

What Do We Know About Leadership?

What kind of variable is leadership? Sometimes independent, when leaders act upon the organization or environment; sometimes dependent, when adapting to the organization or subordinates or peers or the environment; sometimes a moderator, when modifying the impacts of other variables.

Given this horrendous complexity, it is no surprise that Vaill (in press) has questioned whether it makes much sense to talk of cause and effect in leadership.

The measures of effectiveness are so fragmented that to speak of effectiveness can connote many possible interpretations. Effectiveness has been defined as group productivity, climate, absenteeism, or turnover. It has been defined individually as receiving promotion, solving laboratory tasks or puzzles, or perceived effectiveness. At the organizational level (rarely measured), effectiveness usually involves some number of dollars or completed projects as a criterion.

Any discussion of effectiveness is, therefore, limited to whatever the researcher has defined it to be.

After decades of research, what is known about leadership? Actually, a fair amount, but not enough for a complete picture to emerge.

1. Consideration and initiating structure bear no simple relationship to leadership effectiveness (Kerr & Schriesheim, 1974; Korman, 1966).

2. Leadership is related to many behaviors, but only in specific situations (Campbell, Dunnette, Lawler, & Weick, 1970; Gibb, 1969).

3. Typical findings from the leadership research comprise laundry lists of traits, personality and behavioral variables. The findings also contain distinctions between leaders and nonleaders and between effective leaders and less effective leaders. A sampling (from Stogdill, 1974) of conclusions about leaders:

- Strong drive for responsibility and task completion
- Persistence in pursuit of goals
- Originality in problem solving
- Drive to exercise initiative in social situations
- Self-confidence and sense of personal identity
- Willingness to accept consequences of decision and action
- Readiness to absorb interpersonal stress
- Willingness to tolerate frustration and delay
- Ability to influence other persons' behaviors
- Capacity to structure social interaction systems to the purpose at hand

- Exceed followers in factual knowledge about persons and events
- Display behaviors which are valued
- Valued because spontaneity is contagious and stimulates spontaneity in others
- Widens the field of participation for others
- Protects the weak and underchosen
- Encourages participation of less capable members of work group
- Tolerant of the deviate
- Accepts rather than rejects a wide range of member personalities
- Psychologically distant
- Effective leaders identify with superiors and the organization; less effective identify with subordinates
- Structuring expectations is critical
- Top managers don't experience as much role ambiguity
- Followers value leaders with influence with superiors

In one study, the author even mentioned that leaders drink a lot of coffee. What does that indicate? Reaction to stress? High energy level? Dislike of tea?

The hodgepodge of findings simply proves again that leadership is, well, complex.

4. Some of the most intriguing findings in the literature deal with what managers/leaders do all day.

McCall (1977) organizes these findings into three categories:

The Pace of Managerial Work. Studies of higher level managers confirm the unrelenting pace and capricious nature of managerial work. One study of a Swedish top executive found that he was undisturbed for 23 minutes or more only 12 times in 35 days (Carlson, 1951). Mintzberg (1973), in a study of five top executives, found that half of their activities lasted nine minutes or less, and only one-tenth lasted more than one hour.

Managers have little control over their activities. Mintzberg (1975) found that the managers in his study initiated only 32 percent of their contacts and that 93 percent of the contacts were arranged on an "ad hoc" basis.

Because managers participate in so many activities, their job never ends. They are often guessing, reacting, never sure of success, and never able to say there is nothing else to be done. Their heavy work load mandates that they be proficient at superficiality (Mintzberg, 1973). They have neither the time nor the specialized knowledge to engage in in-depth activities. Their work is characterized by brevity, variety, and fragmentation.

Time with the Work Group. Mintzberg's (1973) executives spent an average of only 48 percent of their contact time with subordinates, even though the subordinate groups contained most of their respective organizational memberships. This and other studies indicate that managers spend between 40 and 66 percent of their time with nonsubordinates-- a group including superiors, peers, professional colleagues, members of other departments and units, and outsiders.

Most of their time is actually spent in meetings discussing strategy, negotiating, and performing ceremonial functions (Mintzberg, 1973). Although time spent with the work group is critical, it is only one of the criticalities in the often harried manager's existence.

