ABSTRACT

MANAGER GOAL SETTING: AN EXPLORATION
INTO ITS MEANING AND MEASUREMENT

by Jack L. Mendleson

Currently many managers believe goal setting is an
important tool for improving the functioning of business
organizations. Popular expressions of goal-setting ideas
are management by objectives and management by results.
Business managers have translated their strong belief in
goal setting into a considerable demand for books and
training programs about goal setting and for the services
of consultants. But despite this flourish of activity in
the past five years or so, little objective evidence
exists which would either support or deny the claims made
for goal setting. One of the very few relevant previous
research projects was done within one department of one
large corporation. This project reported finding positive
relationships between various supervisor techniques in
dealing with subordinates in goal-setting sessions and the
degree to which the subordinate's work behavior was changed
in a favorable direction as a result of goal setting. The
present study goes beyond this earlier study. The present
research involved superior-subordinate pairs in eight dif-
ferent companies. It also assessed the relationships
between goal-setting activity and two other logically

related management phenomena, the degree of job understanding between superior and subordinate and two ratings of subordinate effectiveness (present effectiveness and potential for promotion).

First the researcher, working from a broad definition, made a large-scale review of business writing about goal setting. From this information the researcher put together a list of 118 statements about goal-setting behavior to measure the amount or extent of goal-setting behavior occurring within a superior-subordinate pair of managers.

Next 29 goal-setting specialists judged the extent of goal setting indicated by each statement on the list. The 42 statements on which the specialists were in greatest agreement made up the Goal-Setting Index (GSI).

To derive the GSI from the specialists' judgments, the researcher adapted Thurstone's method of measuring attitudes, the method known as equal-appearing intervals. Here are three examples from the GSI:

From the lowest level of goal setting: At my organization level we're lucky if we have plans for tomorrow, let alone next week or next month.

From the middle level: I get some specific feedback about my performance, but I need more.

From the highest level: Every so many months my boss and I sit down and decide how much I'm supposed to accomplish by specific dates in the future. When these dates actually arrive, we talk about how I did and what I should be shooting for during the next time period.

Then, by having both the superior and subordinate check statements on the GSI with which they agreed, it was possible to derive quantitative scores indicating the level of goal-setting behavior occurring within the pair, as seen by: (1) the subordinate; (2) the superior viewing his subordinate's situation; and (3) the combined viewpoint of the pair.

Employing the GSI and two other measures in 25 superior-subordinate situations in the eight companies, the researcher found:

1. Confirmation of the hypothesis that there are significant, identifiable commonalities running through the wide variety of ways that goal-setting specialists describe manager goal setting.

2. Partial confirmation of the hypothesis that the extent of goal setting taking place within a superior-subordinate pair of managers can be measured.

3. Surprisingly, no significant relationship between the extent of goal setting within a superior-subordinate pair of managers and job understanding (extent to which the subordinate understood his superior's expectations for the subordinate's work).

4. (a) Surprisingly, no significant relationship between the extent of goal setting within a superior-subordinate pair of managers and the superior's ratings of his subordinate's present performance; (b) on the other hand, a positive relationship, as expected, between two of the three measures of extent of goal setting and the superior's rating of his subordinate's promotability.

5. Surprisingly, no significant relationship between the extent of job understanding within the superior-subordinate pair of managers and the effectiveness ratings.

The positive findings in 4(b) provide tentative support for the idea that goal-setting efforts on the part of the pair lead to better chances for considering the subordinate promotable. The more the superior sees that he does goal setting with a particular subordinate, the more promotable he considers that subordinate to be. Also, the more the subordinate sees that he is doing goal setting with his superior, the more promotable the superior thinks the subordinate is. This support of the hypothesis is limited by the fact that no significant relationship occurred between the combined GSI for the pair and the promotability rating.

How to explain the preponderance of unexpected results found in 3, 4, and 5? One possible explanation: Of the three measures--the GSI, the measure of job understanding, and the ratings--the first two proved not as reliable, in a measurement sense, as one might hope. At the same time, however, the two measures were sufficiently reliable, though at a borderline level, to permit the researcher to make the attempt to assess the intercorrelations among the variables of interest.

In view of the borderline reliability of these two measures, alternative conclusions can be drawn. First, as presently formulated the GSI at least provides a foundation for future attempts to measure goal setting since it does identify component parts of goal setting and isolates commonalities among the ideas of various specialists in goal

setting. Within the framework of this first alternative more effort could be devoted to improving the reliability of how goal setting was measured. If a more reliable measure could be developed, then it is possible that a greater number of significant interrelationships would result.

Second, the fact that positive interrelationships did not appear in most of the expected areas, although the measures in question were reliable enough to have possibly produced significant intercorrelations among the variables, suggests two possibilities: (a) The assumed chain of relationships from goal-setting behavior to better job understanding to effective subordinate performance is too simple a formulation. It may be necessary, in this complex field of manager behavior, to find additional intervening variables or events in order to obtain support for the above assumed chain of interrelationships. (b) It is also possible that this logically assumed chain of interrelationships does not exist except in scattered instances and that goal-setting efforts and better job understanding have little to do with leading to effective subordinate performance in the real world.

All the above possibilities have to be faced. The finding of some positive relationships between goal-setting efforts and promotability, if confirmed by future research, may be quite important to management theory. At least a

beginning has been made in seeing some of the factors
involved in understanding goal setting and other logically
related management activities.

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By

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to her and to Laura Ann, who was born during the final
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CHAPTER I

INTRODUCTION AND HYPOTHESES

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important tool for improving the functioning of business
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are management by objectives and management by results.
Business managers have translated their strong belief in
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related management phenomena, the degree of job understanding

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between superior and subordinate and two ratings of sub-
ordinate effectiveness (present effectiveness and potential
for promotion).

This chapter explains the particular focus of atten-
tion of this study, then defines goal setting for purposes
of this research. Next previous research into goal setting
is surveyed, followed by other pertinent research with
superior-subordinate pairs. This surveying leads to the
purposes of this thesis. Next is the explanation of the
three key variables. The chapter closes with the hypotheses
of this study and a brief discussion of the rationale of
these hypotheses. Later chapters discuss methods of testing
the hypotheses, results, and interpretations.

The researcher's first interest in goal setting is in
its measurement. For example, can one superior-subordinate
pair be said to practice goal setting to a greater extent
than another pair? If so, on what basis? The researcher's
second interest in goal setting, if the extent of its
existence can be measured, is in measuring its effects.
These two interests are the basis for this thesis. If these
two kinds of measurements can be made, subsequent research
efforts can become ever more situationally specific.

Definition of Manager Goal Setting

The term goal setting, somewhat more descriptive than
management by objectives or management by results, is em-
ployed throughout the study.

The paragraphs of definition below represent an attempt to delineate a core of agreement among the various advocates of goal setting. The definition may seem very "open," even vague. This is intentional, for goal setting is to be defined in this study so that some key ideas of all the major goal-setting theorists can be employed.

Manager goal setting is that process of superior-subordinate interaction through which work goals and related matters are established for the subordinate manager. Work goals are current aims for the individual manager in the performance of his work assignment.

These goals apply to a particular period of time; and, by the time of completion of the interaction, both superior and subordinate are aware of this period.

"Related matters" are defined as any arrangements which somehow facilitate the setting or achieving of work goals by the subordinate manager. For goal setting to exist, certain of these matters must be present. First, some mutually understood mechanism must be devised through which goal attainment can be verified. This verification could consist of measurement, but it need not. Verification could consist of nothing more than the observation that an event specified in a work goal has in fact taken place. Second, this verification also implies some feedback of information to the participants. Third, at the end of the period of time specified in the definition, some review of goal attainment must occur; and this demands additional

superior-subordinate interaction. Finally, a _recycling_
occurs, in which goals are once again set for the coming
period. These four matters may be minimal or very elaborate.
In addition, other matters related to goal setting may be
present. These other matters will be developed below,
through a review of the business writing about goal setting.

When are work goals and related matters said to be
"established"? The pair may or may not agree that the
goals are appropriate and reasonable. This kind of agree-
ment is not a necessary condition for having established
work goals. For example, in one pair the superior manager
may simply tell the subordinate manager what that subordi-
nate's goals are to be for the coming period, and the sub-
ordinate may believe the goals set are inappropriate and
unreasonable. On the other hand, the subordinate may set
his own goals without help from his superior, and the supe-
rior may believe the goals are inappropriate and unreason-
able but may agree for one reason or another that these
are the goals. In short, goals have been established if:
(1) the pair agrees what the subordinate's work goals
actually are for the coming period; (2) the pair agrees on
the length of the period; and (3) these "goals" meet the
definition of goals presented above. Hughes has suggested
the following condition: "Goal setting has been done when
the individual knows what he expects of himself, not just

what the manager expects of him."[1] Hughes' statement, how-
ever, is not a necessary condition of goal setting in this
study.

"Superior-subordinate interaction" is defined simply
as a process of exchange of information between superior
and subordinate, either oral or written, or both. The defi-
nition does not turn on whether superior or subordinate
initiated the interaction; nor does it turn on which party
(if either) plays the dominant role in the decisions that
result. Furthermore, the interaction may occur simultane-
ously between the superior and several of his immediate
subordinates.

Group goal setting satisfies the definition given
here, provided that each superior-subordinate pair can be
said to have "established" work goals, as explained above.
For the present definition to apply this means that, although
the goals may be established for the superior and various
subordinates, each individual superior-subordinate pair must
be clear on that individual subordinate's goals.

The definition suggested here is broad enough to en-
compass the literature under all the following labels: goal
setting (whenever something more specific than organizational
goals are discussed), management by objectives, management
by results, standard setting, and performance objectives.

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[1]Charles L. Hughes, Goal Setting, Key to Individual
and Organizational Effectiveness (New York: American
Management Association, 1965), p. 117.

Previous Research

Goal-setting Research

The section which follows summarizes the research find-
ings on goal setting, along with an analysis of the way in
which goal setting was measured in each study.

