

## Alfred Korzybski Memorial Lecture

### FOUNDATIONS FOR STRENGTHENING LEADERSHIP\*

by

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This evening has been set aside to advance the study and understanding of general semantics and to reflect upon and remember the contributions of Alfred Korzybski. We feel that Korzybski might have derived a measure of satisfaction from the many and varied applications of his formulations which have emerged over the last half century. We are honored to present this year's Korzybski Memorial Lecture and to acknowledge the impact which his work has had on our own endeavors.

Through his analysis of language structures, Korzybski showed us that things in the world around and within us are not necessarily as we say they are because they 'are' that way, but they appear as they do because of the way we think about them. Social activities involving leadership, power and authority are also based on 'conceptual structures' (formulations) that many times are deeply-embedded, silent and invisible. When such formulations are at variance with biological necessities, human affairs are conducted in unsound and unhealthy ways; when congruent, human activities can be carried out in a sound, productive, creative, satisfying and healthy manner. This generalization appears true for activities related to marriage, child rearing, business, finance, education, industry, medicine, military activities, etc.

Our goal is to present a general-semantics-based foundation for developing a sound theory of face-to-face leadership. Whenever two or more people are engaged in an activity, leadership involves determining a course of action while achieving coordination. The importance of leadership in our daily lives is difficult to over-estimate. Its influence is reflected in such words as "god," "king," "tribal chief," "president," "father," "boss," "high priest," "ayatollah," "parent," "general," and "teacher." The term "leadership," even though characterized as a high order abstraction, points to something of apparent significance to

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people over many centuries.

Leadership itself is too important a human process to be left unexamined or to be rejected as inadequate simply because of the unsystematic treatments of it that prevail in everyday circumstances.

The important question here is not "What 'is' leadership?" Asked in this manner, the query is premised on the 'is' of identity. A recent conversation we experienced is representative of the difficulty in trying to identify 'it'.

"What is the mission of your institution?" we asked an instructor at one of our military teaching centers; it might have been Annapolis or West Point.

"In the final analysis," he responded, "to train young people to lead."

"But," we continued, "what does it mean to teach people to lead?"

"It means leaders lead through the exercise of command," he observed.

"Can you explain that?" we asked.

"That's all there is to it," he replied. "You can't take it any further than that. Leaders exercise command by leading."

This circular conversation portrays the conviction that "Leadership is a mystical, indescribable thing." We know better. Our goal is not to define what leadership 'is', but to develop a meaningful set of operational definitions, based on the ways of talking about leadership, which can be used to produce a "map" that serves as a valid representation of what happens in actual relationships between people who are engaged in a shared activity.

A leader, whether in business, industry, government, academia, etc., achieves results with and through others, and processes of leadership are involved in doing so. Whether it is called management, supervision, or administration, the underlying processes establish direction and permit coordination in accomplishing results. Experiencing these processes in everyday settings may generate a range of 'emotional' responses (semantic reactions): enthusiasm, apathy, anger, commitment, complacency, indifference, involvement, and so on. These different semantic reactions, which include so-called 'emotional' and 'intellectual' aspects, tell us that leadership is exercised in many different ways. Leadership behavior may be characterized as persuasive, punitive, strong, 'inspirational', 'charismatic', or comforting,

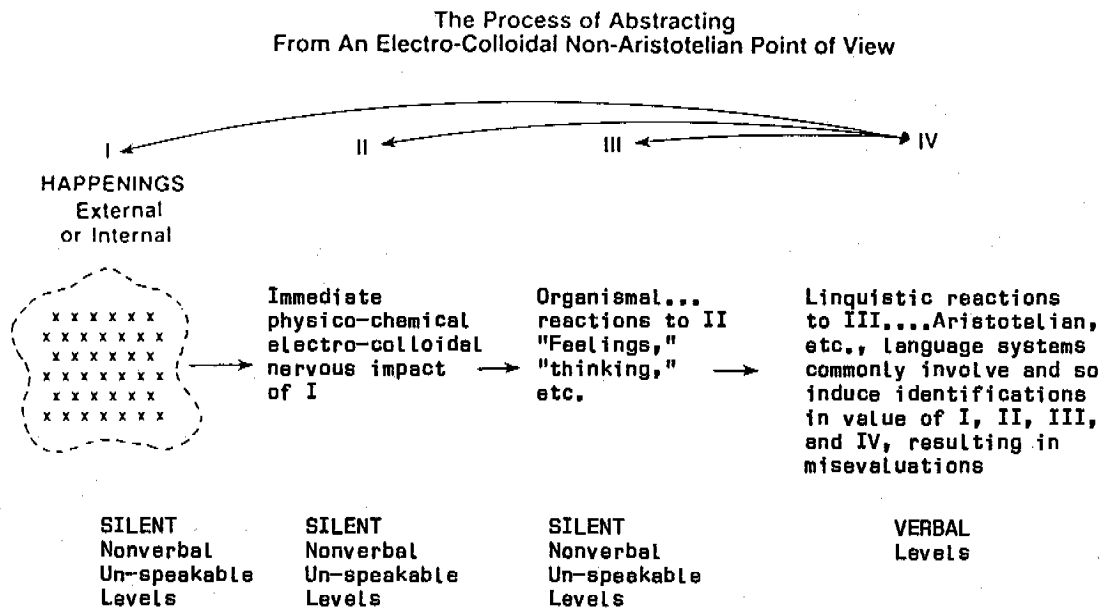
again telling us that it is a very complex human activity.

A thorough analysis of leadership requires that we deal with the structure of language and 'thought' embedded within Aristotelian and non-Aristotelian orientations. By examining various ways of formulating the analysis of leadership, we intend to demonstrate, through experimental research, the implications of relying on Aristotelian logic in conceiving leadership theory and prescribing leadership practices. By comparison, a non-Aristotelian formulation of effective leadership processes yielding significantly different conclusions will be explored. Let's take an example -- the airliner cockpit.

The Captain as a leader in the modern jetliner can utilize cockpit resources in an Aristotelian or a non-Aristotelian way. In terms of safety and on-time performance, the basis of resource utilization employed makes an important difference. We will clarify this conclusion later by describing an experiment which has significant implications for understanding the exercise of effective leadership and its relationship to flight safety. The key role of non-Aristotelian 'logic' in the successful outcome of this experiment will become clear as we proceed.

Korzybski's diagram of the process of abstracting from a non-Aristotelian point of view has become so central to formulations of leadership that we wish to emphasize it now. This important diagram first appeared in Korzybski's final article written just before his death.

Figure 1



Source: Korzybski, A. "The Role of Language in The Perceptual Processes." Blake, R. R., and Ramsey, G. V. (eds.). Perception: An Approach to Personality. N.Y.: Ronald Press, 1951, pp. 170-205. Slightly revised by Blake and Mouton.

The "happenings" on the left side of this figure are events or occurrences that are taking place "out there." "Out there" may be physically separate from the observer or within his or her own skin. In either case, the unspeakable happening sets off a chain of reactions beginning with physico-chemical electro-colloidal nervous impact from I. Activation of the retina, cochlea, or other sensory mechanisms occurs at silent Level II, but this reaction is still nonverbal and unspeakable. Organismal reactions to Level II sensory stimuli occur at silent Level III in the form of 'feelings' and 'thinking', probably including visual images, still at prespeakable levels. At the fourth level, language systems are employed by the observer to express and verbalize the Level I happening.

When this natural order of the abstracting process is reversed, Level IV formulations about the happening may structure and reshape the observer's perception of it in ways that may be very different from the happening itself. If the Level IV language structure has Aristotelian-type logic embedded within it, the interpretation of the happening is likely to contain misperceptions and inappropriate evaluations which lead to faulty assumptions, generalizations, and actions. With this formulation, let us closely examine a number of studies which derived their conclusion about effective leadership from an Aristotelian, elementalistic research base.

#### Aristotelian Orientation Applied in Empirical Studies of Leadership

Following World War II the United States military services remained deeply interested in leadership and commissioned well-financed research to study it further.

One research center was located at Ohio State University where Professor Edwin Fleishman led the investigations which have become widely known as the Ohio State Leadership Studies. We will characterize this research in schematic outline in order to clarify the thought processes on which it was premised and demonstrate its reversal of the natural sequence in the order of abstraction.

These researchers started by collecting more than 1800 statements characterizing abstractions about aspects of leadership behavior. The information was collected as a "pure," empirical, seat-of-the-pants undertaking with little or no guidance from theory or system-based evaluating and little apparent awareness of the sequence of abstraction. The many items were winnowed to 150 and assembled into a questionnaire. Typical questionnaire items were: "he emphasizes meeting of deadlines," "he treats people under him without considering their feelings," "he insists that he be informed on decisions made by people under him."<sup>1</sup>

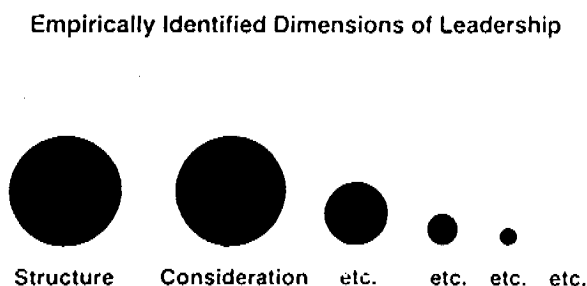
Subordinates of military officers and industrial personnel responded to the Fleishman instruments by indicating the extent to which each of these items characterized his or her supervisor's exercise of leadership.

### Elementalism

The next question posed by Fleishman, Hemphill, and colleagues was something like, "Could there be clusters of items which seem to group together but are different from other items which also may be grouped together? If we identify these, we may discover the essential structures underlying the practice of leadership."

In order to answer this question they used the statistical methodology called for in a factor analytic approach to identify several common items. We will concentrate on the two considered most important, as shown in Figure 2, understanding that additional factors present were evaluated as lacking sufficient statistical significance to be useful in characterizing leadership.