Managers and Media. Managerial work is primarily oral. They spent 60 to 80 percent of their time in conversation (Dubin, 1962). Brewer and Tomlinson (1963-64), Burns (1954), Dubin and Spray (1964), and Mintzberg (1973) cite evidence emphasizing the high percentage of managerial time spent talking. Much of this talk is directed at exchanging information (Horne & Lupton, 1965; Mintzberg, 1973), and very little of it is spent giving orders or issuing instructions (Horne & Lupton, 1965).

Managers are not reflective planners. Their decisions are usually based on orally-acquired information and intuition. They value current, specific, well-defined, and non-routine activities. They place less value in long memos, mail, and routine reports. Much of managerial power derives from the amount of information which is the manager's alone. This data base is primarily acquired orally and, lacking the means to disseminate all of it to others, managers are often unable to delegate decision-making responsibility. Because of this, most of their decisions are based on rational faith rather than rational judgment (e.g., Cyert & March, 1963; Katz & Kahn, 1966; March & Simon, 1958; Pettigrew, 1973).

To check the accuracy of the various studies on managerial work, the investigators on this project conducted

a series of interviews with middle-level managers and corporation presidents and vice-presidents. Their activities were clustered into 12 tentative categories (see Table 1, page 8).

Our interviews confirmed much of what has appeared in this review. The activity clusters derived are similar to those of Mintzberg (1973). As the research progresses, these activity clusters will be modified. At present, they represent a working model.

We know enough about leadership to conclude the following:

- Leadership is a complex set of behaviors.
- The nature of managerial work is frenetic and capricious.
- Leadership involves making decisions with less-than-complete information, etc.
- The "situation" leaders work in extends far beyond the work group to organizational and environmental demands. To further foul up our analysis, this "situation" is constantly changing.

Looking at Leadership

In looking at leadership, a reasonable place to jump off from is the descriptions of what leaders do all day. The question to be considered here is, "If Mintzberg and others have described the managerial job accurately, what would contribute to effectiveness under such conditions?" This paper will suggest three possible components of effectiveness--complexity, use of structure, and use of power--along with one caution about leadership effectiveness.

Leadership and Complexity

Weick (in press) has commented that a leader must be as complex as the system he or she is up against. A leader must have the "requisite variety" to cope with the complexity of organizations. If this is so, what is this ability to cope with ambiguous, ill-structured situations?

Complexity usually goes under the names of conceptual complexity or cognitive complexity. It is characterized by "flexible and open cognitive systems; the use of many

Table 1

What Managers Do

<u>Activity</u>	<u>Definition</u>	<u>Examples</u>
1. Symbolic	Activities in which the manager represents symbolically or ceremonially the unit or organization	Going to anniversary dinners, attending retirement parties, making speeches, joining civic organizations
2. Staff development and education	Deciding on and arranging for educational and developmental activities for oneself, one's staff, or the organization; also performing mentor roles	Requesting OD help; picking university courses; detecting lack of financial education in the organization; meeting with consultants or taking personal time to help staff
3. Monitor	Gathering information on the progress of work; looking for deviations	Visiting production sites; reviewing engineering strategies, subordinate performance, financial and production statements
4. Disseminator	Informing others of unit or organizational activities; basic information sharing	Budget reports; informing other divisions of activities; distributing statistical summaries on departmental issues; explaining sensitive issues to those concerned
5. Entrepreneur	Find or create opportunities to improve work activities	Examine requests for new products, proposals to diversify product lines, new advertising campaigns; prepare competitive bids; invest in land or other corporations; take greater advantage of tax credits

- | | | | |
|-----|------------------------|---|---|
| 6. | Resource Allocation | Using available resources (human, technical, mechanical, physical, financial) for work accomplishment | Project planning; arranging loans; interview job candidates; staffing arrangements after transfers or promotions; sub-contracting |
| 7. | Hip Shots | Taking immediate action in response to a serious problem | Cost over-runs; change in sales or production forecast; pollution or affirmative action problems; emergencies (strikes, fires, etc.) |
| 8. | Persuasion | Using influence to gain some control over forces which are not directly controllable | Choosing Board nominees; testifying at trade associations; selling new products internally; negotiating contracts; requesting major expenditures; negotiating with government officials; finding adequate housing for employees; getting community improvements |
| 9. | Structuring and Design | Changing organizational structure to improve work processes | Reorganize divisions; set up depreciation or budgeting procedures; set up reporting relationships, staff meetings, etc. |
| 10. | Routine Administration | Taking care of formal requirements | Reviewing applications; in-basket materials; MBO reviews; coordinate paperwork; estimate cost and issue purchase orders on routine matters |
| 11. | Network Construction | Joining or participating in activities to create potentially useful contacts | Serving on external boards and in community groups |
| 12. | Nuisances | Time-consuming events not directly related to organizational goals | Customer complaints; phones out of order; interruptions |