In research for his Master's thesis, Garwood received
113 questionnaire responses from managers in one company.
Here are examples of his preliminary findings:[1]

> Eighty-five per cent (85%) of the respondents felt
> that management by objectives has contributed to
> profitability at [the Company].

> Seventy per cent (70%) of respondents felt that
> management by objectives facilitates planning more
> than previous approaches.

These findings suggest an important implication: At
least some managers in a business organization do get the
idea that, following emphasis upon management by objectives,
they are doing something they were not doing previously, or
at least doing something more or better than previously.
One of Garwood's stated purposes in the study is to evaluate
the company's training program in management by objectives.
Unfortunately he seems to have no measure of the extent to
which the training program changed behavior of participants.
Rather, his questions seem to assume that because the

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[1]These were reported in the following memorandum to
company officials: W. R. Garwood, "Survey of Management by
Objectives Participants," September 14, 1966. At the time
of most recent information, Garwood was a Master's candi-
date at the University of Tennessee.

managers underwent the training they are now employing management by objectives, while previously they did not employ it.

Raia, in his doctoral dissertation,[1] studied a manager goal-setting program, the "Goals and Controls Program" of the Purex Corporation. Raia measured several variables which could be effects of the new program. The variables included: levels at which goals were set where the goals are traditional and quantifiable production goals; degree to which such goals were attained; an index of organizational functioning independent of goal setting and goal achievement, namely productivity; awareness of basic company goals among participants; overall attitude of participants; level of motivation of participants; and communication and mutual understanding. Raia reports that installation of the program is associated with generally favorable changes in each of the variables.[2] Raia's study represents a significant step in goal-setting research because for the first time some of the relevant issues of goal setting have been measured and related to indices of organizational functioning. However, the relevance of these findings to the present study is limited for several reasons:

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[1]Anthony Paul Raia, "A Case Study of the Effects of Goal-Setting and Self-Control on Organization Performance" (Unpublished Ph.D. dissertation, University of California, Los Angeles, 1963).

[2]Anthony Paul Raia, "Goal Setting and Self-Control: An Empirical Study at Purex Corporation, Ltd.," Journal of Management Studies, Vol. 2, No. 1 (February, 1965), pp. 34-53. See also Raia, "A Second Look at Management Goals and Controls," California Management Review (Summer, 1966), pp. 49-58.

1. The first three of the variables listed above
   were measured using statistics relevant to the
   production departments of Purex. These measure-
   ments would be directly relevant in few (if any)
   other companies. Neither would the measurements
   be relevant to functional areas other than
   production.

2. All other variables were measured only <u>after</u>
   installation of the new program. This meant that
   the researcher could only infer that improvements
   had occurred, based on a limited amount of inter-
   view data and reportedly high present levels of
   each of these variables.

3. Instead of measuring the central variable, goal
   setting, Raia simply assumed that goal setting
   was actually taking place, or that the amount of
   goal setting had increased, because a new program
   was installed.

4. The nature of the change brought about by the new
   program is not adequately specified.

The third and fourth limitations are quite serious
from the point of view of the present research, for the in-
stallation of a new program does not ensure significant
changes in the essence of superior-subordinate relationships.
It is certainly possible that participants may conform to
the formal requirements of the program with little change
in actual performance.

In short, Raia did not really measure goal setting, at least not at the level of a given superior-subordinate pair. Rather, he assumed "goal setting and self-control" came into being at Purex, where it had not existed previously because of: the emphasis of the president of the company and a policy pronouncement; and a Goals and Controls Program which consisted of formally required goal setting, control reports, and performance review.

One of Raia's findings, however, is quite pertinent to the present study. He found that communication and mutual understanding between the plants and company headquarters improved as a result of the program. No rigorous measurements were made on this point. Rather, this finding is based on Raia's judgmental evaluations of his interview data. He reasons that the face-to-face performance reviews, installed as part of the program, "appear to facilitate two-way communication and mutual understanding between the parties."[1] Some background about Purex's Goals and Controls Program will help to put this conclusion into proper perspective for purposes of the present research.

The performance review was one of three integral parts of the Goals and Controls Program. (The other two parts were: the formally required goal setting, in which the manager himself set the goals and his superior reviewed them; and control reports in which the information is supplied

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[1]Ibid., p. 121.

directly to the individual manager concerned, but with a copy to "higher levels of management.") However, this performance review was uniquely an invention of Purex management and is not at all representative of common practice. The Purex performance review provides operating line managers the opportunity to meet with representatives of higher management on a personal basis, whereas the more common practice in industry is for the individual manager to meet exclusively with his immediate superior for this review. At Purex these meetings take place alternately at the plant and at corporate headquarters, and this introduces another significant deviation from common practice. The meeting at corporate headquarters is significant because the managerial people from the plant have an opportunity to discuss a wide range of problems with the various staff departments of the company.

Raia's evidence of improved communication and mutual understanding between the plants and company headquarters can now be viewed in clearer perspective:

> Six of the eight line managers interviewed reported that the presence of higher authority at the review is an important factor in the removal of obstacles. Each was able to recall several specific instances in which obstacles to higher goal levels and improved performance were removed because authorization which otherwise would not have been obtained was granted at reviews. This appears to be particularly true when the solution involves the expenditure of a significant amount of funds.[1]

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[1] Ibid., p. 117.

Two conclusions emerge. First, because of the uniqueness of
the Purex performance review, it would not be reasonable to
generalize the finding of greater communication and mutual
understanding to other companies with different performance
review programs. Second, while the finding concerns an
important area of inquiry, the evidence presented is very
limited and further research is needed. This research is
part of the present study.

The General Electric Company has conducted research into
performance appraisal and related subjects, many of which
have relevance to goal setting.[1] In fact, one of these
findings seems to have produced much of the current interest
in goal setting and especially "results-oriented" appraisal.
It is summarized as follows:

> Appreciable improvements in performance were
> realized only when specific goals were established
> with time deadlines and results measures agreed upon.
> Regardless of how much emphasis the manager gave to
> an improvement need in the appraisal discussion, if
> this did not get translated into a specific goal,
> very little performance improvement was achieved.[2]

This finding was based upon: (1) observation of 84 superior-
subordinate pairs in performance appraisal and goal planning

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[1]The research findings summarized here appear in two
basic reports: Emanuel Kay, et al., "A Study of the Perfor-
mance Appraisal Interview," March, 1962; and Emanuel Kay and
Roy Hastman, "An Evaluation of Work Planning and Goal Set-
ting Discussions," March, 1966. Both were published by the
Behavioral Research Service of the General Electric Company.

[2]Kay, et al., op. cit., summary page.

discussions; (2) before and after interviews with subordi-
nates; and (3) a follow-up check 12 to 14 weeks after the
performance appraisal and goal planning discussions to
determine the degree to which performance improvement had
been achieved. The finding was consistent with earlier
research in other companies, which found that specific
goals were necessary for improvement to occur at worker
levels.

More broadly viewed, the General Electric research
seems to demonstrate unexpected consequences of typical per-
formance appraisal discussions. A prime purpose of these
discussions is to trigger an improvement in performance.
A common assumption among managers is that subordinates
want to know "how they stand" or "how they're doing."
Even more "obvious," one is not likely to improve unless
he knows where he is falling short. As a result, the boss
finds himself reciting the subordinate's weaknesses or
areas in need of improvement. The General Electric research,
however, found that criticisms of performance (and this can
be read as <u>negative</u> criticism) "typically resulted in de-
fensiveness on the part of the subordinate."[1] More tenta-
tively, the researchers suggested, "It is very possible that
criticism creates defensiveness and defensiveness retards
improvement."[2] At any rate, the findings clearly demonstrate

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[1]<u>Loc. cit.</u>

[2]<u>Ibid.</u>, p. 33.

that "the more criticism and defensiveness observed in the
appraisal discussion, the less performance improvement
achieved 12·to 14 weeks later."[1]

By the time of the 1966 study[2] the results of the
first study, reported above, had played an important role
in the installation of "Work Planning and Review" discus-
sions. "Work Planning and Review," in more general terms,
is a goal-setting program. This later study confirmed the
earlier results and added to them:

> Maximum improvement in job performance was realized
> by those employees whose WP&R [Work Planning and
> Review] interviews consisted predominantly of problem-
> solving discussions--the review of problems encountered
> in achieving goals and the discussion of alternative
> solutions to these problems and anticipated future
> problems.

> The least performance improvement was noted for
> those men whose WP&R interviews had been conducted
> like a performance appraisal interview. The same
> pattern of criticism by the manager, followed by
> defensiveness on the part of the subordinate, and lack
> of improvement in subsequent job performance found in
> a previous study of the performance appraisal process
> was observed in this study.[3]

Confirmation is provided in a study by Morton et al.[4]
which is apparently independent of the General Electric
research. The so-called "goals method" or appraisal and
review was found better than the "rating method" in several

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[1] Ibid., summary page.

[2] Kay and Hastman, op. cit.

[3] Ibid., inside cover page.

[4] R. B. Morton, et al., "An Experiment in Performance
Appraisal and Review," Journal of the American Society of
Training Directors, Vol. 15, No. 5 (May, 1961), pp. 19-27.

respects. The goals method created higher agreement, higher "teamness," clearer "routes to improvement," less hostility among subordinates, and, paralleling the General Electric findings, greater eagerness among subordinates to change their performance.

For purposes of the present thesis it is instructive to note the focus of attention of the General Electric researchers. This attention was given to what interaction occurred between superior and subordinate, rather than what program was in effect. Naturally the program did have an impact. But no assumption was made that various managers would all react to the same extent or even in the same direction to the program.

In addition to the focus of attention, General Electric's research efforts also seem optimally specific. Note the specificity of emphasis of the underlined terms in the following summary of the 1962 study:

> The most constructive finding of the study was that discussions involving work planning, goal setting, and subsequent reviews of performance, which focused on specific, short-term plans and goals, yielded much greater returns in improved job performance than did comprehensive summary appraisal discussions.[1] [Underlining added.]