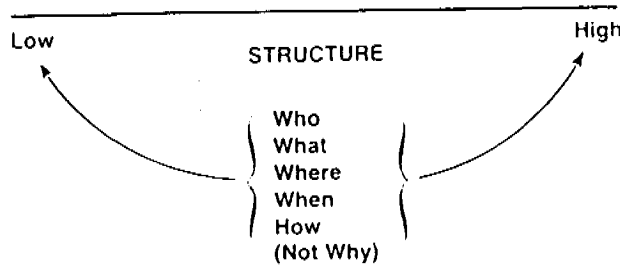
Figure 2



### Labeling

Once committed to the blunder of finding leadership 'elements' consistent with Aristotelian logic, the next step was to "label" them. One was entitled "Initiating Structure," calling attention to what the leader tells the subordinate "to do." The Structure dimension is represented in Figure 3.

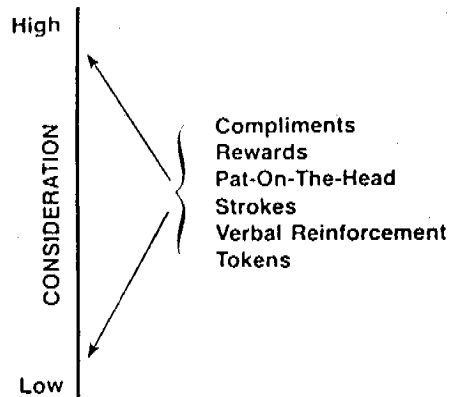
Figure 3



At the high end, a leader tells the subordinate what to do, where to do it, when to do it, how to do it, and so on. He or she rarely goes into "why," because explaining rationale is not consistent with the other kinds of behavior found within this activity. Fleishman's use of the term Structure to describe a leader's activities relative to the task is unrelated to the general semantics use of the term.

The second dimension, shown in Figure 4,

Figure 4

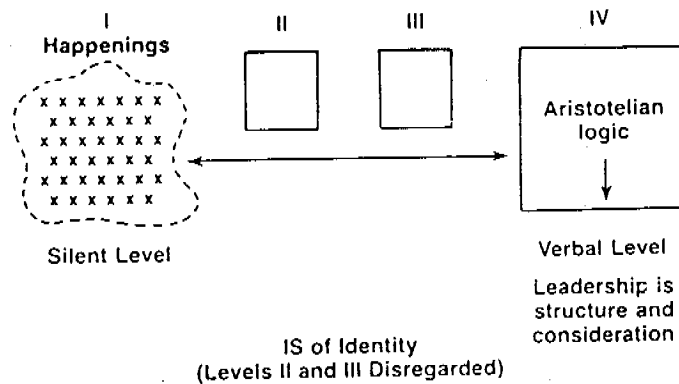


was labeled "Consideration," referring to the extent to which a leader gives subordinates social-emotional support. Consideration is present to a high degree when the leader treats subordinates in a warm or emotionally-supportive way, as demonstrated through compliments, rewards, pats on the head, strokes, etc.

Now the groundwork has been set for comprehending the Aristotelian logic inherent in this approach. Clusters became factors, and the factors were grouped into two discrete or independent "activities." The automatic assumption was made that these activities "belong to" and are at the disposal of the leader for achieving coordinated direction. Since Initiating Structure and Consideration are viewed as two separate, uncorrelated actions, a leader can apply any magnitude of one in combination with any amount of the other. The Ohio State studies seem to have concluded that "it," something "out there," had been described. The presence of elementalistic 'thinking' (formulating) was apparently unrecognized by Fleishman and his colleagues.

Fleishman's reversal of the natural order of abstracting, as shown in Figure 5, is deeply embedded in the Ohio State approach. Clearly, Fleishman's collection of 1800 leadership behavior items is a Level IV rather than a Level I beginning. The resultant "theory" is superimposed on the "happening" rather than derived directly from it, constituting a reversal of the natural sequence of abstracting. Conclusions about the happening itself, i.e., the exercise of leadership, are drawn at verbal Level IV without regard for the silent Levels I, II, and III.

Figure 5



The logic of elementalism is implicitly utilized as the researchers conclude, "Leadership is Initiating Structure and Consideration."

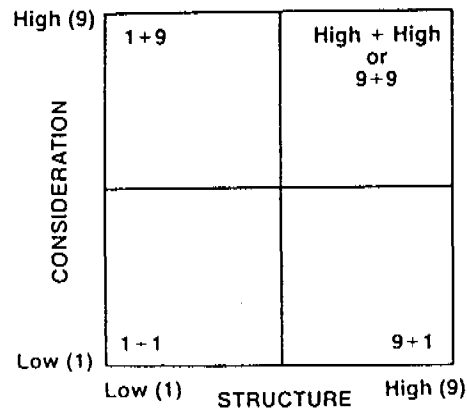
### Additivity

Fleishman now saw the need to recombine the two leadership activities to gain a comprehensive view of any specific individual's leadership behavior. The manner of recombining is of signal importance for comprehending the consistency with which Aristotelian logic was relied upon in this important research.

Fleishman said, in effect, "We'll create two questionnaires, one for measuring behaviors called for by Initiating Structure, and the other for behaviors resulting from Consideration. We will then employ a system of coordinates and combine scores of varying magnitudes for each of the two activities.

"To display individual scores on a graph," Fleishman might have continued, "we will place Initiating Structure and Consideration at right angles to one another. If a leader's score is

Figure 6



high on one activity and high on the other, we represent that person's approach to leadership in the upper right quadrant of the graph (Figure 6) and so on for other combinations of scores, e.g., low+low, high+low, and low+high."

What is high+high when translated into actual leadership behavior? We think that the terms Paternalism/Maternalism accurately describe the exercise of high+high leadership. A paternalist exercises a high degree of control through giving directions and instructions but is simultaneously considerate, warm, affectionate, and supportive in exchange for compliance.<sup>2</sup>



Items selected from the two Fleishman tests provide a feel for the character of Paternalism. In Figure 7, items from the

### Figure 7

How Test Items Based on the Ohio State Leadership Model  
are Answered by Those Who Earn a High-High (9+9) Score

Initiating Structure		Consideration
Always rule with an iron hand	(but)	Often do favors for persons under me
Encourage after duty work by persons of my unit a great deal	(but)	Often help persons under me with their personal problems

Structure test on the left side are aligned with Consideration items which appear on the right side. Controlling others with an iron hand and also doing personal favors for them is the formula for rewarding subordinates with consideration in exchange for compliance.

The following illustrative dialogue provides an operational view of paternalistic leadership in action. Joe is the subordinate, and Smith el is his boss.

Smith el

Boss: You've read the shift book. It's pretty full, but you need to get it all done.

Subordinate: I'll do my best.

Boss: Here's how I want you to do it. Instead of making the seven adjustments on each of the three machines, a machine at a time, I want you to make the same adjustment on each machine, one at a time in sequence. Start with balancing the rotes on all three. Then come back to the first machine and replace the belt. Repeat that on machines 2 and 3, and so forth.

Subordinate: But boss, that's inefficient. It's really better to deal with all seven adjustments on machine 1 and then work on machine 2.

Boss: I appreciate your suggestions, Joe. They have nothing to complain about, but I can't prove that to the operators. It's one of those trust and confidence problems between two departments. This way I can personally guarantee them that each one of the adjustments was completed.

Subordinate: Okay, if that's the way you want it. It's wasteful, but if that's the way you want it . . . okay.

Boss: That's great, Joe. I can always count on you. Give me a ring 30 minutes before quitting time to let me know your progress.

Subordinate: Okay.

Boss (answering phone hours later): Yeah, yeah, Joe. What . . . ?

Subordinate: I've almost got it done except for the seventh adjustment on 2 and 3. I'll get through by quitting time.

Boss: That's really wonderful, Joe. You've given me a great day's work. If you have any extra time before quitting, knock off and go to the smoke pen. Have yourself a break on me.

Subordinate: Okay, boss. Thanks a lot. Glad I did what you wanted.

The boss structures the task and, against his better judgment, Joe gives the boss what he wants. The boss demonstrates his appreciation by giving Joe high socioemotional support, not because he did good work, but because he obeyed the boss and did the work the way the boss directed. This additive mixture of two independent variables results in paternalism. The paternalistic character of this relationship becomes even more vivid in the remark in which the boss confuses himself with the company and says, "You've given me a great day's work . . ." He also identifies himself with the company when he uses company time as though he personally owned it, giving it as a reward to the subordinate for compliant behavior.

Fleishman expected that leaders scoring in the high+high quadrant would be more effective than other leaders since their test scores reflect the maximum presence of both essential activities which comprise leadership behavior. A series of studies designed and conducted over 30 years to empirically test this prediction have failed to demonstrate that it is a "useful" map for characterizing the territory of leadership.<sup>3</sup>

We have focused here on the Fleishman leadership model,

because Fleishman's work continues to be of importance. In spite of its faulty formulation and lack of demonstrated validity, Fleishman and others since, including Fiedler,<sup>4</sup> Reddin,<sup>5</sup> House,<sup>6</sup> Hersey and Blanchard,<sup>7</sup> et al., developed and extended this leadership theory which continues even today to be one of the best known and widely accepted formulations of leadership effectiveness. By way of summary, Korzybski might observe, "The Aristotelian language [applied to leadership theory] perpetuated what I call 'elementalism', or splitting verbally what cannot be split empirically."<sup>8</sup>

### Differential Analysis Applied to the Exercise of Leadership

A next major step in establishing a more valid formational base for describing the exercise of effective leadership was taken by Professor Rensis Likert in his Navy-supported research conducted at the University of Michigan. Likert might have formulated his hypothesis as follows.<sup>9</sup>

The way to understand effective leadership is to identify two kinds of groups which differ from one another in terms of production effectiveness. Subordinates of leaders in the more effective groups should then be asked to describe their leader's behavior. Subordinates of less effective leaders will be asked to describe their leader's behavior as well. This will permit a comparison of leadership behavior at the high end of the effectiveness continuum with that at the low end.

Likert also concentrated on the fourth step in the abstracting sequence, but he added the interesting twist of asking subordinates to characterize two kinds of leaders, not just leaders 'in general'. By doing so he made a forward step. At least he could now contrast what the respondents said of one set of leaders with how the other leaders were described.