dimensions in an integrated, combinatorial fashion; a search for novelty and further information; and the ability to consider multiple points of view simultaneously" (Suedfeld & Rank, 1976).

Harvey (1966), Schroder (1971), and Suedfeld (1968) argue that complexity is not a personality trait. Rather, it seems to be a flexible, situation-specific response style (Suedfeld & Rank, 1976). In Schroder, Driver, and Streufert's (1967) terms, it is the ability to generate large numbers of dimensions, discriminate among these dimensions, and integrate these dimensions into novel and flexible configurations.

Cognitive simplicity, on the other hand, is characterized by concrete responses--overgeneralization; hierarchical; absolute; little conflict or diversity; no viewing of situations from another point of view; and fast closure (Schroder, Driver, & Streufert, 1967).

As complexity is not a trait, most people are simple about some things ("I like movies") and complex about others ("I approve and disapprove of wars"). Cognitive simplicity/complexity is also content-free, totally unbiased toward any belief. "I love violence" and "I abhor violence" or "Everyone should be free" and "Everyone should submit to authority" are equally simple. Political conservatives and third-world guerrillas can be equally complex (or simple). The construct is a structural one.

Although we know what complexity is conceptually, empirically we know little. The relationships among the various complexity measures are shaky (Seaman & Koenig, 1974; Suedfeld, Tomkins, & Tucker, 1969; Vannoy, 1965). Like many other aspects of human behavior, complexity is easy to muse about and hard to measure.

In his excellent book, The Psychology of Consciousness (1972), Ornstein likens our guesses about the human brain to three blind men examining an elephant. One says it is long and tubular; one, rough and scaly; one, thin and flappy. Ornstein also cites an EEG expert who says that measuring what goes on in the brain is like putting a stethoscope to the hood of a car. We can tell if it's on and maybe how much.

When we've put our stethoscope to work on complexity, what sort of tubes and scales and flaps have we found?

Complexity has been related in some fashion to intelligence (Schroder, Driver, & Streufert, 1967), to field

independence (Wardell & Royce, 1975), and to creativity¹ (Hare & Gaier, 1971; Schroder, Driver, & Streufert, 1967; similar descriptions in MacKinnon, 1975, and Arieti, 1976). Complexity is also conceptually similar to internal-external locus of control as defined by Rotter (1966).

Although not identical, many of the same processes are evident in these constructs--the abilities to analyze, break set, eliminate distractions, experiment with different categories, generate categories internally, etc.

Complexity is also not solely cognitive in the sense of making linear judgments. It apparently involves both halves of the brain (as does creativity), the linear, verbal, logical left side and the holistic, spatial, non-verbal right side (Ornstein, 1972; Mintzberg, 1976).

The importance of these research findings is that they confirm that complexity is vital to both creativity and effective information processing. The process by which thoughts take place is not understood, and is certainly not amenable to rational dissection. Again, our attempts to ascertain what creative thoughts (or rational thoughts) are can be likened to the blind men circling the elephant.

Looking at complexity as a construct which has aspects similar to creativity suggests some other ways of looking at leadership.

The importance of humor (Arieti, 1976; Freud, 1916; Koestler, 1964) in creativity is well-documented, and the characteristics of humor have much in common with what we know about complexity. Humor involves seeing problems and incongruities where others don't; simultaneous categorization, unique associations, breaking set. McCall (1977) has used the analogy of humor in recognizing organizational incongruities.

Other aspects of creativity, such as Janusian thinking² (Rothenberg, 1971) and tolerance of stress, have meaning in a leadership context. Janusian thinking has been

¹Field independence and creativity are also positively related (Bottenberg, Finster, & Wehner, 1974). Gruenfeld (1970) found field independence to be positively related to judging both creativity and competence.