By specifying meanings in detail, General Electric was able to begin measuring how much goal setting was occurring. For example, work planning was defined to include the following elements:

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[1]Kay and Hastman, op. cit., p. 1.

> . . . Work goals, a strategy for reaching the goals,
> identification of alternate routes for goal attainment,
> the identification of resources required to meet the
> goals ($ budget, manpower, facilities, and information),
> the identification of tasks necessary for reaching each
> goal and the time schedule for task completion, measure-
> ments to identify progress and achievement, the identifi-
> cation of check points to review progress and make
> necessary revisions in the plan, and a plan to communi-
> cate with those who will affect or be affected by the
> plan's progress.[1]

This detailed definition facilitated the development of a

research instrument, the Work Planning Survey. In addition

to the report from which the quoted material above came, a

manual was developed[2] through which a manager could survey

his own operation. Although a computer program was developed

to process the data, and although considerable information

is provided in the manual for feeding the results of the

survey back to the participants and then for following up,

no summary evaluation or score was developed.

Likert's recent study of salesmen and their managers

has some relevance for goal setting. Likert summarizes:

> The results . . . point to a fundamental conclusion:
> sales managers who, as seen by their men, have a well-
> organized plan of operation, high sales goals, use
> group methods of supervision, and apply the principle
> of supportive relationships are appreciably more
> likely to have better sales units under their

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[1]Anonymous, "A Composite Description of Work Planning
Based Upon Four Departments," a mimeographed paper prepared
for internal use at General Electric, undated.

[2]Anonymous, "Manual for Administering Work Planning
Survey and Interpreting Results," prepared by the Individual
Development Methods Service of the Management Development
and Employee Relations Services, General Electric Company,
1963.

direction than are the managers who, as seen by their
men, display the opposite pattern of behavior. The
latter are much more likely to be in charge of poorer
sales units.[1] [Emphasis added.]

The important point for the present research is the measure

of goals employed. The two goals measures consisted of the

extent to which the salesmen _feel_ (1) that the sales manager

has high sales goals and (2) that the other salesmen have

high sales goals. Although this measure lacks the specifi-

city of the General Electric work, it points up the essential

subjectivity of the goal-setting process. The researcher

is doomed to great uncertainty if _he_ must say that one

superior-subordinate pair's goals are set at higher levels

than another pair's, for each pair's situation is expected

to differ significantly. Even generalizations about goal

levels of the subordinates of a single superior will be very

difficult for an outsider.

Several conclusions may be drawn from this review of

the research on goal setting. First, goal setting, as de-

fined in this study, serves the worthwhile purpose of

facilitating improvement of managerial performance. Goal

setting also seems to do this better than the comprehensive

performance review, which has been widely advocated and

widely, if perhaps poorly, practiced for many years. Second,

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[1]Rensis Likert, "New Patterns In Sales Management,"
Michigan Business Papers, No. 37, 1962 (published by the
Bureau of Business Research, Graduate School of Business
Administration, The University of Michigan, Ann Arbor,
Michigan).

goal-setting programs seem to have some positive effects, although the cost of achieving these effects in relation to their organizational value has not been determined. Furthermore, dysfunctions may yet be found which outweigh these positive effects. Third, the specificity of the General Electric research suggests that, within one company's corporate philosophy, programs, and procedures, detailed research into components of goal setting can be conducted. Whether components can be identified which will apply to several companies remains to be seen. Fourth, both the Likert research and the General Electric Work Planning Survey suggest the fruitfulness of focusing upon the subjective evaluations of the participants.

Related Research with Superior-Subordinate Pairs

The central concerns of the following review of findings may be summarized in two questions:

1. What are the manifestations of disagreement and misunderstanding between superior and subordinate managers?

2. How significant is this disagreement and misunderstanding?

The following table summarizes the findings in a study by Maier et al.[1] Most pertinent for the present research is

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[1]Norman R. F. Maier, et al., Superior-Subordinate Communication in Management, AMA Research Study 52 (New York: American Management Association, 1961).

TABLE 1-1. Comparative agreement between superior-subordinate pairs on four basic areas of the subordinate's job (percentages based on study of 58 pairs in patterned interviews).1

	0 Almost No Agreement on Topics	1 Agreement on Less than Half The Topics	2 Agreement on About Half the Topics	3 Agreement on More than Half the Topics	4 Agreement on All or Almost All Topics
Job duties	3.4%	11.6%	39.1%	37.8%	8.1%
Job requirements (subordinate's qualifications)	7.0%	29.3%	40.9%	20.5%	2.3%
Future changes in subordinate's job	35.4%	14.3%	18.3%	16.3%	15.7%
Obstacles in the way of subordinate's performance	38.4%	29.8%	23.6%	6.4%	1.7%

the area of job duties, where the greatest agreement occurred. Even in this area only about 46 per cent of the pairs agree on more than half the topics. The researchers are not explicit about job descriptions but report that "many of the five companies studied had fairly elaborate descriptions of the subordinates' job duties, developed at considerable

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1Ibid., p. 10.

expenditure of time and money."[1] Another uncertainty in these findings, as carefully noted by the researchers, is the extent to which a real lack of agreement exists, as opposed to omissions of duties due to temporary forgetting.[2] In the present study it should be apparent that goal-setting efforts would be hindered by lack of agreement of the former kind. Although the researchers interpret the findings as reflecting "a fair amount" of agreement about duties, they point to another problem--agreement about priorities of duties. It was found that agreement about job duties does not guarantee agreement on the priority assigned to these duties. Also pertinent is the large percentage--nearly 50 per cent--of the pairs who agree on less than half the future changes in the subordinate's job. Finally it is relevant that nearly 70 per cent of the pairs agree on less than half the obstacles in the way of subordinate's performance. The researchers are appropriately conservative in interpreting this last finding, as they point to the "very personal" nature of the subject.[3] Nevertheless, as the researchers themselves conclude, these findings strongly suggest the existence of a significant organizational problem. The researchers write:[4]

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[1] Ibid., p. 13.

[2] Ibid., p. 20.

[3] Ibid., p. 12.

[4] Ibid., p. 30.

> . . . The findings in general provide empirical evi-
> dence that substantial communication problems exist at
> high management levels in organizations--problems
> which one can expect to be reflected in poorer organi-
> zational efficiency and distortion of organizational
> goals at lower levels in the hierarchy.

The exact nature of the problem may not be this clear.
There may also be instances in which "communication" is not
the problem--if effective communication means that the two
parties effectively exchange information and grasp each
other's points of view. Rather, in these cases the problem
may be a basic lack of agreement about the appropriateness
of values and assumptions. This problem will be circumvented
in this thesis by assuming that the _first_ administrative con-
cern must be with communication which produces understanding.
In other words, before the researcher explores a topic such
as subordinate's _agreement_ with superior's viewpoint, he
should first study the subordinate's _understanding_ of that
viewpoint. Duffendack, whose work is discussed below, aptly
states this from the manager's viewpoint: "Until you know
there is understanding, there is no basis for either agree-
ment or disagreement."[1]

Also included in the Maier report is an article,
"Management by Objectives As a Communication Device," which
discusses one way to alleviate the communication problem.
The article suggests management by objectives as one way to

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[1] Stanley C. Duffendack, "The Job Perception Index:
Manager's Manual," internal publication of the Individual
Development Methods Service, General Electric Company,
June 25, 1965, p. 1.

remedy the problems uncovered by the research of Maier

et al.

Duffendack of General Electric has developed and

applied an interesting device for measuring job understand-

ing, the Job Perception Index. This device measures not

agreement of superior and subordinate, but simply the extent

to which the subordinate understands his superior's expecta-

tions. Duffendack calls this perceptual congruence. Because

this device has been used in the present research, details

of its operation are postponed to Chapter 2. However, it

should be noted at the outset that more is being measured

than just the subordinate's perceptiveness. Duffendack ad-

vises managers (superiors) that, when they interpret their

own index scores, they keep in mind, among other things:

> Communication is a two-way process. You need to
> check on yourself as a sender and receiver, as well
> as on your employee as a receiver and sender. Two-
> way feedback is the key, and is most useful when used
> on a day-to-day basis.[1]

One important finding from the work of Duffendack and

his colleagues at General Electric is that there is a range

of variation in the Job Perception Index. Specifically,

based on the results of 176 company managers, the range is

from a rank order correlation of -1.00 to +.91. Study of

both the mean of the distribution (mean = .47) and the

distribution in Table 1-2 would indicate the scores are more

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[1] Ibid., p. 1.

or less normally distributed. Duffendack reports a test-retest reliability of .63 and standard error of estimate at the mean of .14.

TABLE 1-2. The distribution of company managers on the Perception Index[1]

P.I.	Decile	Explanation of Distribution
.73 to .91	90-99.9	The decile shows the relative position of a P.I. score. For example a P.I. of .54 is higher than that achieved by about 60% of the managers but lower than that of about 30%.
.65 to .73	80-90	
.59 to .65	70-80	
.53 to .59	60-70	
.47 to .53	50-60	
.40 to .47	40-50	This distribution is based on the P.I. results of 176 Company Managers. They represent managers from the Unit Manager to the Department General Manager. They represent all functions and seven departments but it is not a scientifically selected sample.
.32 to .40	30-40	
.22 to .32	20-30	
.08 to .22	10-20	
-1.00 to .08	0-10	

This range of variation suggests that some pairs apparently do have higher job understanding than other pairs. This finding is consistent with findings of Maier et al., as shown in Table 1-1. Second, while individual pairs differ significantly, no significant variation was found between scores in the several General Electric plants at which the Index was used. There was no evidence that superior-subordinate pairs were communicating any better at one plant than another. These plants were widely dispersed

[1]Ibid., Exhibit 1, p. 4.

geographically, were engaged in radically different businesses, and were several different sizes.