More effective leaders were generally described as "employee-centered" and less effective leaders as "job-centered." From these findings, Likert concluded that

Supervisors with the best records of performance focus their primary attention on the human aspects of their subordinates' problems and on endeavoring to build effective work groups with high performance goals. . . . Those supervisors whose units have a relatively poor production record tend to concentrate on keeping their subordinates busily engaged in going through a specified work cycle in a prescribed way and at a satisfactory rate as determined by time standards."<sup>10</sup>

Likert emphasized "group centeredness" over the 'idea' of individuals as followers by elevating the 'concept' of membership. Effective leadership was characterized by boss-subordin-

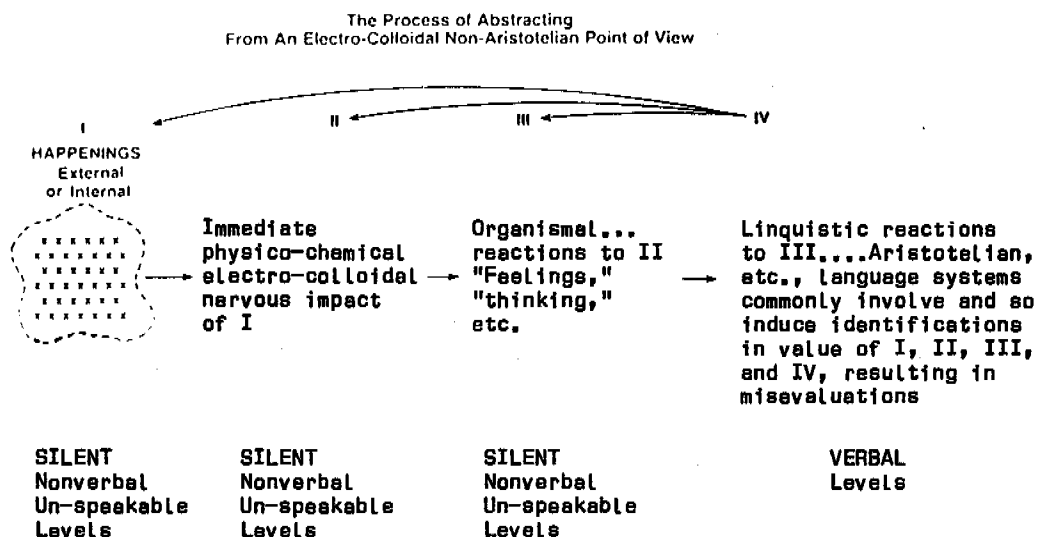
ate(s) give-and-take around the job itself reflected in terms such as goal integration, mutual confidence and trust, and mutual support. His research told him that employee-centered participation induces commitment to results, but the interaction processes for inducing these experiences were not examined. While Likert's findings empirically described and predicted more and less effective leadership behavior, he was unable to provide a basis for drawing systematic generalizations.

About this same time, McGregor<sup>11</sup> and Argyris<sup>12</sup> were moving toward non-elementalistic, non-additive formulations of effective leadership. McGregor's Theory X and Theory Y and Argyris' Models I and II are, however, severely limited by the two-valued, either-or character of their formulations. Leadership is not a case of either-or but of infinite variations in exercising it.

Non-Aristotelian Orientations/Logic Applied to the Exercise of Leadership

Our own work in establishing formulational bases for evaluating leadership started in a different way. Being aware of the contradictions and discrepancies among approaches prevailing at that time, we spent some fifteen years as participant-observers engaged in in situ "happenings" in live groups (i.e., the left side of the Korzybski model, Figure 8) as the basis for drawing our conclusions. Our experiences included working in the late Forties with psychoanalytic therapy groups at London's Tavistock Clinic and continued for the next ten years in "T" groups, i.e., sensitivity training, conducted primarily in Bethel, Maine. Significant insights were also derived from working with Moreno in

Figure 8



Source: Korzybski, A. "The Role of Language in The Perceptual Processes." Blake, R. R., and Ramsay, G. V. (eds.). Perception: An Approach to Personality. N.Y.: Ronald Press, 1951, pp. 170-205. Slightly revised by Blake and Mouton.

psychodramatic settings over a number of years and from general semantics seminar work with Bois. During this same time, we conducted many experiments in university settings in which we observed the group processes of students interacting as they sought to achieve synergistic results. Along the way we entered industry and gained further insight into Level I happenings by helping leaders mobilize their human resources in order to increase effectiveness in problem solving and decision making.

As participant-observers during this entire period we experienced as "happenings" our own and others' participation as leadership appeared and was strengthened, or faltered, shifted or reappeared. We were particularly attuned to what members did and did not do that resulted in achieving direction and coordination. Importance is attached to the key word "we," as our sharing of many of these experiences permitted us to correct one another's perceptions and in this way increase our understanding of leadership phenomena as "happenings."

These experiences led us to focus our attention on processes of interaction rather than on traits or attributes of successful and unsuccessful leaders or on leadership 'in general'. Our formulations of leadership effectiveness, then, are derived from the "happenings" themselves.

Leadership cannot be experienced without a task or in a solo situation. Recognizing again that additional dimensions may be needed for a complete description, we identified two primary leadership dimensions, concern for accomplishing the task and concern for one another as participants. These concerns, as represented in Figure 9, are not 'out there' somewhere. They are within the leaders-(and members)-as-coparticipant-observers of the happening and cannot be separated and dealt with individually without losing the phenomenon which they describe.

Figure 9

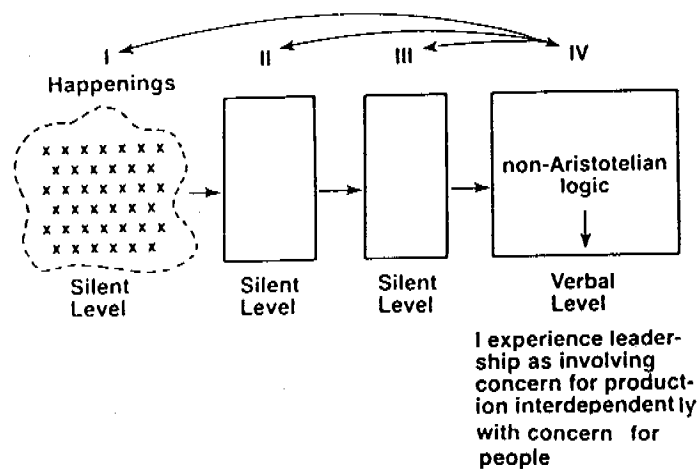
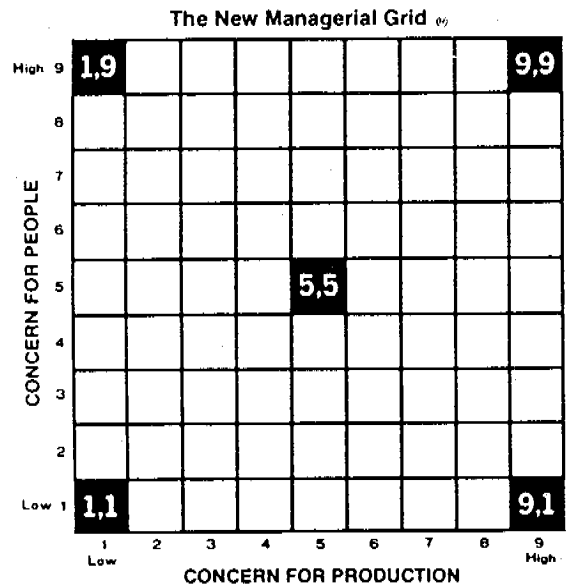




Figure 12



Source: The New Managerial Grid, by Robert R. Blake and Jane S. Mouton. Houston: Gulf Publishing Company, 1978, p. 11. Reproduced by permission.

Because the analysis of leadership happenings begins at this point, the importance of interaction between interdependent variables (,) as compared with an arithmetic coupling of independent variables (+) can hardly be overestimated.

This important difference in formulation is found in many fields. An example from chemistry illustrates the critical distinction between an arithmetic coupling (+) of independent variables and an interaction of interdependent but uncorrelated variables (,) (Figure 13).

Figure 13

Additivity

Mixture  
Smog  
Stew  
9+9

Interdependence

Compound  
Water (H<sub>2</sub>O)  
Cake  
9,9

A physical mixture is analogous to the arithmetic combination of variables exemplified in the Fleishman model. In a physical mixture, such as smog, each element in the combination retains its distinctive features. The particles and gases that compose smog retain their unique characteristics even when combined.

The mixture analogy depicts how Initiating Structure and Consideration each retains its distinctive character when arithmetically combined. For example, a "9" amount of task behavior is revealed in the supervisor's structuring the subordinate's activities by directing the what, how, when, and where aspects in a 'complete' way. A "9" amount of socioemotional support is evidenced in giving rewards, compliments, and strokes. Task direction and socioemotional support are two independent behaviors. 'Conceptually', 9 units of "direction" retain the same character whether combined with 1 unit (9+1) or with 9 units (9+9) of socioemotional support.

By comparison, the interaction brought into definition by the Grid concept of leadership parallels a chemical compound in which variables interact with one another. In the interactive combination of chemical elements, the separate components lose their individual characteristics in the compound produced. Water, the compound composed of hydrogen and oxygen ( $H_2O$ ), has very different properties than either of the gaseous elements that make it up.

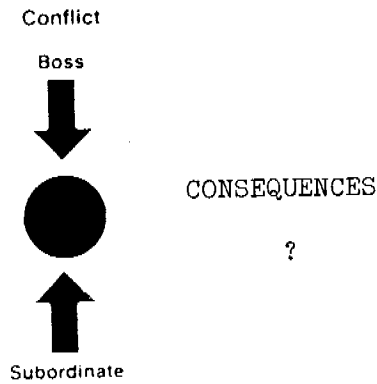
Similarly, these two interdependent dimensions of the 9,9-oriented leadership process are not treated or measured separately. It is not possible to remain structurally consistent with the happening itself and develop two independent tests which measure behavior on one dimension in isolation from the other.

Now is not the time to give an extended presentation of the Grid as a map characterizing different peaks and valleys in the leadership territory. However, to provide an indication as to what is now possible based on non-Aristotelian behavioral science formulating, we can offer a brief examination of one of its major facets.