²Ability to conceive and utilize two or more opposite or contradictory ideas, concepts, or images simultaneously.

correlated with creativity in a group of successful executives (Rothenberg, 1973) and there is some evidence as well as common sense behind the claim that top managers handle stress well (Kiev, 1974).

One cannot look at studies of leadership effectiveness without seeing obvious similarities with studies of creative persons. Risk-taking, complexity, internal control, the ability to deal with opposites and contradictions--all these to some extent describe both the creative person and the effective leader.

Schroder, Driver, and Streufert's (1967) description of the complex individual and Mintzberg's (1973) list of managerial skills contain elements from both the literature of creativity and the literature of leadership.

MacKinnon (1975) mentions two blocks to creativity: fear of making mistakes and social disapproval (high exposure jobs--those where leaders routinely run the risk of making major mistakes--would be particularly vulnerable to these blocks (Stewart, 1976)).

This brings us to the essential oppositeness of creative leadership. Jobs which require the most creativity are the most exposed and most likely to have pressures for being rational and cautious. As stress and playfulness are keys to creative endeavor, the creative leader is an opposite--a playful logician, a risk-taking stop sign.

This ability to use opposites and contradictions--often called creative leaps--may be an important component of leadership effectiveness.

Complexity and stress. It is often said that leaders like to take risks and there is some evidence that they do (Kiev, 1974). In some respects, saying that leaders are risk-takers is a so-what-else-is-new declaration. People hopefully don't rise to the top by doing nothing or by playing it safe. But if this is so, leaders must either like certain types of stress or deal with it well since stress is their daily diet. By stress we mean the person's assessment of his or her capability to handle a situation and the importance of handling the situation. The first part involves capacity; the second involves need. If a person feels capable of handling a situation, yet considers the consequences irrelevant (doesn't want the reward or doesn't see failure as a severe blow), little stress is perceived. However, if the chance of success is low and the importance of that success is high, severe stress can be perceived.

The type of stress which is appealing to leaders seems to be moderate stress, where leaders can take calculated risks. This is where performance is highest and interest is usually greatest (Anderson, 1976; Schroder, Driver, & Streufert, 1967).

There is disagreement on what risk-taking is. Some researchers consider it a situation-specific response. Kogan and Wallach (1967) and Slovic (1972) say that the best predictor of risk-taking behavior is having taken risks in similar situations. By this argument, one who is willing to take risks on the job may be a cautious driver or vice versa.

Other evidence (Knowles, Cutter, Walsh, & Casey, 1973) indicates that risk-taking may be a general motivational trait--a tendency to approach rather than avoid risk situations. Regardless of what kind of attribute risk-taking is, who would prosper in risky, stressful, ambiguous situations? The complex. Schroder, Driver, and Streufert (1967) demonstrate this with a variety of findings:

- Under stress, information processing becomes less complex (see also Drabek & Haas, 1969). Once maximal complexity is reached, perceptual systems first cut down on intake through filtering and omission, then on output. The quality of decisions goes down; the quantity usually increases.
- Complex individuals can deal with more stress (information load, diversity, information change; severity of consequences), make more complex decisions, and last longer before their perceptual systems go into decline.³ In high stress situations, they remain capable of producing high quality decisions. High quality refers to generating new dimensions internally rather than accepting dimensions as given, using many sources of information over time, and integrating these dimensions into new configurations. The complex are better at seeing problems where others don't and arriving at solutions which others don't see (see also Mitchell, Smyser, & Weed, 1975; Anderson, Hellriegel, & Slocum, 1977).

³So-called stimulus addicts (Ogilvie, 1974) and people with high auditory thresholds (Sales, Guydosh, & Iacono, 1974) also enjoy complex and often stressful situations.

- Internally-controlled managers perceive less stress in situations and act more effectively in coping with stressful situations than do the externally-controlled (Mitchell, Smyser, & Weed, 1975; Anderson, Hellriegel, & Slocum, 1977).
- Interpersonally, they also differ. Cognitively simple individuals tend toward aggression and power plays in complex situations. The complex, because they are flexible in their adoption of others' perspectives, have better interpersonal relations under conditions of disagreement (Schroder, Driver, & Streufert, 1967).