As in the case of Maier et al., we must rely to some extent on the interpretation of the researcher for an assessment of the significance of the lack of agreement found. Duffendack's experience, as a full-time employee of General Electric, may give him an advantage in making such an interpretation. In Duffendack's judgment, 30 to 40 per cent of the pairs were no better than "the average level of understanding"; Duffendack adds that "frequent checking is required to ensure accurate communication." Of this 30 to 40 per cent, 20 to 30 per cent are no better than "chance score"; Duffendack comments that "there is a lack of understanding and only detailed communication and frequent follow-up are effective." Of these 20 to 30 per cent, the bottom 10 to 20 per cent are depicted as follows: "There is misunderstanding, probably disagreement and serious communication failure."

The evidence offered by Maier et al. and by Duffendack seems to suggest rather clearly the lack of agreement and/or understanding between superior and subordinate managers. However, all the following explanations might be given to explain low scores. (Indeed, several of these have been suggested by Duffendack and Maier et al. as managers' reactions to the findings):

1. The differences are merely a question of "semantics"; there is basic agreement even though different words are used.

2. The reason superior and subordinate failed to agree on subordinate's duties is that either or both parties forgot to mention some duties; this temporary memory lapse is not significant.

3. This measure did not measure, or at least it underemphasized, the really important areas.

4. The work is constantly changing, and this explains the lack of agreement.

5. The work is more complex than most other work, and this explains the lack of agreement.

Each of these objections could be countered with logical argument. However, it may be more persuasive, especially if these findings must be communicated to managers, to cite an informal bit of research which demonstrates rather clearly the mechanism through which the disagreement or lack of understanding arises. Marion Kellogg developed a case study[1] involving a mythical individual (John Jones). Half the group working with the case is instructed to pretend it is John's manager, that it is the evening before a discussion with him to make a plan for his development. The other half is asked to put themselves in John's place, facing the next day's discussion with his boss of his development needs and plans. Both groups are given the same relevant information:

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[1]Marion S. Kellogg, "New Angles in Appraisal," Thomas L. Whisler and Shirley F. Harper, editors, Performance Appraisal: Research and Practice (New York: Holt, Rinehart, and Winston, Inc., 1962), pp. 88-92.

personal data about John, including age, education, and work history; summary of his past performance appraisals; results of tests taken when he was first hired. The information about John is about equally mixed with favorable and unfavorable material (e.g., while he is bright, quick, outgoing, and quite a leader, he is not very detail minded and dislikes routine and records very much).

Miss Kellogg summarizes her experience in giving this case to eleven workshop groups of managers and to over 200 participants:

> In every case, the manager group saw John as, at best, performing at a minimum level, in spite of the fact that his appraisals all rated him "average" or better. And John saw his manager as blocking his advancement, almost impossible to work for, and failing to give reward for good work even though he had been given some very substantial salary increases.[1]

It seems apparent that superior and subordinate, at least when facing each other, play very different roles. Miss Kellogg notes that everyone views things through his own "set of filters" and "screens the facts" he uses. Social psychologists have identified the concept of "selective perception," which "causes a person to see only a portion of the objectively available stimulus."[2] Miss Kellogg's finding demonstrates that the superiors' "sets of filters" may be systematically different from subordinates' sets.

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[1]Ibid., p. 90.

[2]John A. Howard, Marketing: Executive and Buyer Behavior (New York: Columbia University Press, 1963), p. 28.

Obviously such differences can be expected to give rise to disagreements and misunderstanding.

Harrison's dissertation research,[1] although apparently independent of Duffendack's work, studied a very similar concept of subordinate understanding of superior's expectations. Unfortunately for present purposes, Harrison's research was at the level of workers and their supervisors, rather than managers and their superiors. Nevertheless the findings are relevant to the present research design. Harrison found that workers who more accurately predicted what their supervisors expected from them tended to be given higher rankings on job performance. One of the hypotheses below employs a very similar line of reasoning at the managerial level. Harrison is careful to note that his study

> Does not show whether better understanding of the expectations of the supervisor was a function of an ability of the individual employee or whether better understanding grew out of the supervisor's being more willing to communicate his expectations to some employees than to others.[2]

Summing up the related research into superior-subordinate pairs:

1. There _is_ evidence of significant misunderstanding between superior and subordinate concerning the subordinate's work.

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[1]As reported in Roger L. Harrison, "Workers' Perceptions and Job Success," _Personnel Psychology_, Vol. 12 (1959), pp. 619-625.

[2]_Ibid._, p. 624.

2. This misunderstanding occurs especially in the
   area of priorities of subordinate's duties,
   future changes in subordinate's work, and
   obstacles facing the subordinate as he performs
   his assigned work. It occurs less in the area
   of subordinate's job duties, but even here it
   can be considered a significant problem.

3. General Electric's inter-plant evidence seems to
   suggest this misunderstanding occurs as much in
   one company or one plant as another.

4. Goal setting is one conceivable solution to the
   misunderstanding.

Purposes of the Present Study

The review of the research findings above suggests
some of the possible interrelationships that could exist be-
tween such managerial preoccupations as superior-subordinate
understanding and the extent of goal setting that goes on in
an organization. Further, the literature reflects widespread
enthusiasm for goal setting among managers, consultants, and
authors. For further progress in clarifying the relation-
ships that might exist between goal setting and other manage-
ment actions and problems as well as to understand more
operationally what is involved in goal setting itself, the
necessity for measuring goal setting is clear. A measure of
goal setting will be developed in this study.

This measure is to be derived directly from managers' comments and from prescriptive statements found in the literature on goal setting and other areas of management. During the process of developing this measure a number of specialists in goal setting are to independently judge both the relevance of various statements about goal setting and then the extent of goal setting indicated by the relevant statements. This judging is to provide, through a comparison of the independent judgments, a means of evaluating the degree to which agreement can be obtained. The first purpose of this research, then, is to derive a cohesive, generally agreed upon measure of manager goal setting.

The measure so derived may be useful in at least two respects. First, it should permit the claims made for goal-setting systems to be tested; i.e., it should provide a research tool through which the extent of goal setting in one superior-subordinate situation can be compared to that in other settings, including different organizations, different departments or divisions, and different functional areas of responsibility. Second, for the administrator who has definite ideas about how much goal setting is desirable or needed in various superior-subordinate situations (including his own situation), this measure may provide a means of comparing extent of goal setting between various sub-units of the same company or comparing sub-units at various times (e.g., before and after significant top management

action to affect the amount of goal setting going on in an organization).

The second purpose of the present research is to employ the measure discussed above to work out possible relationships among goal-setting efforts and two other significant and measured organizational variables—mutual job understanding and individual manager effectiveness ratings. Specifically, the purpose is to answer these questions: Is there an association between goal setting and job understanding? goal setting and ratings? job understanding and ratings, especially where this relationship can somehow be attributed to goal-setting efforts? Although the direction of causality cannot be demonstrated in the present study, the ultimate purpose underlying this second purpose is to answer this question: What difference, if any, does manager goal setting make in the organization?

Key Variables in the Study

Three key variables have been delineated in the purposes above and will be employed in the hypotheses that follow. Preliminary description of these variables will be given here, with more detailed discussion in Chapter 2. First, extent of goal setting is the degree to which superior and subordinate set work goals for the subordinate's work, plus the extent to which various "related matters" are established. Three distinct measures of the extent of goal setting will be employed: superior's view of extent of goal

setting; subordinate's view; and a measure of the average
of the two views. Each of these measurements is conceptually
distinct. The "related matters" were defined minimally above
to include verification, feedback, review, and recycling.
As a result of the review of the business writing about goal
setting in the next chapter, these matters will be elabo-
rated further and additional related matters will be intro-
duced. At this point it is sufficient to take extent of
goal setting to mean how much goal-setting activity is
taking place within a particular superior-subordinate situa-
tion.

Second, job understanding, measured by perceptual con-
gruence, is operationally defined as the extent to which a
subordinate knows the order of importance his superior
assigns to various aspects of the subordinate's work. In
other words the highest possible perceptual congruence (and
by inference, the highest job understanding) would occur
where the subordinate perfectly understands his superior's
expectations for him. Perceptual congruence is limited to
Duffendack's definition; thus his Job Perception Index may
be said to measure perceptual congruence.

Third, the ratings are the superior's evaluation of
the subordinate's present performance and potential for
advancement.

Hypotheses

1. There are significant, identifiable commonalities running through the wide variety of ways that goal-setting specialists describe manager goal setting; and these commonalities will be reflected in the independent judgments of a sample of various specialists in goal setting. (Common labels for these specialists' descriptions of manager goal setting are goal setting, management by objectives, and management by results.)

2. The <u>extent of goal setting</u> taking place within a superior-subordinate pair of managers can be measured where goal setting is viewed as a wide-ranging concept involving not only work goals and the process of setting goals but also various related matters. (These "related matters" include verification, feedback, review, recycling, and others; the "others" will be identified in the next chapter.)

3. The <u>extent of goal setting</u> within each superior-subordinate pair of managers is positively correlated with the <u>job understanding</u> of that pair (where job understanding is measured by perceptual congruence and where extent of goal setting is measured by all three methods: superior's view; subordinate's view; and combined view).

4. The <u>extent of goal setting</u> within a superior-subordinate pair of managers is positively correlated

with the superior's <u>ratings</u> of the subordinate (where

extent of goal setting is measured by the three ways).

5. The <u>job understanding</u> within a superior-subordinate

pair of managers (measured by perceptual congruence)

is positively correlated with the superior's <u>ratings</u>

of the subordinate.

Rationale of the Hypotheses

The premise underlying Hypothesis 1 is that these

"commonalities of viewpoint" may well be <u>more</u> significant

than any dissimilarities which exist. That is, there may

be a common core of ideas about goal setting which is more

significant than the differences, such as whether individual

or group goals are emphasized or whether superior or subordi-

nate plays the dominant role in formulating work goals.

This premise of the significance of commonalities has not

been stated as a hypothesis, since it cannot be tested in

the present study. However, confirmation of Hypothesis 1

may suggest further exploration of this premise.

Underlying both Hypothesis 1 and Hypothesis 2 is the

premise that, for research involving careful measurement of

variables, goal setting can be meaningfully viewed as a

wide-ranging concept, as suggested in Hypothesis 2. Thus,

underlying Hypothesis 2, that this wide-ranging concept <u>can</u>

be measured, is the premise that such measurement will be

useful for research into goal setting.