An issue most central to identifying an effective leadership process is the matter of conflict solving, the resolution of differences that are barriers to agreement and that impede or block the establishment of a direction and therefore diminish coordination. Much is known about conflict and its resolution, and many of the faulty ways by which conflict is dealt with are apparent in everyday interactions. The issue of conflict is shown in Figure 14, where the boss is shown in disagreement with the subordinate.

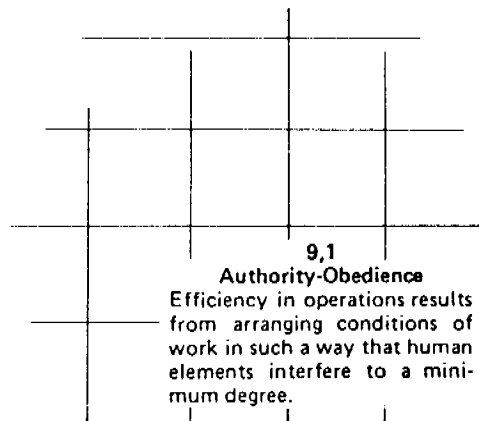


Figure 14



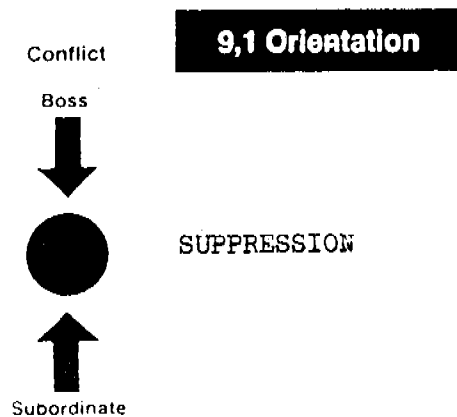
The 9,1-oriented theory, as shown in the lower right corner in Figure 15, depicts the underlying attitude, "Efficiency in operations results from arranging conditions of work in such a way that human elements interfere to a minimum."

Figure 15



Now we can look at the actual exercise of conflict resolution by a 9,1-oriented leader in Figure 16. We find that the mechanism for resolving the difference is suppression.

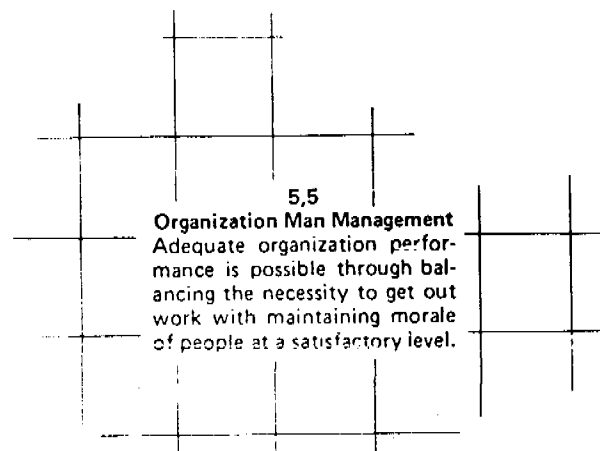
Figure 16



Suppression means that the boss (or leader) rejects the position of the other person, with essentially no effort made to examine reasons for the underlying disagreement. Rather, the position represented by the other person is replaced by the boss's position as the one which prevails.

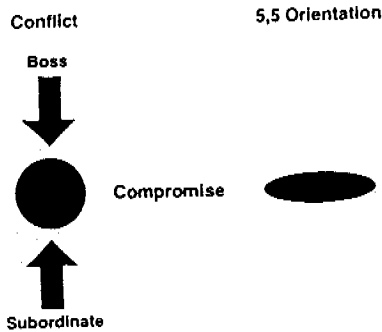
As shown in Figure 17, the theory in the middle of the Grid is the 5,5 orientation. "Adequate organization performance is possible through balancing the necessity to get out work with maintaining morale of people at a satisfactory level."

Figure 17



The mechanism for conflict resolution, as shown in Figure 18, is to engage in compromise, accommodation, adjustment, and negotiation. The balance point is that point the boss is willing to accept to terminate resistance.

Figure 18



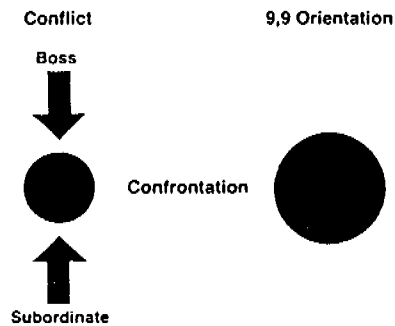
The 9,9 orientation is based on, "Work accomplishment is from committed people; interdependence through a 'common stake' in organization purpose leads to relationships of trust and respect." This is shown in Figure 19,

Figure 19

<p><b>9,9</b>  <b>Team Management</b>                  Work accomplishment is from committed people; interdependence through a "common stake" in organization purpose leads to relationships of trust and respect.</p>		

while Figure 20 deals with the conflict resolution issue. Here, one word that has two very different 'meanings' is used, but only in one way.

Figure 20



The term is confrontation. It does not mean challenge or contest or drawing a line beyond which another person moves forward only at his or her risk of challenge. Rather, confrontation as used here 'means' that the difference contained in the issue being dealt with is focused on, not the person. Positions being proposed and resisted are examined to determine the underlying causes and to discover a basis of resolution which meets the limitations seen in the positions of both parties. The exploration of differences with effective resolution means that nobody wins and nobody loses, that no one yields and no one withdraws into neutrality, and no one compromises or accommodates. Rather the participants seek to discover the roots of reservation and thereby to clear them away. If one is upholding a position that turns out to have been invalid, he or she can relinquish the position, realizing that a better one has been found to replace it. Alternatively, when two or more people discuss a difference and explore their reservations, the prospect always prevails that a third solution which is preferable to and better than either of the entry positions may be discovered. This is synergistic problem solving.

As a further example, the compound character of this approach can be depicted by examining a test item which attempts to describe the leader's behavior in terms of task accomplishment without simultaneously exploring concern for people. This might be expressed as:

Figure 21

"I exert vigorous effort	Grid Style Orientation
and . . . .?"	?

This statement reveals nothing of the interaction processes since we do not know how "vigorous effort" on the leader's part is related to the subordinate's efforts, actions, or perceived reactions.

If a test item reads,

Figure 22

"I exert vigorous effort and	Grid Style Orientation
pressure others to do the same."	?

the leadership orientation is clarified. Here, the Grid style is 9,1; force is used to induce compliance.

If the leader says,

Figure 23

"I exert vigorous effort and	Grid Style Orientation
reward compliance of others.	?

a very different expression of leadership, the 9+9 orientation, occurs; reward is used to induce compliance.

The vigorous effort might be exerted as shown here in Figure 24.

Figure 24

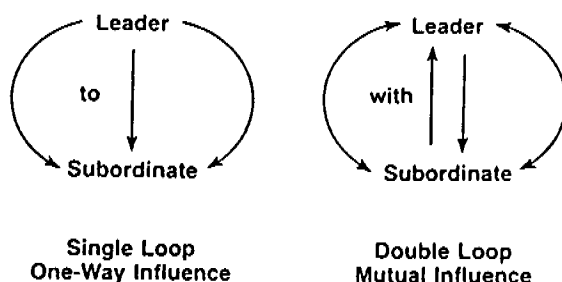
"I exert vigorous effort and	Grid Style Orientation
others enthusiastically join	?
in."	

When others enthusiastically join in, open participation in the activity results and the commitment of others is heightened.

"Openness" in the 9,9 orientation is premised on mutuality. Rather than exercising unilateral control over who will do what and when, an optimal approach to how things will be done emerges from the interaction process.

These combinations produce very different "compounds" of leadership as a function of what combines with "what"; splitting the components is a virtual impossibility.

Figure 25



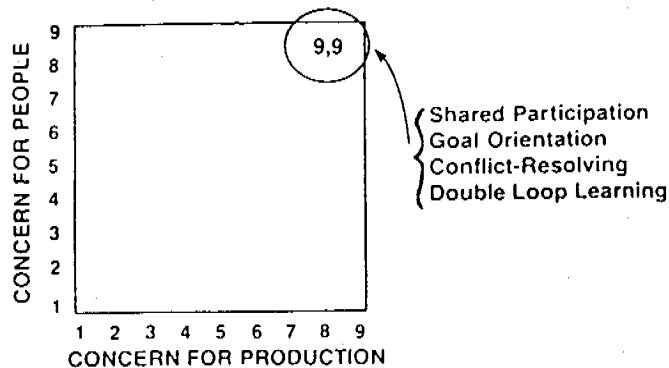
Thus, from the perspective of non-Aristotelian logic, in mapping the Grid style orientation, we see in Figure 25 the interdependence between the task and people dimensions as critical to describing a mutual influence process. The sociological terms boss and subordinate, leader and led, which refer to one "doing something" to another, are inappropriate when used to describe a 9,9-oriented leadership process. As yet there is no functional language to describe the coparticipants in a relationship when both (or several) engage proactively in accomplishing a task.

What does this mutual influence process mean in the 'real world'? Any given task is characterized by its own internal logic. Optimally effective task completion by several is contingent on sound processes which allow technical, material, and human resources to be fully utilized in the soundest way. Effective leadership contributes to sound task completion while ineffective leadership detracts from it. 9,9-oriented leadership processes for achieving coordinated direction involve multi-loop, open communication predicated on finding the best alternative or course of action congruent with the logic inherent in the situation seen in its entirety.

9,9-oriented leadership, depicted in Figure 26, applies the processes of shared participation, superordinate goal orienta-

tion, conflict resolution, and double-loop learning which correlate positively with effective task completion.

Figure 26



When the task involves a problem to be solved, for example, the 9,9-oriented leader seeks input from others before reaching a decision. Potential solutions are examined to clarify underlying differences and to discover an alternative which best responds to the perceived 'logic of the problem'. Emphasis is placed on utilizing all available resources to determine the optimum course of action. Synergistic problem solving through the processes of interaction may be superior to the "best" solution which any one individual might have produced working alone.

That we sometimes fail to find these superior synergistic solutions entails no breakdown in 'intelligence'. 'Intelligence' is 'there', but something blocks its use. Faulty leadership processes: permit the intrusion of hip-pocket solutions, seniority, rank, "old boy" networks, etc.; block coordinated and collaborative effort; prevent intelligence from being employed in sound ways.