An interesting footnote to this argument comes from the LPC research. As stress increases, both high and low LPCs go with their predominant behaviors (Larson & Rowland, 1973; Mitchell, 1970). In stressful situations high LPCs (more complex according to some studies) attend more to interpersonal relations and handle them more effectively.

The relationship of stress and complexity is not linear, however (Schroder, Driver, & Streufert, 1967). It is an inverted U. Complex individuals perform best under conditions of optimal stress (moderate). At high and low levels they don't do as well as simple individuals. This makes good common sense. As Mitchell (1972, p. 41) commented, "In settings that are relatively simple or extremely stressful, the ability to make fine differentiations might lead to irrelevant behavior on the part of the leader."

Stress, after all, is frustrating. When frustrated, we can: (1) use goal-directed behavior (define problem; specify job goals; set up structures for realizing goals, resource allocation); (2) fight (aggression, regression, fixation) (Behling & Schriesheim, 1976; Locke, 1975; Mintzberg, 1973; Wilkens & Haynes, 1974); (3) fail and withdraw. (For similar typologies see Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Anderson, Hellriegel, & Slocum, 1977.) The complex gravitate toward alternative (1), the simple toward alternatives (2) and (3).

Complexity and effectiveness. Complex leaders are indeed more effective under certain conditions. A summary of the major findings follows:

1. Suedfeld and Rank (1976) found that successful revolutionary leaders were those who were able to shift gears from the single-minded dedication needed to foment revolution to the subtle complexities of negotiation and tightrope-walking once power has been attained. Examples

of leaders who successfully made the transition-- Jefferson, Lenin, Washington; failures--Trotsky, Hamilton, Guevara.

2. Mitchell (1972) found that complex leaders have higher performance on lab tasks than simple leaders. Simple leaders think they have more influence and control, the opposite of the way their subordinates see them. However, simple and complex leaders don't differ in their behaviors; this is more a function of the task (Hackman, 1966). What differentiates them is that the complex vary their behavior more. It is not what the leader does (being considerate), rather his or her ability to change set.

3. Psychologically distant leaders may do better because they individuate.⁴ A leader who individuates is able to differentiate sharply between more and less competent subordinates and between self and others. Those who fail to individuate (make a lot of group decisions, diffuse responsibility widely) suffer a loss in group productivity (Fiedler, 1964). Although research involving Fiedler's LPC is contradictory,⁵ Mitchell (1970) found that high LPCs were more complex and differentiated more sharply between task and interpersonal dimensions. Overall, high LPCs make more discriminations between aspects of task situations while low LPCs pay more attention to interpersonal situations. This ties in with the often repeated observation that managers are task-oriented,⁶ primarily concerned with goals, production, and competence; concern for feelings is a minor emphasis (Campbell, Dunnette, Lawler, & Weick, 1970). Effective managers apparently make sharp distinctions between task and interpersonal characteristics of a

⁴There is a positive correlation between individuation and morale; between individuation and productivity (Ziller, 1964). Field independent managers have high variability in their ratings of others (Gruenfeld & Arbuthnot, 1969).

⁵Hill (1969) and Mitchell (1970) relate the LPC to complexity. Larson and Rowland (1974) found the LPC unrelated to complexity in the area of interpersonal relations; Evans and Dermen (1974) found that the low LPC was cognitively simple but that the high LPC was not necessarily complex.

⁶Task-orientation means objectivity, persistence, confidence, tolerance of deviant opinions and conflict (Bass, 1969).

situation. In other words, they don't make group decisions just to make their subordinates happy. They make group decisions because they feel, in that instance, that a group decision would be more effective.

4. Suggested by the author's interpretation of Kerr (1975)--Those who reward more productive behaviors will be more complex because they are better able to spot organizational incongruities. Those who are more simple will reward A when hoping for B (MBO often rewards attainable goals while hoping for risky, creative ones).