Discovering the direction of causality in Hypotheses 3, 4, and 5 is beyond the scope of this study. In fact, if the three variables are correlated, it is probably the result of circular causality. However, the basic premise is that increased goal setting helps increase job understanding (measured by perceptual congruence), and that increased job understanding tends to increase ratings. This latter relationship is congruent with Harrison's findings. Again, if the hypothesis is confirmed, this may suggest future research into the causal relationship offered here.

Perceptual congruence, in Hypotheses 3 and 5, might be taken simply as a measure of the subordinate's social sensitivity or empathy. However, this measure has been used in this research with the assumption that the interaction between superior and subordinate is the dominant determinant of the congruence. This assumption is perfectly aligned with Duffendack's thinking and seems to follow naturally from the research efforts of Maier et al.

CHAPTER II

METHOD FOR TESTING HYPOTHESES

This chapter explains the method for testing the hypotheses presented in Chapter 1.

The first major section of the chapter explains the independent variable: the extent of goal setting. It traces the development of the independent variable from its theoretical conception through the series of steps that transformed the conception into something measurable. The steps are:

1. Definition of the extent of goal setting.

2. A review of the business writing about goal setting from which are derived some statements about goal setting and categories of these statements, so that these statements and the categories would be available for developing a measure of the independent variable, the extent of goal setting.

3. A summary of Thurstone's method for measuring attitude and the adaptation of this method to the measurement of the independent variable.

4. Development of an initial group of statements providing a pool from which to draw in constructing a measure of the extent of goal setting.

(The statements are drawn from the literature
review mentioned in step 2 above, while the
pool of statements is a feature of Thurstone's
method mentioned in step 3 above.)

5. Selection of judges who evaluated the statements
   in step 4 and procedure for contacting these
   judges (a feature of Thurstone's method mentioned
   in step 3 above).

6. Selection of a smaller number of statements most
   appropriate for making up the final measure (a
   feature of Thurstone's method mentioned in step 3
   above).

This section closes with a summary of the development of the
goal-setting measure, referred to in this thesis as the Goal-
Setting Index (GSI).

The second major section of this chapter describes the
two dependent variables--the Job Perception Index (JPI) and
the Subordinate Effectiveness Rating (SER)--and how they
are measured.

The third major section explains how interrelation-
ships among the three variables were assessed in a field
study.

The Independent Variable, Extent of
Goal Setting

Definition of Extent of
Goal Setting

Chapter 1 defined the extent of goal setting as the degree to which a superior and subordinate pair set work goals for the subordinate's work, plus the extent to which related matters are established such as verification, feedback, review, and recycling.

At the outset of this thesis the researcher assumed that some superior-subordinate pairs manage by objectives more than other managers. It might be argued that superior-subordinate pairs are characterized by a range of differences in much the same way that individuals are. However, in interviews with various specialists in goal setting, it became apparent that the idea of different levels of goal setting is not necessarily obvious. For this reason this concept of level will be developed in some detail here.

A continuum is a useful tool for analyzing goal setting. At one end little goal-setting interaction occurs between a superior and his subordinate. At the other end considerable interaction occurs about goals and related matters. Since the only practical way to measure goal-setting behavior along this continuum is dependent on human observation and judgment, the measurement method must adapt itself to the conditions under which human observers can make judgments with respect to goal setting. Behavioral scientists in

working on this problem have found that dividing a continuum
of the sort dealt with here can often best be done by divid-
ing the continuum into convenient, discriminable steps,
each one, from one end of the continuum to the other, just
noticeably different from the step next to it. These steps
along the continuum may be referred to as levels. In the
case of this study the steps along the goal-setting con-
tinuum are called levels of goal setting.

Some of the basic premises underlying level of goal
setting are:

1. For purposes of this research a high level of
goal setting is not to be treated as reflecting
better management than a low level.

2. Various forces external to and therfore, beyond
the control of a superior-subordinate pair of
managers may influence the level of goal setting
practiced by that pair.

3. Combining premises 1 and 2 should rule out
measuring how "well" either the superior or
subordinate is managing by measuring the level
of goal setting alone.

4. The measuring in this study was strictly an
attempt to measure present levels as they
actually exist in various companies. Given the
state of knowledge in this area today, it is not
possible to identify companies which are "ideal"
in their approach to goal setting. (However, by

relating sound measures of the goal setting

taking place in a range of organizations to

measures of organizational effectiveness, it

may eventually be possible to obtain some

idea of the role that goal setting plays in

organizational effectiveness. Until a sound

measure of goal setting is developed and its

relationship to organizational effectiveness

is determined, nothing significant can be said

about the value of viewing goal setting by

levels.)

The premises, taken together, assert that the measure

of goal setting described in this section is intended to

measure only how much goal-setting behavior is taking place

in a sample of superior-subordinate pairs in industry.

Furthermore, even if there is need for some different level,

any particular pair may or may not be able to change the

actual level through their own efforts.

All this discussion is offered because of interview

findings that present-day managers frequently perceive goal

setting normatively. Apparently managers view goal setting

(or the slogan "management by objectives") as something good

managers do. A top-ranking personnel executive in one well-

known company refused to allow company managers to be inter-

viewed for this study. He feared that the research might

show that his company managers did not manage by objectives.

One company president (of a company included in this study)

apparently spoke for many managers in various companies when
he asked, with regard to management by objectives, "How else
can you manage?" (Other approaches to managing are suggested
in the review of previous writing below.)

Review of Previous Writing

Introduction.--The review which follows has two pur-
poses. The first is traditionally and necessarily a part
of any research report; the second is much less usual. The
purposes:

1. To summarize and integrate the present knowledge
   about the subject and in this way to place the
   present research in some historical perspective.
   (It may be noted that the review of research in
   Chapter 1 also contributes to this purpose.)

2. To provide not only some structuring of the
   variety of behavior involved in goal setting but
   also detailed information from which statements
   reflecting the specifics of goal-setting behavior
   can be derived.

Beginning with the first of these two purposes,
several overall comments can be made about the literature
on goal setting. This literature:

1. Tends to be highly repetitive; much duplication
   and overlapping exists from one writer to the
   next;

2. Is frequently based upon assorted working experiences of the particular writer and his often haphazard observations rather than upon systematic research;

3. Too often contains prescriptions for management practices which are supported more by anecdotes and clever phrases than by empirical evidence or logical analysis; and

4. Is not characterized by a clear historical progression of ideas.

Recognizing these limitations, one still has no reason to dismiss this writing as insignificant, especially for leads into organizational research. It may well be that organizational functioning and organization research could be improved by focusing more directly upon matters of goal setting. Now the discussion turns to other introductory matters which further explain this review of the literature and begins to delimit the subject of goal setting.

Within this literature there are the expected differences of opinion. However, there also seems to be a core of common thinking with which most goal-setting specialists would concur. Because the present research effort points toward this core, this review of previous writing will look for areas of agreement rather than disagreement. The duplication and overlapping of concepts mentioned several paragraphs earlier make it particularly feasible to look for agreement.

One frequently encountered thought, perhaps as old as traditional management thinking, is that, for optimal operation of a business, its leaders need to formulate clearly stated objectives of that business and promulgate these among the members. These objectives are overall statements of the mission of the business.

The notion of a hierarchy of objectives, another ancient idea, specifies that the overall objectives should be factored into more specific sub-unit objectives, each of which plays a part in the overall objectives. Following this reasoning, sub-unit objectives are factored into sub-unit objectives, with the factoring process continuing to the level of the smallest units in the organization.

One feature distinguishes the present concept, manager goal setting, from the tradition of the emphasis upon objectives: manager goal setting consistently emphasizes the individual relevance of the objectives considered. In other words, the focus of attention in manager goal setting is upon "my" work objectives or the objectives within which a small group is to achieve within but distinct from the framework of formal objectives of the organization or the department.

Definitions of goal setting.--With the preceding general considerations about goal setting made explicit, some brief definitions of goal setting can be considered. In deriving definitions two elements were sought: (1) the purpose(s) of goal setting and (2) the specifics of the

interactions between the superior and subordinate as they
followed their particular pattern of goal-setting behavior.
A third factor in deriving definitions was a concern with
the boundaries or limits of goal setting. This definitional
section concludes on a negative note since it mentions the
kinds of behavior which are not goal setting.

Some of the principal specialists in goal setting who
have published in this subject area are Drucker, McGregor,
Likert, Hughes, Schleh, Odiorne, and McConkey. Their defini-
tions are examined and compared in the following pages.
Several of these specialists did not present a brief defini-
tion; in these cases the researcher derived a brief defini-
tion from their respective writings.

Drucker's writings are generally conceded to be the
first which proposed goal setting as a distinctive management
technique. His concept is that management by objectives
and self-control is a process which has as its purpose the
directing of "the visions and efforts of all managers toward
a common goal."[1] What takes place is:

1. As a "positive act of assent,"[2] each manager
   establishes: (a) "clearly spelled-out objec-
   tives"[3] for his own unit and (b) means of
   measuring performance and results against
   these objectives.

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[1]Ibid., p. 126.   [2]Ibid., p. 129.

[3]Ibid., p. 126.

2. The manager's superior reviews both the objectives and measures.

3. Through steps 1 and 2, the superior-subordinate pair achieves a "meeting of minds" which establishes the "charter under which the [subordinate] manager operates."[1]

Then McGregor[2] adapted Drucker's concept to his own purposes. In doing so, he placed a different emphasis on the entire process, in line with the thinking he had been developing over the preceding 20 years or so, and renamed it: "Management by integration and self-control . . . is a strategy-- a way of managing people--"[3] for the purpose of integrating individual needs and organizational objectives in which: (1) the manager encourages each of his subordinate managers to (a) develop his own work goals and (b) include as well his goals and plans for personal development; (2) the manager does not so much "review" the goals but consults with the subordinate or acts as a resource person; and (3) the manager is willing to sacrifice short-term organizational results in the hope that the long-term results will be better for the organization and the individual subordinate as that subordinate comes to define

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[1]Ibid., p. 129.