By contrast, sound leadership processes are characterized by a minimum of five process facets seen as essential for reconstructing a 9,9-oriented leadership "happening."

Open leadership conveys the idea that interactions among members are not predetermined by the officially designated leader, though he or she retains ultimate responsibility for outcomes. There is no prearranged sequence, no preestablished priorities, no Robert's Rules, and even the statement of the problem is subject to challenge, change, and redefinition. Interactions are determined by the perceptions of the problem itself and the capabilities of the persons to contribute to its solution.

When other 'elements' are present, open leadership can bring forth effectiveness.

One of these is inquiry, the continuous proactive interrogation of the technical and human environment and situation to uncover discrepancies or contradictions. Inquiry results in increased thoroughness, greater vigilance, and deeper awareness on the part of all members as to how the situation is developing. Cross-inquiry exists when one member interrogates another as a data source.

Another important facet is advocacy. Advocacy involves the open and direct expression of convictions as to a sound course of action as well as reservations, doubts, or misgivings about alternative courses of action. It means that each member is willing to offer alternative definitions, suggestions, and recommendations or to support another's options up to the point where action is required.

Critique is an additional essential ingredient. Critique is the process facet which allows the leader and members to learn from experience. Before, during, and after an action, the team is involved in anticipating and analyzing its actions, reactions, and interactions to discover what might be changed, improved, or corrected.

Resolution of conflict certainly is a central consideration. Conflict may or may not be inevitable, but it does not have to be negative or destructive, if present. An effective member, whether or not he or she is the leader, ensures that whenever issues of conflict are recognized, they are surfaced and resolved in a constructive way that results in mutual trust, respect, understanding, and agreement.

With this clarification of 9,9-oriented leadership as a problem-solving approach, let us return to Joe, the machinist we encountered in an earlier dialogue, now with his boss, Smith non-el. Smith non-el is a boss whose behavior is congruent with non-elementalism and non-Aristotelian logic.

#### Smith non-el

Boss: You've read the shift book. It's pretty full, but you need to get it all done.

Subordinate: I'll do my best.

Boss: Instead of making the seven adjustments on each of the three machines, a machine at a time, I want you to make the same adjustment on each machine one at a time in sequence. Start with balancing the rotes on all three. Then come back to the first machine and replace the belt. Repeat



that on machines 2 and 3 and so forth. Does that make sense?

Subordinate: But boss, that's inefficient. It's really better to deal with all seven adjustments on machine 1 and then to work on machine 2.

Boss: I appreciate your suggestion, Joe. I know they have nothing to complain about, but I can't prove that to the operators. It's one of those trust and confidence problems between two departments. This way I can personally guarantee them that each one of the adjustments was completed.

Subordinate: Well, if there's a problem with guaranteeing them, let's solve it, but in a way that permits me to work in a sound manner.

Boss: Yes, you're right. I suppose we could . . .

Subordinate: We could. It's true that anyone might miss an adjustment or two working down through one machine. You see something that needs fixing and it captures your attention, interrupts an orderly sequence . . . I've a checklist in my mind anyway, but I could put it on paper and check off each item as I complete it. That way you could offer them the same assurance of quality but without my losing efficiency.

Boss: Of course. Give me a ring 30 minutes before quitting time to let me know your progress.

Subordinate: Okay.

Boss (answering phone some hours later): Yeah, yeah, Joe. What...?

Subordinate: I've got it all done, even before quitting time.

Boss: That's good. How'd it work?

Subordinate: The checklist is really a good idea. It permitted me to go faster because I didn't feel the need to circle back and double-check on myself. It's a creative solution to the problem; better for me and I can assure you as to thoroughness.

Here we see the same machine-maintenance situation managed from a 9,9 leadership orientation. The boss acknowledges the subordinate's disagreement but is open to an examination of what

Joe had in mind. Joe's proposal seemed to have merit and the addition of a checklist led to action that is jointly agreed upon as sounder. Here we see the result of open participation, candor, and conflict solving based on respect for differences. Mutual exploration of alternatives and possibilities has led to a more productive, efficient approach to the task. The impact of sound leadership processes is reflected in involvement and commitment, mutual problem solving, and so on.

Taking another glance at the big picture as seen in Figure 27, we see that elementalism as reflected in space and time, mind and body, emotions and intellect is extended to include structure and consideration.

Figure 27

Examples of Aristotelian Logic  
(Elementalism)

- \* Space and Time
- \* Mind and Body
- \* Emotions and Intellect
- \* Structure and Consideration

By comparison, the non-Aristotelian logic of space-time, mind-body, and emotion-intellect can be extended by adding concern for production -- concern for people, as in Figure 28.

Figure 28

Examples of Non-Aristotelian Logic  
(Non-Elementalism)

- \* Space-Time
- \* Mind-Body
- \* Emotions-Intellect
- \* Concern for Production-Concern for People

Now leadership joins the ranks of the "unsplittable" phenomena of nature. As reported earlier, research based on measuring instruments characterized by a 9+9 orientation has demonstrated that paternalism is not positively correlated with and therefore does not predict effective leadership performance in empirical situations. On the other hand, the 9,9 teamwork orientation has consistently been associated with heightened productivity, improved creativity, and increased satisfaction,<sup>13</sup> as well as total organismic health.<sup>14</sup>

Indexing the 9,9 Orientation for Use in  
Specific Situations

Answers to a new question can now be explored. How can the strategies embedded within the 9,9 orientation be implemented across a wide variety of distinctive situations? Our answer is that the structural properties of a 9,9 orientation remain constant, but are tactically extensionalized when applied with specific subordinates in concrete activities. That is to say that the emerging principles in Figure 29 represent relatively invariant structural properties that are foundations of a 9,9 orientation.

Figure 29

Four of 10 Emerging Leadership Principles  
From the Behavioral Sciences

- |    |  |                     |
|----|--|---------------------|
| 1  | Fulfillment through participation motivates and supports productive outcomes   | Participation       |
| 2  | Shared participation stimulates active involvement   | Involvement         |
| 3  | Conflicts resolved by direct confrontation of their causes, with understanding and agreement basic to cooperative effort | Conflict resolution |
| .  | .  | .                   |
| .  | .  | .                   |
| .  | .  | .                   |
| 10 | Management is by agreed-upon objectives<br>etc.  | Goal-Setting        |

Extensionalizing is an invaluable tool for more precise analysis of the leadership tactics for any particular situation or set of circumstances. The general proposition is that leadership tactics are a function of the person(s) (P) interacting within his or her environment (E).

Figure 30

$$LT = f(P, E, \text{etc.})$$

Indexing aids us in choosing the soundest tactics for implementing the 9,9-oriented strategy in any given situation. Significant situational factors for indexing which are related to characteristics of subordinates (P) relative to any work activity are shown in Figure 31.

Figure 31

Situational Factors for Tactical Indexing to  
Characteristics of Subordinates

- \* Experience
- \* Age
- \* Education
- \* 'IQ'
- \* Socio-Economic Background
- \* etc.

Applied in a particular case, we can extensionalize an individual subordinate, Mary, as shown below.

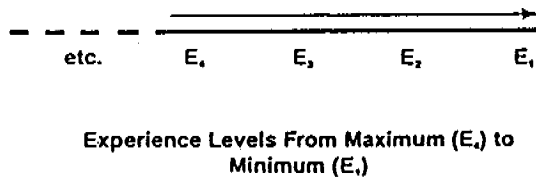
Figure 32

$$LT = f(\text{Mary}_1, {}^{1982}, E', \text{Age } 18, G12, 'IQ'90, \text{etc. } E, \text{etc.})$$

Mary 1, in 1982, is an entry level receptionist, age 18. She has completed grade 12, her 'IQ' is 90, etc.

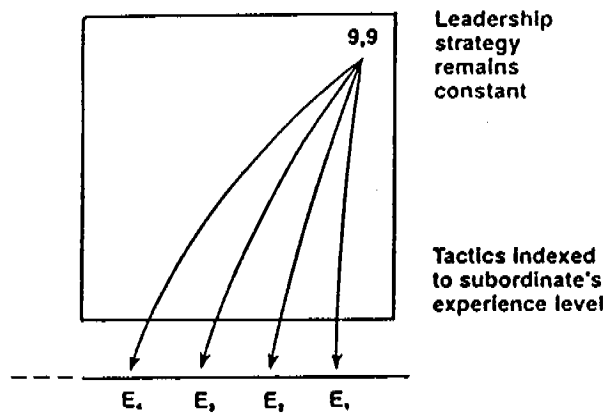
Experience level of the subordinate relative to the activity in which he or she is engaged is a significant factor for analyzing leadership behavior in an operating context. It is therefore used to demonstrate the utility of indexing in determining the tactics for implementing a 9,9-oriented strategy. As seen in Figure 33, experience levels can vary from a maximum of  $E_4$ , where the subordinate is knowledgeable, competent and skilled in carrying out an activity efficiently and effectively, to a minimum of  $E_1$ , where prior experience in completing the task is essentially absent.

Figure 33



To concretize this illustration, we can apply E-level indexing to the 9,9-oriented strategy of mutual goal setting. Looking

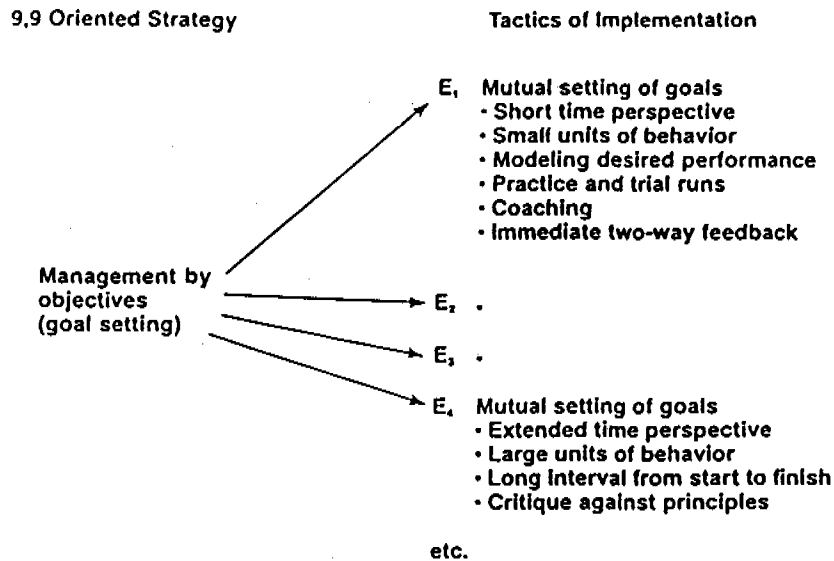
Figure 34



at Figure 34, we see that there is no shift in the underlying strategy of mutuality or in adherence to the principles of open participation, subordinate involvement and shared commitment. Goal-setting tactics vary, however, when indexed to the subordinate's experience level.