5. Schroder, Driver, and Streufert (1967) found dramatic differences between cognitively simple and complex individuals. They found that the following characteristics differentiate complex from simple individuals. Complex individuals:

- a. give more information in decisions (see also Nydegger, 1975)
- b. qualify their decisions with remarks indicating doubt
- c. use more dimensions
- d. track information not immediately available
- e. spend more time processing information
- f. increase search and processing as uncertainty increases
- g. perform better in public
- h. use more complex decision-making strategies
- i. have less overgeneralized strategies
- j. use less retaliation under stress
- k. don't differ from simple if both environment and criterion are simple
- l. persist in face of failure
- m. are more open to attitude change
- n. use instrumental (rational) aggression; concrete are usually irrational and retaliatory if they are proviolence; totally nonaggressive if they are nonviolent (inflexible)

- o. formulate long-term strategies
- p. show more understanding of the other side.

In summary, complex individuals are more effective in many leadership situations because they are more versatile. They shift gears better, are more flexible, and individuate more sharply than concrete individuals.

Use of Structures

Question: "What do you enjoy most?"

Manager: "I love messes. I've been sent to be plant manager at failing plants, been a chief engineer who couldn't read a blueprint. Wherever there's a mess, that's where I hope _____ sends me."

Question: "You were chief engineer and couldn't read a blueprint?"

Manager: "That doesn't matter. The key to solving problems is setting things up right."

Setting things up right involves the use of structures. No leader can attend to everything, and even if he or she could, there are too many unknowns for this to be an effective strategy.

Dealing with the complicated problems of organizations requires relying on others in a systematic fashion. The question becomes one of dealing with the unknown, the fragmented and the capricious, through the use of structures.

Although structuring in the sense of initiating structure has been studied intensely, the focus has been narrow-- the work group and its goals. Structuring involves far more than this. Three examples where using structures is critical follow.

Leadership and stability/instability. Leaders exist in organizations and environments which are part stable, part unstable; part simple, part complex; and which are subject to change without notice.

Effective behavior clearly involves telling which is which and acting accordingly. Stability and instability of organizations and their environments will be discussed

at length in Organization Structure and Environment: Implications for Managerial Work by Morgan McCall. For the purposes of this paper, suffice it to say that different behaviors are called for in stable as opposed to unstable situations. For example, in a stable environment, more effective managers control and use their time constructively. In unstable environments, more effective managers flexibly accept problems and do less scheduling (Porter & Van Maanen, 1969).

Schroder, Driver, and Streufert (1967) present four levels of information processing structure. These provide a model for effective response. Level 1 strategies call for categorical thinking in responding to simple situations, while Level 4 calls for using many alternative processes which are flexible and unique.

Leaders and judgment. Human beings have very limited information processing systems (March & Simon, 1958; Slovic, 1972). Slovic noted certain characteristics of human judgment:

- a. Feeding more information increases confidence but not accuracy.
- b. We overestimate importance of minor cues.
- c. We underestimate importance of major cues.
- d. We are conservative processors--the shifts we note are smaller than they really are. We have trouble integrating diverse information.

Many important decisions are made by nonrational, intuitive processes (see Abelson, 1976; Ajzen, 1977; Slovic, Fischhoff, & Lichtenstein, 1977; Tversky & Kahneman, 1974). Decisions are often made incrementally, without a final purpose in mind. Mintzberg (Mintzberg, Raisinghani, & Theoret, 1976) found that managers handle ill-structured problems by subdividing them into manageable bites. The decisions he studied took up to 25 years in some cases and were characterized by novelty, complexity, and open-endedness. Most of the effort was expended in searching for solutions; evaluation of proposed solutions was relatively unimportant and only one custom-made solution was detailed in each case. Although much time was spent in gathering information, detailed development of solutions so they could be compared was too time consuming and expensive.

Lord (1976) found that (1) on highly structured problems, defining the problem as a group endeavor was unnecessary because people can usually work on tasks alone. An example of this might be the production of an annual

report. Assignments are made, data collected, and work proceeds relatively independently until the final stages when the various sections must be integrated; (2) with problems which are less clear, when there are several solutions and several paths to them, defining the problem is critical (see also Ball-Rokeach, 1973), i.e., if there are several well-qualified candidates for a job, defining the problem (determining the criteria for job selection) is necessary; (3) on unstructured problems, the kinds leaders deal most often with (McCall & Lombardo, in press), defining the problem doesn't particularly help because of the infinite number of possibilities. Solving ill-structured problems seems to be a process of generating a variety of solutions, then selecting (often through intuition) one detailed solution which is implemented through a succession of sub-decisions. A case in point might be McDonnell-Douglas's desire to compete favorably with Boeing resulting in its entry into the airbus race with the DC-10.