[2]Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, 1960), Chapter 5, "Management by Integration and Self-Control, pp. 61-76.

[3]Ibid., p. 75.

his own goals. Drucker's idea of a "balancing" of needs and desires can be contrasted to McGregor's notion of "integration." As Drucker notes, this balancing involves a meeting of minds and establishment of a "charter." This can be viewed as a short-term process, even a bargaining process. McGregor's notion of "integration," on the other hand, is a longer-term, mutually satisfying process that surmounts the psychological problems resulting from the compromises inherent in bargaining.

Likert, although not devoting many pages to the subject and not labeling it goal setting, outlined a group approach to manager goal setting. To Likert goal setting is a never-ending group process for the purpose of improving performance and interpersonal relationships. Characteristics of his approach are: "each manager working with his sub-ordinates as a group sets objectives for the next period ahead";[1] (2) "the manager and his superior review the plans and objectives set by the manager and his work group";[2] (3) at the end of each period results are reported for the variables which measure achievement and "each manager studies results of his operation and evaluates his leader-ship and performance";[3] and (4) "objectives and plans are

[1]Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Company, 1961), p. 218.

[2]Loc. cit.

[3]Ibid., p. 219.

drawn for the period ahead."[1] Likert points out that this

work can go on individually and in groups but favors group

meetings because they "facilitate learning by sharing

experiences, help to coordinate the plans and work of the

different units, and increase the motivation to carry out

the plans."[2] Goal setting fulfills only a small part of

Likert's purpose in writing New Patterns of Management, so

it may be instructive to note that Likert intends for his

approach to apply "suggestions [he] made earlier."[3]

Earlier he had stressed that a superior, as perceived by

his subordinates (usually collectively rather than individ-

ually as is the usual formulation), should be "supportive,

friendly, and helpful rather than hostile";[4] should show

"confidence in the integrity, ability, and motivations of

subordinates rather than suspicion and distrust";[5] and

"coaches and assists employees whose performance is below

standard."[6] All these suggestions point to a concept of

goal setting similar to that of McGregor who views integra-

tion as a long-term endeavor. The significant difference

is Likert's group emphasis.

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[1]Loc cit.

[2]Ibid., p. 220.

[3]Ibid., p. 217.

[4]Ibid., p. 102.

[5]Loc. cit.

[6]Loc. cit.

Hughes follows in the integrative tradition of McGregor and Likert.[1] In Hughes' thinking individual goal setting is a process for the purpose of matching or reconciling an individual's goals with the goals of the organization. Goal setting involves: (1) an individual's statement of commitment to himself, including both work objectives and longer-range career objectives, made with prior knowledge of organizational goals and (2) mediation of goal systems (individual and organizational) by the individual's superior. Without claiming to, and without specific reference to either author, Hughes apparently has pulled material about the goal-setting process from the concepts of both Drucker and McGregor.[2] Hughes seems to take Drucker's idea of the "positive act of assent," with the twist that this act is a commitment the subordinate manager makes to himself rather than to his boss. Such a commitment is closely tied in with McGregor's "self-control" in the integration process.

Two consultant-authors, Schleh and Odiorne, have emerged with concepts similar to Drucker's. It is not possible to say whether Drucker, Schleh, or Odiorne was the first to formulate the various ideas they share in common. At the same time it is possible that these three have mostly

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[1]Charles L. Hughes, Goal Setting: Key to Individual and Organizational Effectiveness (New York: American Management Association, 1965).

[2]Hughes does refer to McGregor's "Theory X" and "Theory Y," but not to McGregor's goal-setting process.

polished and popularized existing ideas of various practicing managers and consultants.

In Schleh's thinking, "management by results"[1] is a process of management for the purpose of efficient organizational functioning in which: (1) delegation of responsibility and personal accountability is stressed; (2) "specified objectives" are set for all managers by their superiors; (3) these objectives state "the specific accomplishment expected of each individual in a specific period of time";[2] and (4) ideally these objectives are stated "in terms of final measurable results."[3] Schleh devotes some attention to meeting the needs of organization members in the process of achieving results, but the strong emphasis is upon short-term organizational results. Since Schleh devotes little attention to what McGregor called "integration," the guess is that to Schleh "integration" is not a significant problem or else it can, for him, be readily solved in the short run.

Odiorne's management by objectives is similar to Schleh's management by results:

> The system of management by objectives can be described as a process whereby superior and subordinate managers of an organization jointly identify its common goal, define each individual's major areas of responsibility in terms of the results expected of him, and

[1]Edward C. Schleh, Management by Results: The Dynamics of Profitable Management (New York: McGraw-Hill Book Company, Inc., 1961).

[2]Ibid., p. 18.

[3]Ibid., p. 20.

use these measures as a guide for operating the
unit and assessing the contribution of each of
its members.[1]

Odiorne views these results as synonymous with individual

manager's objectives and defines an objective simply as "a

clear statement of what he [the manager] wants to do and

when he wants to do it.[2]

McConkey, a group vice-president of United Fruit Com-

pany, has recently written about management by results in

terms similar to those of Schleh and Odiorne. McConkey

defines his concept explicitly:

Management by results may be defined as an approach
to management planning and evaluation in which specific
targets for a year, or for some other length of time,
are established for each manager, on the basis of the
results which each must achieve if the overall objec-
tives of the company are to be realized. At the end
of this period, the actual results achieved are
measured against the original goals--that is, against
the expected results which each manager knows he is
responsible for achieving.[3]

The purpose of management by results is to "key all corporate

efforts into objectives."[4] As McConkey says:

The essential think is to convey to him [the
operating manager] that he is expected to include
in his objectives those results which will contribute

[1]George S. Odiorne, Management by Objectives: A System
of Managerial Leadership (New York: Pitman Publishing
Corporation, 1965).

[2]George S. Odiorne, from his speech to a seminar on
"Management by Objectives--Results-Oriented Appraisal,"
August 5, 1966, sponsored by the Bureau of Industrial Rela-
tions, the University of Michigan.

[3]Dale D. McConkey, How to Manage by Results (New
York: American Management Association, 1965).

[4]As reported by McConkey in a telephone conversation.

most to realizing the objectives of his job, his unit, and the corporation as a whole.[1]

To put goal setting into clearer perspective, it may be instructive to set boundaries and consider managerial behaviors which are not managing by objectives. One of the General Electric researchers, Meyer,[2] has pointed out that it is probably impossible to manage with no goals. It follows that at least some minimum amounts of goal setting occur between all superior and subordinate pairs of managers. Yet some behavior that takes place during the interactions between superior and subordinate is antithetical to goal setting. Hughes[3] contrasts management by objectives, and its "concern for goals and ends," to "management by controls," and its "concern for tasks and means." Schleh might not agree with Hughes' ideas of self-control, but he agrees that required results, rather than activities, should be specified. Schleh writes:

> Individuals may easily get out of touch with the central purpose of the enterprise, a process encouraged by the natural inclination to specify the activities that are required of a man instead of the results.[4]

Drucker contrasts management by objectives with management by "drives" and by "crisis." A "drive" in Drucker's

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[1]McConkey, op. cit., p. 17.

[2]Herbert H. Meyer, in an interview.

[3]Hughes, op. cit., p. 31.

[4]Schleh, op. cit., p. 18.

thinking is a short-term emphasis on one type of organiza-
tional output which "puts all emphasis on one phase of the
job to the inevitable detriment of everything else."[1]
Although Drucker does not elaborate on "crisis" management,
apparently he believes managing by objectives could mini-
mize crises.

Emerging refinements in goal-setting definitions.--
The reader will recall the second purpose of this literature
review (page 4):

> To provide not only some structuring of the variety
> of behavior involved in goal setting but also detailed
> information from which statements reflecting the spe-
> cifics of goal-setting behavior can be derived.

This discussion of refinements provides some of this detailed
information. No significant developments in the definition
of goal setting are readily apparent in the definitions
offered above. McConkey's definition, written in 1965, does
not differ notably from Drucker's, written in 1954. And
while some authors have firmly advocated greater participa-
tion, others, such as Odiorne, have argued just as firmly
that participation is valuable only in certain situations
and that these situations by no means always prevail. How-
ever, if we look into the details rather than the broad
definitions of the various specialists, some refinements can
be tentatively identified.

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[1]Drucker, op. cit., p. 128.

One refinement in goal setting seems to be a tendency away from the formal programs of goal setting with standard forms and detailed instruction in procedures to an emphasis upon what happens between superior and subordinate(s) in the goal-setting process. Jones explains how this relationship comes into being as he discusses a group of managers sitting around a table, where the group members have achieved mutual trust and respect:

> . . . What do you find them doing? They talk about where they are and where they want to go. They talk about how long it ought to take them and what must specifically be done to get there. They talk about how they will know what progress they are making. They make arrangements for feedback. In other words, they may not use the words but they are managing and using objectives. . . . You don't have to give it a name. That just formalizes it. Then people get committed for or against the words "management by objectives" and may lose sight of what they are really trying to achieve.[1]

Another refinement in goal setting seems to be a decline in the extent to which the superior is assumed to have "all the answers." The earlier writers seemed to assume the superior was omniscient and that the subordinate's task in goal setting was to read the boss' mind as the subordinate sets his goals. Hughes is an excellent example of recent writers who have introduced into their theories iterative processes through which both individual and

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[1]John Paul Jones, in Ernest C. Miller, Objectives and Standards: An Approach to Standards and Control (New York: American Management Association, 1966), p. 20.

organizational goals are stated, then modified, until a reconciliation is achieved.