In more specific terms, goals set through boss/subordinate interaction at the E<sub>1</sub> level of maturity are short-term and attainable. As displayed in Figure 35, the pathways to accomplishment are relatively clear and immediate feedback as to progress is provided.

Figure 35



When a task is approached by a subordinate from a higher experience level, i.e., E<sub>4</sub>, mutually established goals are likely to be more complex. Generally, progress is described in terms of large, broadly outlined units of behavior. Intermediate critique points along the way from start to finish provide a measure of achievement.

Dialogues between leader and subordinate can again be used to further illustrate, operationally, the variance of E<sub>1</sub> and E<sub>4</sub> tactics.

#### Receptionist

Boss: This is your first day. It's likely to be a little tough. How do you feel?

Subordinate: I'm all thumbs. I don't know what to do.

Boss: Then that's a good place to begin. That's where we start setting goals. What is your understanding of this job?

Subordinate: Well I'm to be the receptionist. I've never had any experience with that.

Boss: Let's look at what a receptionist does.

Subordinate: Well, one thing is answer the phone.

Boss: Yes, what else?

Subordinate: Greet visitors, type some.

Boss: Anything else?

Subordinate: I suppose I might be expected to be your person Friday.

Boss: Maybe. That's a good overview of the whole job. Let's talk about those things, one at a time. Telephone answering is our first contact with our clients. Let's talk about goals for answering the phone.

Subordinate: What goals? What's that got to do with answering the telephone?

Boss: Let me ask you a question. How do you feel when the phone rings twenty times and there is no answer?

Subordinate: I don't like it. Either no one is there or people are too busy, or they are visiting . . .

Boss: I don't like to be kept waiting either. Can we set an objective for prompt answering?

Subordinate: Maybe I can answer it within the first several rings. I can experiment with it to see if I can get it down to three.

Boss: That sounds fine. Now, what's the best thing to say?

Subordinate: "Good morning."

Boss: But then the caller doesn't know whether it's the right number.

Subordinate: I could say, "Good morning. This is Strategic Systems, Inc."

Boss: That's it . . . what we've talked about so far covers a lot of detail, but it shows that goals are involved in just answering the phone.

Subordinate: Yes it does . . . but, I'll never remember it all.

Boss: It'll take a little practice. I'll go to a phone and call as though I were a real caller. We can critique how the call went after you deal with me.

Subordinate: That's a good idea. That way I can check myself out.

The readiness for participation and involvement is present even at this lowest experience level. A proactive orientation is released through active two-way, give-and-take participation. Questions are asked, and problems are posed and discussed in the context of empathy, trust, respect, and openness. Goals are set, and an experimental test of how to reach them is introduced -- as is the concept of learning from immediate feedback through critique.

The following dialogue between an energy company president and the vice president of exploration exemplifies E<sub>4</sub> goal setting.

President: We've reviewed the facts and created a large data base. We've checked our logic. It's a gamble, but still a gamble worth taking.

Vice President: I think you're right. The potential rewards are too great to pass up.

President: Who do you think should have overall responsibility for direction and coordination?

Vice President: I'd like to develop and manage the project.

President: Well, you've certainly had more experience than anyone else. What's your best judgment as to what it will take to make north slope oil commercially available in the lower 48?

Vice President: We're talking long-range here, so there are a lot of variables that are difficult to predict. One important consideration is transportation. My people see both the pipeline and tankers as viable possibilities, but we can develop these options as we solve the problems of getting it out of the ground.

President: How long before this project begins to pay off for us and makes a real contribution to the country's oil-related problems?

Vice President: Eight, maybe ten years, but then we'll have a dependable, predictable oil supply for the U.S. market and a substantial source of capital for ourselves.

President: I still have an uneasy feeling about the intensity of the reservations coming from the environmentalists. Do you think a pipeline could have the damaging effects they predict?

Vice President: No, I don't. We've assessed their data and checked it against the results of our own experiments. I



think we're being subjected to scare tactics rather than to an objective assessment of risks. However, I've considered their protests in the contingency plan.

President: And you want this assignment?

Vice President: I think, given the special knowledge and experience needed, I'm probably in the best position to take it on. Besides, I'm intrigued by so many complexities and unknowns. It's like a pioneering adventure, a rare and unique opportunity.

President: You're right. If I were younger, it's the type of challenge I'd accept myself. I'll recommend your appointment as project director to the Board. I'd like to have your final estimates on costs and time frames before I present the idea.

Vice President: As long as the Board understands we're only making educated guesses, I can have a proposal put together within the week. Most of the pieces are in place from our preliminary work and my staff pretty well anticipated this move.

President: Good, I appreciate your initiative. I'll have retired long before the soundness of this venture is known. I wish you the best and hope I'll be watching from my rocking chair.

Though strategically the same in the sense that mutual goal setting is involved, the tactics of implementation are conspicuously different between the receptionist illustration ( $E_1$ ) and the vice president example ( $E_4$ ). Answering the phone is a fairly simple, straightforward task in comparison with the north slope oil project.

Goal setting is common to the interaction in both situations, but in one case the goal is set for a day, and in the other, for a decade. In the former case, small units of behavior (i.e., answering the phone within three rings) characterize established objectives, whereas objectives in the latter case of oil discovery, recovery and delivery, expense and environmentalism, etc., are necessarily left open-ended. Leadership practices in both situations are characterized by mutual influence, open participation, shared understanding, and commitment to implementing emergent solutions.

Is such a general semantics formulation as has been presented here limited to leadership processes or is it of more widespread relevance? Other investigations of human activities have also embraced Aristotelian logic in their formulations. One example is the newly-emerging field of androgyny, the study of establishing conditions for effective relationships between men

and women. The problem of androgyny starts with Webster as shown in Figure 36.

Figure 36

**Androgynous = Having the characteristics of both male and female**

Source: Webster's, *New Collegiate Dictionary*, G. & C. Merriam Co., Mass., U.S.A.

The advent of the women's liberation movement has had significant influence in causing human effectiveness researchers to reexamine what optimal male/female relationships might be. This field of research has mushroomed in the last decade. Leading androgyny investigators have, however, embraced Aristotelian logic in analyzing the problem and unwittingly embedded elementalism and additivity in their research.<sup>15</sup>

When androgyny research is examined from a general semantics point of view, the critical underlying assumption upon which the entire theory is built is that Sequence IV linguistic reactions as to masculine and feminine sex role distinctions are imposed on Sequence I "happenings."

Figure 37

**Strong Male Sex Role Behavior + Strong Female Sex Role Behavior = Androgyny**

As seen in Figure 37, androgyny theorists go on to say that "effective" men should not only exhibit strength in the masculine sense, but sensitivity in the female sense, and conversely, that "effective" women should demonstrate both traditionally masculine and traditionally feminine behavior.

Elementalism emerges from an analysis of the measuring instruments used to assess the androgynous person. Two tests, splitting human behavior into masculine and feminine categories premised on conventional sex role descriptions, were designed to measure androgyny, as shown in Figure 38. Scores on the masculine and feminine tests are then combined, and a high score on each test, i.e., high masculine + high feminine, is defined as androgyny. Only now is the inherent fallacy in sex-typed descriptions of behavior becoming apparent.

Figure 38

Bem Sex Role Inventory		
Strong Male		Strong Female
Aggressive	(+)	Affectionate
Strong Personality	(+)	Soft-spoken
Forceful	(+)	Tender
Analytical	(+)	Gullible
Competitive	(+)	Compassionate

Source: Bem, S., *Psychological Androgyny*. St. Paul, Minn.: West Publishing Co., 1977.

The sounder approach to characterizing human effectiveness appears to be in taking a non-Aristotelian approach to experiencing the "happening" as participant observers and proceeding through the physicochemical electrocolloidal impact and organismal reactions prior to formulating a description of what constitutes effective behavior in any human relationship. This approach deeply questions the assumption that sex roles beyond the explicitly reproductive are 'inherent'. Were this approach taken, we predict the conclusion would be as shown here in Figure 39.

Figure 39

**Problem-solving Interdependence = Androgyny  
is unrelated to sex role**

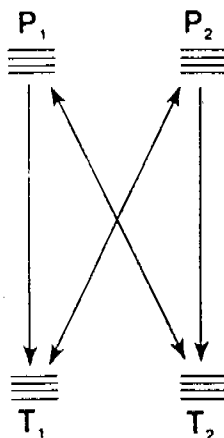
We have illustrated generality through an examination of androgyny. This is but one example of the need currently existing to rethink from a non-Aristotelian point of view subject matter after subject matter across the entire range of the behavioral sciences.

### Change

Once the process facets essential for the exercise of sound leadership have been established in terms of underlying structural properties, the formulational/operational challenge lies in aiding leaders to understand, embrace, and utilize them. Shifting from many approaches that are less sound to a more sound basis of leadership practice does not automatically arise from familiarity with the evidence that one is more effective than the others, but involves theory-centered, self-convincing, experience-based learning.

To view this kind of discovery learning in general semantics terms, it is useful to look to Korzybski's formulations relative to change. In effect, Korzybski asked the question, "How can individuals be aided to shift from an Aristotelian to a non-Aristotelian basis of leadership logic?" The key is derived from understanding the Korzybski diagram pictured in Figure 40.

Figure 40



Foreword by A. Korzybski and M. Kendig in *General Semantics Monographs III*,  
The International Non-Aristotelian Library Publishing Company, Lakeville,  
Connecticut, 1942.