The problem gets defined and redefined continuously down the line. As Cohen, March, and Olsen (1972) and Cohen and March (1974) also note, decisions don't proceed from problem definition to solution in any rational sequence--sometimes solutions float around looking for problems.

At best, in Mintzberg's terms, "The designers may begin with a vague image of some ideal solution... they grope along, building their solution brick by brick without really knowing what it will look like until it is completed." (Mintzberg, Raisinghani, & Theoret, 1976, p. 256)

For leaders, groping and coping with ill-structured problems is a critical ability--what Weick (in press) has called requisite variety and what is referred to here as complexity. In Mintzberg's (1973) observational study, four of his ten managerial roles reflect this ability.

Leaders and feedback. Human learning depends on feedback on the results of one's behavior. Given the fragmented, oral nature of managerial work, leaders often get vague and miscellaneous feedback. Because they are generalists, superficially involved with many different projects, intimately involved with only a few, it is difficult for them to give feedback as well. Both giving and receiving feedback, however, is critical to their effectiveness.

Unfortunately, little research has been done on this critical process in organizations.

Mintzberg (1973) describes three informational roles of the manager; McCall (1975) describes the sources and

types of information important to different functions and levels of the organization; and McCall (1976) provides a conceptual model of the feedback process in organizations.

Building a network of contacts, extracting important information and passing it on, designing tasks to provide useful feedback, and simply exchanging information are how managers spend the majority of their time (Mintzberg, 1973).

Setting up feedback systems, judgment systems, and systems for dealing with stability and instability may be a major factor in leadership effectiveness. Such structures are the leader's method of chopping up reality and capturing vague intuitions and bits of information to see which actions need to be taken.

Leadership and Power

Power is another important, but little studied, variable in the leadership literature. Mintzberg (1973) details it in his interpersonal roles. Stewart (1976) speaks of internal trading and negotiating as key behaviors in her interview studies. The manner in which coalitions are formed (Lundberg, in press; Salancik & Pfeffer, 1977) is another important activity.

The basis of power seems to be the ability to take or not to take actions that are desired by others (Salancik & Pfeffer, 1977).

Conditions leading to the observation of power.

- I. Scarcity of a resource
- II. Ambiguity
 - A. Clarity of standards
 - B. Knowledge of cause and effects
- III. Alternatives
 - A. Availability
 - B. Willingness to use

These conditions⁷ plus some comments by Porter (1976) and Jacobs (1974) suggest that we might observe the operation of power in the following situations:

- a. reorganization due either to the development of a new product or acquisition of a company;
- b. reorganization necessitated by poor profits (dropping a product line, function, or company);
- c. personnel decisions relating to transfer.

Based on the discussions of French and Raven (1959), Pettigrew (1973), and Salancik and Pfeffer (1977)⁸ power is increased by:

- a. controlling critical resources--important events flow through you;
- b. structuring organizations to institutionalize a person or a function through the control of information, rewards, and punishment, etc.;
- c. ability to write and rewrite the history of the organization;
- d. having unique knowledge, particularly that which reaches higher-ups;
- e. position and status;
- f. having been successful in the past (track record); and
- g. having group support and/or support of those in authority.

At a more specific level, several articles (Falbo & Gryskiewicz, 1976; Martin & Sims, 1956; Michener & Suchner, 1972; Strauss, 1962) discuss the types of behaviors which enhance power.

⁷No clear-cut standards, restricted alternatives, and scarce resources (see Hinings, Hickson, Pennings, & Schneck, 1974; Jacobs, 1974; Pfeffer, Salancik, & Leblebici, 1976; Tushman, 1976).

⁸See also Hinings, Hickson, Pennings, & Schneck, 1974; Jacobs, 1974.

Power, at least for subunits of organizations, is increased by:

- a. ability to cope with an uncertain or problem area;
- b. possession of unique or special skills in the subunit; and
- c. responsibility for work or area on which others depend.

If an organizational subunit's power depends on its ability to deal with an area on which other units depend, one can determine the locations of power. Greatest power should accrue to those subunits which can handle problems in an unstable environment or which handle integral, linking-pin functions.