The influence of research findings upon these emerging refinements.--One series of studies, those carried out by General Electric on performance appraisal interviewing, seems to have influenced managers in many different circles.[1] Reference was made to these studies in Chapter 1. The basic finding seems to have spurred interest in goal setting:

> Appreciable improvements in performance were realized only when specific goals were established with time deadlines and results measures agreed upon.[2]

The first refinement noted above, the movement away from standard forms and detailed procedures to an emphasis upon what happens between superior and subordinate, may have been influenced somewhat by the General Electric researchers' finding that a superior's criticism typically resulted in subordinate defensiveness. This finding clearly pointed up the power of the interpersonal relationships as against forms and procedures. Furthermore, the General Electric researchers found that day-to-day subordinate participation in goal setting, instead of merely setting goals once every six months or once a year, was associated with higher goal

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[1] Kay, et al., op. cit., summary page.

[2] The General Electric writing was apparently the first in the area of goal setting to be based upon research with large numbers of managers. The present study continues in this tradition, rather than the tradition of unsystematic observation and "armchair" theorizing.

attainment. Again this attention to day-to-day participation emphasizes superior-subordinate interaction more than broad programs.

The General Electric research may also have influenced the trend away from the assumption of the omniscient superior. Clearly the superior could not be so all-knowing if the dysfunctional defensive reactions of his subordinates occur "under his nose" and largely without his knowledge.

The study of emerging refinements in goal-setting defini-tions leads us to a more basic question: What is new about goal setting--what sets it apart from other approaches to management?

What is new about goal setting?--The literature brings out that goal setting is not necessarily the "natural" or "obvious" behavior for managers to follow, despite a common-sense assumption that goal setting is obvious. Wikstrom, in research for the National Industrial Conference Board, sur-veyed several companies using management by objectives and summarized their experiences as follows:

> It begs the question to state that managers should
> know what their responsibilities are, and should be
> able to develop meaningful targets in carrying out
> these responsibilities. Experience has shown that
> even a clear statement of an individual manager's
> responsibilities does not take the place of a clear
> statement of the broader objectives toward which his
> own goals must contribute.[1]

Wikstrom explains further:

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[1]Walter S. Wikstrom, "Management by Objectives or Appraisal by Results," Conference Board Record, July, 1966.

But management by objectives begins with results
to be achieved; then the activities necessary for
achieving them are decided upon. This is a switch
in emphasis that apparently can be very difficult
for many managers.[1]

Much the same conclusion emerges from a study in a

setting very different from that experienced by American

managers. McClelland reports his attempt to develop achieve-

ment motivation among managers in under-developed nations:

Much of the success of such a training enterprise
depends on getting the man to be specific, realistic,
and practical in his goal setting, since he often
starts out with general statements like "I want to
increase production (or sales) by 20%," or "I want
to start a new business." The specific goals he
sets are then used as a target against which he can
evaluate his progress every six months for two years
by filling out a report form. Such record keeping
is, of course, simply a method of keeping the goal
salient or ever in front of the person, at least for
two years.[2]

Two Examples of Goal Setting

As suggested in Chapter 1, manager goal setting may

occur in many different forms. In order to provide (1)

some of the specifics about what's new about goal setting

and (2) some of the structuring and some specifics sug-

gested in the second purpose of the literature review

(see page 4), two examples of the forms that goal setting

can take are included here. The two examples differ con-

siderably in the extent of superior-subordinate interaction

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[1]Ibid.

[2]David C. McClelland, "Achievement Motivation Can Be
Developed," Harvard Business Review, Vol. 43, No. 6,
November-December, 1965, p. 14.

which occurs. One example is the "manager's letter" described by Drucker and the other integration and self-control described by McGregor.

Drucker intended the manager's letter as one step beyond the usual face-to-face interchange of ideas between superior and subordinate about goals. But, for the moment, suppose one views the manager's letter as the central part of the goal-setting process. In such a case, assuming the superior accepts the "letter" rather readily, interaction is minimal. Let us consider Drucker's summary of the manager's letter:

> They [some managers] have each of their subordinates write a "manager's letter' twice a year. In this letter to his superior, each manager first defines the objectives of his superior's job and of his own job as he sees them. He then sets down the performance standards which he believes are being applied to him. Next, he lists the things he must do himself to attain these goals--and the things his superior and the company do that help him and the things that hamper him. Finally, he outlines what he proposes to do during the next year to reach his goals. If his superior accepts this statement, the "manager's letter" becomes the charter under which the manager operates.[1]

McGregor's notions of goal-setting processes are much more involved, and require much greater amounts of face-to-face interaction between superior and subordinate. To demonstrate the process, McGregor postulates a hypothetical superior-subordinate pair.[2]

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[1]Drucker, op. cit., p. 129.

[2]McGregor, op. cit., pp. 62-75.

The superior, Evans, is Vice President, Staff
Services; and the subordinate, Harrison, is Director
of Personnel Administration. In Evans' eyes, Harrison's
conception of the personnel job is inadequate in that
Harrison is overly anxious to make a good impression
on top management and is a "poor manager." (For one
thing, he uses his subordinates as errand boys.)
Evans feels that Harrison could grow into the job,
but not without help. With this background McGregor
describes the goal setting which followed. Evans asked
Harrison to prepare a written statement of the major
responsibilities of Harrison's job as he saw them.
Then the two discussed the list in several lengthy
discussions. At the beginning of these discussions
Evans suggested to Harrison, ". . . try to think of
me as a colleague whose experience and knowledge are
at your disposal--not as your boss." When this dis-
cussion was finished, Evans suggested that Harrison
set some specific objectives for himself and his depart-
ment for the following six months. Evans suggested
these objectives include both personal goals and
improvement goals for Harrison's unit. Evans also
asked Harrison to consider by what steps he proposed
to achieve these targets and what information he would
require in order to know at the end of the period how
well he had succeeded in reaching his targets. At the
end of the period the pair discussed Harrison's progress.
Evans had requested Harrison to give his own evaluation
of what he had accomplished.

Key Issues in Goal Setting

From the review of the literature presented up to this

point emerge six key issues in goal setting. These issues

contribute directly to the second purpose of this literature

review; namely, to provide structuring of the specifics

involved in goal setting. The six issues are:

1. Objectives only or work planning?--Some of the

literature leaves the first impression that, once the work

goals are set, goal setting has been done and the only other

matters of concern to the pair are the review at the end of

the goal period and setting new goals for the next period.

The reader may come to the conclusion that some authors advocate nothing more than a quick setting of goals, after which the subordinate is to find his own means of accomplishing the goals. Schleh, for example, insists that individual objectives specify only the desired results, not the activities. McNair[1] has echoed Schleh's point, adding that the "targets" should specify "the what, not the how." It may appear, then, that all that is needed is a statement of goals or results and a method of measuring these results.

On the other hand, even the language used in some quarters suggests there is more to the process than merely setting goals, as illustrated by General Electric's "Work Planning" or "goal planning." As noted earlier (pages 14-15) the General Electric concept includes, in addition to work goals, a strategy for reaching the goals and identifying check points to review progress and make revisions. General Electric's Marion Kellogg rejects the point of view apparently advocated by Schleh, as she comments:

> Just specifying results doesn't do it [i.e., achieve the objectives of Work Planning]. Until you've hammered out how you're going to get there, the risk is very high for the [subordinate] manager.[2]

McLeod,[3] of McKinsey and Company, has elaborated a concept which is independent of the General Electric approach

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[1] Malcolm McNair, Jr., "The American Standard Approach," from a longer article, "Appraisal of Managers and Management Development," Management Record, Vol. 23, No. 3., March, 1961, pp. 8-17.

[2] Marion S. Kellogg, in an interview.

[3] I. H. McLeod, in an interview.

but also stresses planning. In this approach the subordinate managers (functional managers) study and summarize the current situation. Included in this summary are external matters, such as competition and economic conditions, and internal considerations, such as the current year's results and the programs underway. The superior evaluates this summary and sets "goals" for his entire unit for the coming period. Each subordinate translates these goals into more specific "objectives"[1] for his own operation, and then plans and budgets. Before any of this goal setting and planning is approved, however, both the superior and subordinates review it. In short, McLeod views the whole goal-setting process as an intricate, extensive, lengthy interchange of information between superior and subordinates.

McConkey, although using Schleh's term, management by results, goes beyond the idea of merely specifying results. He writes, "Actually, the process of planning to achieve goals is more critical than that of setting the goals."[2] General Electric's study of its Work Planning and Review serves to support and explain McConkey's conclusion:

> The setting of specific goals and performance standards took a relatively small percentage of time. In these sessions, goal setting usually resulted from a problem-solving discussion. In some cases, a goal was stated first, then a lengthy discussion of the problems associated with reaching that goal followed. Although goal setting per se

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[1]This use of the terms "objectives" and "goals" is unusual.

[2]McConkey, op. cit., p. 104.

did not get much empahsis, there was considerable emphasis given to the exploration and solution of problems associated with achieving good performance on these goals.[1]

Raia's findings parallel those at General Electric. Raia found considerable emphasis in performance reviews at Purex, which were based on goal attainment, on identifying and removing obstacles to better performance. For present purposes it should be noted that this "identification and removal" was a part of the superior-subordinate interaction in connection with goals, and not something the subordinate did strictly "on his own," after goals were set.

The apparent conflict in concepts can be resolved by taking the broader view; namely, that a fully elaborated goal-setting process does involve work planning and con-siderably more than a mere setting of goals. Perhaps then Schleh and others can be viewed as stressing results as the necessary first rather than the only point.[2]

If a fully elaborated goal-setting process involves work planning in addition to the mere setting of goals, we may say that, other things equal, a higher level of goal setting exists where the superior and subordinate interact about both goals and plans, rather than goals only.

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[1]Kay and Hastman, op. cit., p. 4.

[2]This single-minded emphasis can be seen to be reason-able in light of the present limited state of knowledge about goal setting. Recall the discussion on page 53 which made it clear that goal setting may involve something new to managers, a new emphasis.

2. <u>Emphasis: short-run or long-run goals?</u>--The
definite emphasis in the literature is upon short-run goals
(one year or less). Some goals are "sustaining" (McConkey)
or "regular" (Odiorne). Nevertheless, following the goal-
setting theorists, even these need to be recycled in the
short-run period. McConkey writes, "If anyone begins to
slip in handling these routine duties, the sustaining
objectives become 'leverage'--that is, major objectives
for the next period . . ."[1] By inference, where people have
not "slipped," the objectives or goals emphasize results
which were <u>not</u> accomplished before.