By way of explanation,

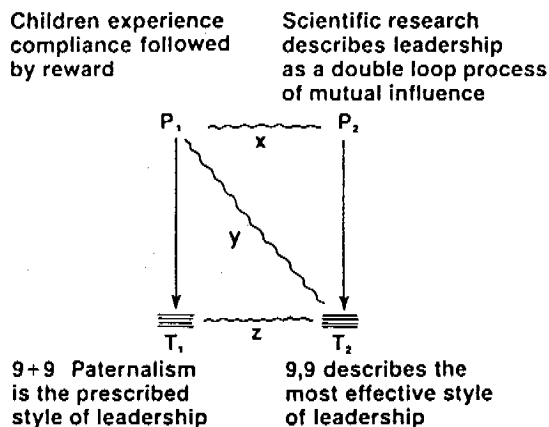
. . . (P<sub>1</sub>) represents a set of conscious or unconscious

assumptions, or what we may call axioms, . . . 'self-evident truths,' . . . creeds, beliefs, dogmas, premises, or postulates. (T<sub>1</sub>) represents the automatic more elaborate consequences of higher order abstractions, which we may call theories, rationalizations, inferences, opinions, orientations, attitudes, evaluations, etc. These influence our internal reactions on which ultimately our overt actions are based. Similarly from a different set of assumptions, etc., (P<sub>2</sub>), also a different set of consequences, etc., (T<sub>2</sub>) follows.

For our practical purposes we may consider (P<sub>1</sub>) a set of assumptions about the world and ourselves taught to us in infancy and childhood, and aggravated by the implications of the structure of our daily language. The traditional consequences (T<sub>1</sub>), based on false "knowledge", follow. (P<sub>2</sub>) may be considered as revised assumptions based on modern scientific data and methods, from which consequences (T<sub>2</sub>) of science and sanity follow.<sup>16</sup>

An adaptation of Korzybski's diagrammatic formulation to the leadership context is seen in Figure 41.

Figure 41



Useful for our purposes, P<sub>1</sub> of this diagram represents the Aristotelian concepts of conventional wisdom regarding leadership as learned in childhood from parents. T<sub>1</sub>, then, is the operating logic for exercising leadership as it emerges in adult behavior. If we arrange for P<sub>2</sub> to represent scientifically validated leadership processes characterized by a non-Aristotelian system of logic, it follows that T<sub>2</sub> becomes the operating logic

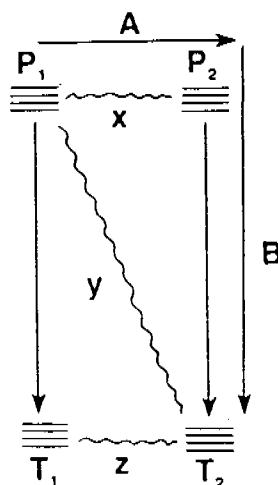
of the 9,9 orientation.

As we have seen,  $P_1$  and  $P_2$  are contrary ways of experiencing sound leadership. Individual efforts to resolve this conflict might take any one of several directions. In Korzybski's words,

The wavy lines  $x$ ,  $y$ , and  $z$  [Fig. 42] represent our vain struggles to reconcile the irreconcilables. The lines  $y$  and  $z$  represent our dissatisfactions, feelings of bewilderment, confusion, insecurity, frustration, fears of an incomprehensible unknown world, often despair, etc. . . . The line  $x$  represents the vague and uneasy feelings of inadequacy, contradiction, conflict between science and the prevalent notions about life, lack of communication, blocking of intelligence, cultural lag, protest, doubt, disillusionment, cynicism, helplessness, hopelessness, etc. . . .<sup>17</sup>

Extrapolating from Korzybski, it is virtually impossible when dealing with people who operate from outdated, ineffective  $P_1$  assumptions, to convey  $T_2$  orientations of leadership in modern life. Figure 42 indicates the steps Korzybski suggested as essential to aid leaders in shifting from  $P_1/T_1$  to  $P_2/T_2$ .

Figure 42



Foreword by A. Korzybski and M. Kendig in General Semantics Monographs III.  
The International Non-aristotelian Library Publishing Company. Lakeville,  
Connecticut, 1942.

Instead of continuing with the wavy lines  $x$ ,  $y$ , and  $z$  of bewilderment and confusion, this process of self-discovery makes the errors of the nursery and linguistic structural assumptions ( $P_1$ ) conscious. Then, as indicated by the arrow  $A$ , we simply revise  $P_1$  to  $P_2$ , from which  $T_2$ , the modern world orientations and foundations of leadership, education, and practice, follows.

In leadership education, we deal with students and practitioners who are full of (P<sub>1</sub>) ----- (T<sub>1</sub>) while they live in a world desirous of (T<sub>2</sub>) derived from (P<sub>2</sub>). Therefore the processes represented by wavy lines x, y, and z will not help, but the clear-cut changes represented by arrows A and B will. To the best of our knowledge, such a revision from Aristotelian to non-Aristotelian assumptions and systems has been formulated for the first time in Science and Sanity.<sup>18</sup>

These observations explain why the processes of traditional education, rooted in T<sub>1</sub> leadership and authority, are so often ineffective in creating meaningful change. Effective leadership cannot be conveyed by conventional T<sub>1</sub> means. In our efforts to induce change, we have learned that the processes of leadership education, or "reeducation" are relatively simple, but in practice, are not easy.

In order to bring change about, students seeking to increase their leadership effectiveness are first enabled to become aware, in 'intellectual' terms, of P<sub>1</sub> assumptions operating within their own neurological mechanisms. Next, teams of students study P<sub>2</sub> assumptions and, among themselves, discuss and clarify their own understandings of the inherent differences between P<sub>1</sub> and P<sub>2</sub>. Finally, students discover, experientially, the skills needed for exercising effective T<sub>2</sub> leadership.

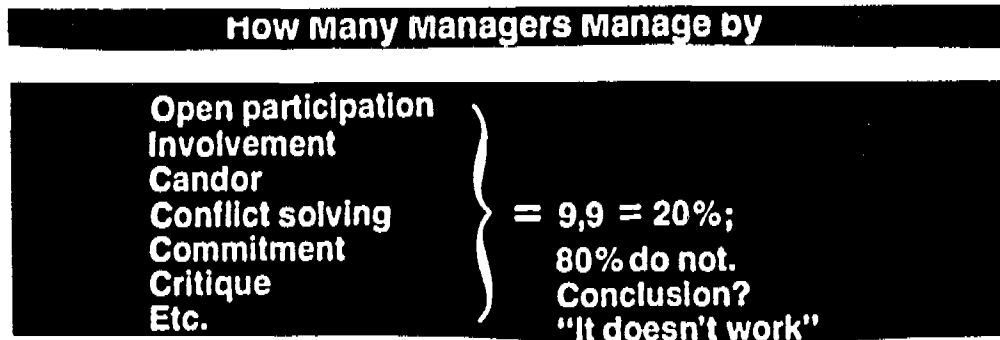
#### The Power of P<sub>2</sub> Insights into T<sub>2</sub> Behavior

When a person is fully aware of the P<sub>2</sub> basis of systematic analysis relative to behavior, he or she is then in a situation which permits him or her to design "happenings" in order to induce effectiveness through the systematic use of intelligence, rather than simply having to live passively with "happenings" as they occur and take shape out of the everyday give-and-take. The idea of being in a position to design happenings is very important to a more constructive future.

When "happenings" can be designed, then T<sub>2</sub> behavior dealing with a 9,9 orientation becomes an indispensable behavioral skill for all participants.

Persistent obstacles to shifting from T<sub>1</sub> to T<sub>2</sub> assumptions and behaviors have been identified in our work. The two most significant are self-deception and organization culture. By our findings, approximately 80 per cent of any group of American leaders who enter a learning experience initially report that they are operating in a 9,9 or T<sub>2</sub>-oriented way. Once their own P<sub>1</sub> and T<sub>1</sub> kinds of actual assumptions and behaviors have become explicit through critique, only 20 per cent now view their own behavior as 9,9 or T<sub>2</sub>-oriented as seen in Figure 43. Self-deception is reduced and the conditions conducive to change created.

Figure 43



Source: Blake, Robert R., and Mouton, Jane S. The New Managerial Grid. Houston: Gulf, 1978.

The structure and culture of organizations, heavily laced with  $P_1 - T_1$  systems of thought and action, must also be challenged and revised if deep and lasting change is to occur. Time-binding has deepened the expectations of people interacting within such cultures and unsound practices of leadership are held in place by tradition, precedents, and past practice. Once members of a given culture have become more aware of  $P_1 - T_1$  and  $P_2 - T_2$  types of behaviors and skills at an individual level, it is essential for them, interacting as intact groups, to study and identify the  $P_1$  and  $T_1$  expectations and requirements that are hidden within the web of silent history in which they are entangled. This aids team members to shift the cultural practices of the organization itself in the  $P_2 - T_2$ , 9,9-oriented direction.

#### Back Up to 39,000 Feet

Now we can return briefly to the introduction where we made remarks about flying the modern jet in a non-Aristotelian way. In 1979, NASA published a study which revealed the causes of airline industry accidents and near accidents. The gist of their conclusions is contained in the following paraphrase.

Too many crashes and near misses occur in circumstances where the "ultimate cause" cannot be traced to air-to-ground communications, equipment failure, lack of technical competence or a time factor. In too many cases, it has been demonstrated that adequate technical resources for solving the problem were available in the cockpit, but were not mobilized effectively.<sup>19</sup>

United Airlines had long been interested in the problem of effective cockpit resource management and had significant influence on bringing the NASA study about. United initially placed

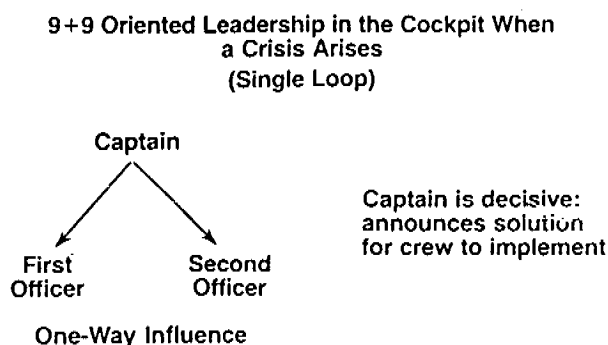


the problem before us about three years ago. It's one thing to recognize that a problem exists but quite another to understand its underlying dynamics. In order to study the dynamics underlying leadership processes in the airliner cockpit, seven airline officers were placed on temporary duty with our organization at that time. We designated seven of our own key personnel to join with them in a task force which had major responsibility for this priority effort. The task force worked for 18 months, meeting together for a week at a time, then returning to their home bases.