Political activity in the sense of getting things done through people is an important part of the leader's job. It may be in this arena that many of the social aspects (persuasion, use of language) of leadership are most evident.

A Caution: Leadership as a Dependent Variable

What affects leaders? Given the reactive nature of their jobs, assuming that they have unilateral control over what they do (as many studies have) is erroneous. Their job is actually characterized by a lack of control (Gamson & Scotch, 1964; Kelley, 1971; Lieberman & O'Connor, 1972; McCall & Lombardo, in press; Mintzberg, 1973; Schopler & Layton, 1972).

A series of studies has shown their behavior to also be a consequence of subordinate behaviors (Crowe, Bochner, & Clark, 1972; Farris & Lim, 1969; Lowin & Craig, 1968) and situational conditions (Hill & Hughes, 1974). Pfeffer and Salancik (1975) show that the leader's superior has great influence on task behaviors while subordinates strongly influence social behaviors.

Leaders are obviously influenced by many forces. How are they perceived? What underlies a person being seen as a leader?

Leaders are not seen as having one style of behaving (Hill, 1973) and leaders see their behavior in more participative terms than do their subordinates (Jago &

Vroom, 1976). Many perceptions about leaders may have little to do with their performance. Pfeffer (in press) explains much of our thinking about leadership as attribution--the tendency of human beings to attribute outcomes to persons rather than shadowy, environmental forces outside their control. Leadership perceptions may be more related to position or use of language or social power (see Lord, 1977) than to functional behavior.

Eden and Leviatan (1975) found that they could replicate the factor structure found in the Ohio State studies even under absurd conditions. Students were asked to describe managers in a fictitious plant using a well-known survey. The students, even those with no experience in organizations, came up with the same factors-- basically, consideration and initiating structure. This raises some difficult questions concerning the qualities attributed to leaders. Are they any more than cultural values--concern for goals and for the people who carry out those goals?

Weick (in press) has argued that we punctuate events to define the truth in retrospect. Staw (1975) found that knowledge of performance may cause attribution of one set of characteristics to a high performing group and a different set to low performing group. Mitchell, Larson, and Green (1977) came to a similar conclusion--that perceptions of performance result in higher ratings of situational characteristics (task structure, group atmosphere, position power) and may also lead to higher ratings on leader behavior.

Attribution of characteristics confounds our interpretations of leadership effectiveness. Care must be taken in deciding whether leader behaviors and/or situational characteristics lead to performance or whether causation may actually be reversed (or simply inferred).

Simulating the Managerial Job

The question which prompted this review was, "If we assume that Mintzberg and others have described the managerial job accurately, what would contribute to effectiveness under such conditions?" The points which have been surfaced in this review, then, were made in accordance with what is known about the nature of managerial work (hectic, stressful, fragmented, oral, etc.).

In summary, a way to study leaders is to simulate the variety of stimuli confronting them and observe how their

activities relate to effectiveness in the use of certain dimensions.

Rather than take a leader-group focus, this review presents a structural argument. The nature of leadership in organizations is such that it is important to look at the processes by which the work gets done.

We have defined leadership activities in terms of the 12 clusters presented on pages 8 and 9. In the simulation, we will be examining how these clusters relate to effectiveness in the use of the three dimensions surfaced in this review:

1. Complexity/Simplicity. Complexity--generating large numbers of problem dimensions, shifting gears as situations change, and forming novel viewpoints (which may be creative leaps). Simplicity--having few dimensions which are not integrated; closure on problems is done quickly; rigid, almost yes/no method of problem solving.
2. Use of Structures. Setting up mechanisms for feedback, judgment, and stable/unstable conditions to get a fix on organizational problems.
3. Use of Power. Using social skills, rewards and punishments to control organizational events.

For example, we may hypothesize that handling nuisances may call for simplicity, network building for complexity, and resource allocation for the use of structures.

It is suggested, then, that the nature of the job requires leaders to apply complexity/simplicity (certain types of mental functioning), set up structures (a certain kind of technical skill), and use power to get things done (a social skill).

As one observer put it, "Executives just sort of dash around." Capturing their dashing through an organizational simulation and subjecting their actions to analysis may tell us something about leadership effectiveness in complex organizations.

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