At the beginning of our work, the flying personnel made a major point with regard to the exercise of Captain authority. They emphasized the importance of decisiveness as an indispensable element of leadership process. Without decisiveness, uncertainty is communicated; divergent, uncoordinated, individually-centered actions are more likely to be taken by other crew members, and conditions for insubordination may be created. A primary concern as we continued our exploration was that Captain authority should be strengthened so that conditions favorable to insubordination are not created.

In any hazardous setting, whether the leader is commanding a submarine, aircraft, control tower, nuclear plant control floor, or fire fight, conditions of crisis can and all too frequently do occur. When an emergency situation develops, the leader's response is a critical factor in determining the likelihood of a desirable and safe outcome. Typically, the 9+9 or 9,1-oriented airline Captain or other leader responds to a crisis by dominating, mastering, and controlling the situation, quickly announcing the course of action to be implemented as shown in Figure 44.

Figure 44



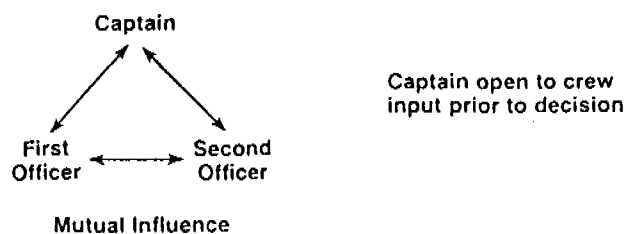
While this is certainly a decisive response to the happening, it

is not always the best response. In some instances, immediate, unilateral action taken by the Captain without provision of the opportunity for other crew members to offer input and alternatives has proven not only ineffective, but deadly.

Now we can examine the 9,9 orientation to leadership in hazardous situations and see that it remains consistent with the principles and strategies of openness, involvement, and participation as depicted in Figure 45. The leader acts quickly in seeking the soundest possible definition of the problem but does

Figure 45

9,9 Oriented Leadership in the Cockpit When  
a Crisis Arises  
(Double Loop)



not proceed to a solution without first utilizing available resources by soliciting others' input, contributions, and recommendations.

When viewed from a non-Aristotelian perspective, effective leadership, as shown here, requires the ability to mobilize available resources and bring them to bear on the problem at hand. To this point, approximately 4400 airline industry Captains, first officers, and second officers have learned this effective 9,9-oriented basis of crew leadership and teamwork. Simulator studies reveal that such learning enhances the quality of solutions to programmed crises, thereby increasing the likelihood that in-flight emergencies will also be resolved safely. Additionally, "United crew members have had much lower mistake rates on flights with FAA inspectors than they did before the program was started."<sup>20</sup>

Comparable results have been demonstrated in other settings where 9,9 leadership strategies have been systematically applied. In fact, the positive impact of 9,9-oriented leadership on productivity and creativity has been reported in a wide variety of organizations and from such diverse fields as social work and sales, nursing and real estate, teaching and banking. In our experience, applications of 9,9-oriented leadership have also proven requisite in establishing collaboration and cooperation between union and management groups locked in win-lose conflict; strengthening relationships between organization headquarters and field locations; increasing the success rate of acquisitions and mergers, etc.<sup>21</sup>

### Future Implications for an Emerging Society

Stepping away from the present for now and looking at the past from a broad culture-centered perspective, it is pertinent to ask whether it is 'natural' in preliterate history to reinforce compliance with reward as in the 9+9 setting or whether the mutuality inherent in 9,9 is the more 'natural'. Anthropological research leads us to believe that most behavior in preliterate times was regulated by custom. Remaining behavior which was subject to free choice was apparently organized consistent with the 9,9 orientation of involvement and commitment predicated on open, shared decision making. To quote, ". . . Hunter-gatherers have habitually made their decisions as equals, by consensus, and in face-to-face meetings."<sup>22</sup>

The 9+9 separation of the inseparable probably developed with the shift from hunting to herding and from picking to planting, possibly beginning somewhere in the 12th-10th centuries B.C. This change of leadership orientations may have been related to the production of 'owned' surpluses.

In many respects modern Western society has adopted as sound the 9+9 version of leadership in the supervision of work, conduct of military affairs, rearing of children, educational and penal systems, in much of organized religion, and so on. We may profitably examine the conditions that may have caused its appearance as a central style for exercising leadership.

Modern theories of leadership are rooted in the basic religious model of what was, and often is, presumed to be a sound relationship between God and man. "Not my will but Thine be done. . ." is a paternalistic precept in which the person relinquishes his or her own self-responsibility by acting not on what he or she wishes or thinks to be right, but rather on what religious authority says is correct and proper. Consideration or reward for compliance, it is traditionally believed, is withheld until the hereafter.

Paternalism flowered during earlier periods of poverty, hunger, and deprivation. We can believe that its acceptability was not based on its presumed inherent soundness so much as upon the needs of people to earn rewards and to gain other sources of security granted in exchange for compliance.

As materialism and affluence have expanded in the aftermath of World War II, we see that people generally are less dependent on the leader's discretion in providing external (i.e., dollars, etc.) rewards and less fearful of severe financial deprivation for non-compliance with leadership direction than in previous times. The readiness to 'tolerate' paternalistic leadership has begun to disappear from all walks of life. Successful resistance of college students in the Sixties to the "in loco parentis" orientation of academic administrations and the rising divorce rate

are two examples of such intolerance. Students throughout the school system now seem far less prepared to do what the teacher requires in exchange for grades and promotion to the next level. Husbands and wives seem far less content to maintain a marriage based on reward and compliance rather than on mutual understanding and fulfillment.

Accepting this scenario as essentially correct, it leads to important implications. The main one is that society cannot expect to reestablish voluntary order by moving in the direction of increasing paternalism.

A primary prospect for a sounder social future is in society-wide learning of how to exercise leadership in the non-Aristotelian manner indicated by a 9,9 orientation and to apply 9,9-oriented strategies to societal institutions of education, family, etc. This means opening situations to participation in such a way as to gain the involvement and commitment of people to solving problems and bringing more valid solutions into use. The strategies of a 9,9 orientation are simple enough to describe in 'intellectual' terms. Acquiring the behavioral skills requisite to open leadership, conflict resolution, inquiry, advocacy, critique, and so on is another matter, but also within our grasp.

#### Summary

Before we end this episode of our experience, let us ask ourselves the critical question, "Where do we go from here in terms of operationalizing sound leadership?" We stand at a point-in-time when the old Aristotelian structures and tactics for formulating and acting no longer provide predictable or acceptable bases for operating an ordered, disciplined and creative society. Paternalism has outlived its usefulness and acceptability.

At the same time, a model of non-Aristotelian logic is in place for  $P_2$  and  $T_2$  thinking and action based on scientific analysis and evidence. Educational designs for shifting from  $P_1$  and  $T_1$  to  $P_2$  and  $T_2$  have been created, experimented with, revised, improved, strengthened, and are available and tailor-made to the specific cultural activities of those who operate within them.

The individual and collective challenge is to apply these  $P_2$  and  $T_2$  systems of leadership thought and action to the nursery, school, university, shop floor, executive suite, and so on. In this way it may be possible to establish a foundation for a society that is ordered, disciplined, creative, satisfying, and capable of fostering healthy semantic reactions.

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## BIOGRAPHIES

Robert R. Blake and Jane S. Mouton

Robert R. Blake, President of Scientific Methods, Inc., in Austin, Texas, since 1961, and Jane Srygley Mouton, Vice-President since that time, have become widely known for their successful applications of behavioral science research to leadership problems in organizations. Both taught in the Psychology Department of the University of Texas before becoming involved with Scientific Methods, Inc. Dr. Blake, who received his Ph.D. from Texas in 1947, joined the faculty immediately afterward. It was at that University that he and his colleague, Glenn N. Ramsey, organized the symposium in 1950 on Perception to which Korzybski contributed his last paper (printed as "The Role of Language in the Perceptual Processes," in Perception: An Approach to Personality, Blake and Ramsey (eds.), Ronald Press, 1951; reprinted in GSB No. 36). Dr. Blake continued his general semantics activities by delivering his first Korzybski Memorial Lecture in 1961 (printed in GSB Nos. 28 and 29). Presently, he serves as a Trustee of the Institute. Jane Mouton received her Ph.D. from the University of Texas in 1957 and taught there for the following five years, also serving as Social Science Research Associate part of that time.

Drs. Blake and Mouton have co-authored many management books, the first of which, The Managerial Grid, has become a standard work in its field. Other titles include How to Assess the Strengths and Weaknesses of a Business Enterprise (1972), The Marriage Grid (1972), Instrumented Team Learning: A Behavioral Approach to Student-Centered Learning (1975), The Versatile Manager: A Grid Pro-

file (1980), Grid Approaches to Meeting Stress (1980), and Productivity: The Human Side (1981).

But life for this partnership is not all formulations. In a recent letter to the editor, Dr. Blake wrote, "Jane, her husband Jack, whom you have met, and I have just returned home from a ship excursion up into the arctic in those waters that separate Greenland from eastern Canada. We found this trip everything we had hoped for it. If I were to pick a singular feature that was of more interest to me personally than others, it would be hiking in the tundra. The tundra in this part of the arctic is very thick and when you step in it your feet sink into it quite much like stepping on a sponge. Often it is wet underneath. Otherwise, the icebergs and ice floes, polar bears, walruses, and musk-ox all added flavor to the arctic. . . ." When you can combine such openness to the fundamentally a-verbal (and potentially un-comfortable) with the kind of analytical formulating Blake and Mouton do, you have discovered-achieved a life-balance indeed.



ROBERT R. BLAKE



JANE SRYGLEY MOUTON