While short-run goals are emphasized in this study,
the problems associated with this short-run emphasis should
be acknowledged. Dearden has documented several persuasive
cases in which "the motivation for short-run improvements
can be so strong that serious management errors can result.[2]

For present research purposes it is useful to focus
attention first upon short-run goals. Nevertheless, other
things being equal, the superior-subordinate pair which con-
siders long-run goals <u>in addition to</u> short-run goals will
be said to be operating at a higher level of goal setting.

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[1]McConkey, <u>op. cit.</u>, p. 86. Again McConkey is
describing the program at a Monsanto division.

[2]John Dearden, "Limits on Decentralized Profit
Responsibility," <u>Harvard Business Review</u>, Vol. 40, No. 4,
July-August, 1962, p. 87.

3. <u>Emphasis: individual or group goals</u>?--Up to this point most of the discussion has dealt with <u>individual</u> work goals. However, a rather strong case could be made for <u>group</u> work goals, as suggested in the earlier reference to Likert's work. Sayles has pointed to two dysfunctions of individual goal setting which might suggest group goal setting as an alternative. First, Sayles points out that "looking only at [individual] results encourages subordinates to engage in behavior that may be destructive to organizational relationships."[1] Thus, coordination necessary to meet overall goals may suffer. Second, "such an emphasis encourages excessive competition for scarce resources, such as space, personnel, parts, and maintenance facilities, and leads to neglect of the unmeasured aspects of a job."[2]

It is possible, of course, that these dysfunctions could be avoided if a participative approach to goal setting is used and if group in addition to individual goal setting is employed. Since there are good ways, then, of overcoming the difficulties with individual goal setting, individual goal setting will remain as the focus in this research. As further support to the position taken in this research to focus on individual goal setting, McConkey, in answering a question about group goal setting, responded that management

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[1] Leonard R. Sayles, <u>Managerial Behavior</u> (New York: McGraw-Hill Book Company, 1964), p. 165.

[2] <u>Loc. cit.</u>

must "get down to individual accountability."[1] Indeed, the

very nature of the process described above seems to involve

an individual subordinate in a dialogue or negotiation with

his superior for the purpose of agreeing on appropriate aims

specifically for the individual subordinates. Even the

differences in the nature of the work of individuals at

the same level limit the use of group goal setting.

Perhaps the subject of group vs. individual goal set-

ting can be summarized in a few points. First, individual

work goals seem to serve at least one purpose which group

goals cannot--to establish a charter or contract between

the individual subordinate and his superior. Second, con-

cept or process discussions of group goal setting are

scarce and are not as well formulated as individual

approaches. Third, group goal setting still remains as a

possibility. At the present it is best viewed as complemen-

tary to individual goal setting, not as a replacement.

Therefore, where a superior and his subordinate give atten-

tion to the work goals of their group in addition to atten-

tion to individual work goals, a higher level of goal

setting exists, other things equal, than where individual

goals alone are considered.

4. Putting autocratic and participative approaches

into perspective in the goal-setting process.--Goal setting

may be autocratic, in the sense that, as Schleh recommends,

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[1]Dale D. McConkey, in a telephone conversation.

the superior establishes goals or results for his subordi-
nates. On the other hand, the process may be very partici-
pative, as McGregor advocated, in that the subordinate is
given a wide latitude in setting goals and developing
means of meeting the goals set. But which approach leads
to a higher level of goal setting? Let us look briefly at
the two approaches.

Schleh seems to be the major contemporary advocate
of an autocratic approach to goal setting. He employs
delegation as a central concept. Schleh reasons that,
through delegating responsibility for results and then
holding subordinates strictly accountable for these results,
the manager establishes an optimum system of management.

On the other hand, Hughes outlines a process which
well illustrates the participative approach. Management
must:

1. Specify company purposes.

2. Break down objectives into subgoals and sub-
   subgoals until they are stated in terms mean-
   ingful to lower-level personnel.

3. Communicate these goals to the subsystems and
   sub-subsystems of employess (divisions, depart-
   ments, work units, and so on).

4. Help individual employees to set personal goals
   through supervisors.

5. Allow for some modification of tentative
   company goals.

6. Iterate goals and plans for achieving them
   throughout the hierarchy, recombining and
   redefining company and personal goals[1] until
   we reach a balance.[2]

The fourth, fifth, and sixth points reflect participative
ideas.

For goal setting to be meaningful, whether a partici-
pative or autocratic approach is employed, the work goals
must be highly salient to the individuals involved. It
follows that the approach which makes goals most salient
yields the higher level of goal setting. And, other things
equal, the participative approach stands a better chance of
making the goals more salient. This is true because the
participative approach, as set forth in Hughes' process
above, allows the subordinate manager to play an important
role both in expressing his opinion freely and in setting
his own work goals. Because he plays this role, his work
goals are more likely to be "his own," rather than a list
of goal statements imposed upon him by his superior. Goals
which have been "internalized" by the subordinate tend,
other things equal, to be more salient than goals which have

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[1]This suggests that management can redefine personal
goals. Hughes' overall approach to goal setting suggests
that this redefinition is not at all what he intended.

[2]Hughes, op. cit., p. 99.

not been "internalized." Now, taking an earlier quote from

Hughes and adding a word to it, the central point is this:

> [More] goal setting has been done when the
> individual knows what he expects of himself, not
> just what management expects of him.[1]

And since the individual is more likely to "know what he

expects of himself" at his job[2] under the participative

approach, the participative approach to goal setting,

other things equal, yields a higher level of goal setting

than an autocratic approach.[3]

5. <u>Rewards tied to goal achievement</u>?--There seems to

be some agreement in the literature that it is desirable to

tie tangible individual rewards to individual goal achieve-

ment, if the means to do this can be worked out. Schleh

advocates tying results directly to pay. He translates

this into the staff area by means of the principle of double

credit, or dual accountability:

> Both staff and line should get full credit for any
> accomplishment of either the staff or the line in
> the area that the staff is set up to cover.[4]

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[1]<u>Ibid</u>., p. 117.

[2]In other words, the individual is more likely to hold internalized expectations with respect to his accomplishments at work.

[3]This is true even if autocratic approaches yield higher goal attainment, because: (1) goal attainment under autocratic approaches is more likely to be achieved at the expense of important but usually unmeasured considerations; and (2) autocratic approaches seem more likely to encourage manipulation of results measures to make results appear better than they actually are.

[4]Schleh, <u>op. cit</u>., p. 211.

According to Schleh, this concept of dual accountability
"should be strongly reflected in such areas as pay, promo-
tion, and performance appraisal . . ."[1] Along similar
lines McConkey tells of the management by results system
at one division of Monsanto, where "the division is con-
scious of a new realization, throughout the organization,
that there is a direct relationship between the achievement
of results and the rewards that are given in the form of
salary increases, bonuses, and stock options.[2] Essentially
Hughes agrees:

> If we reward an employee for establishing a
> challenging goal and beating it, we are using money
> as a motivator; however, if we simply hand out
> money in an automatic way and give increases with-
> out relating them clearly to the results achieved,
> then we are putting it in the category of a dis-
> satisfier . . . . If motivation is to come from
> the work itself, so too must the paycheck.[3]

At the same time there are difficulties associated
with tying rewards closely to goal achievement. One indica-
tion of the recognition of these difficulties is the widely
advocated separation of the superior-subordinate discussion
of needed improvements in the subordinate's work from the
discussion of the subordinate's salary, promotion, and
future possibilities for individual development. One
General Electric report, for example, employs the heading

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[1]Ibid., p. 212.

[2]McConkey, op. cit., p. 86.

[3]Hughes, op. cit., p. 147.

"What the WP&R Discussions Did Not Cover."[1] First, as sug-
gested above, work planning generally did not include the
superior's summary judgment of the subordinate's performance.
Second, the subject of salary was seldom mentioned. Third,
career planning for the subordinate was not usually discussed.
Kay and Hastman recommend that salary and career planning
be handled in meetings which are separate from work planning.
In another publication Kay, along with Meyer and French,
has conceptualized the problem as a "split role" or conflict-
ing role in performance appraisal.[2] In traditional appraisal
interviews the superior must play the role of "judge," as he
provides a justification for salary action. On the other
hand, many appraisal systems have as one of their purposes
to achieve improvement in work performance; and this puts
the superior in the role of a "counselor."

However, even within various parts of General Electric
these concepts have been questioned. Marion Kellogg has
expressed dissatisfaction with the conclusions above as she
stressed that superiors must judge subordinates.[3] Also,
other General Electric researchers, Kay and Hastman, in
reporting that work planning discussions did not include
summary judgments of subordinate performance, noted that

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[1]Kay and Hastman, op. cit., p. 11.

[2]H. H. Meyer, E. Kay, and J. R. P. French, Jr.,
"Split Roles in Performance Appraisal," Harvard Business
Review, January-February, 1965, pp. 123-129.

[3]Marion Kellogg, in an interview.

"Some subordinates expressed a need for this." It can only
be concluded that widespread differences of opinion exist.

In the face of these differences of opinion some
workable mechanisms have been devised through which rewards
actually are tied to goal achievement. It may be noted
that salary meetings can be separated from goal-setting
meetings in the same organizational unit in which rewards
(including salary) are tied to goal achievements. First,
salary increases and promotion decisions may be tied to
goal achievement. For example, at General Electric Work
Planning (goal setting) is pictured as a "key element" in
the compensation system:

> [Work planning] . . . provides the manager with
> current information about individual contribution so
> that his judgments about development, promotion
> and salary are sound.[1]

Second, individual development efforts sponsored by one's
company (e.g., college courses, seminars, assigned reading
programs) may be tied to the individual's goal achievement.
Kimberly-Clark reports the installation of "bank accounts"
for each individual manager who performs well.[2] Within a
broad range of acceptable items of expenditure the individual
may use this bank account for his own development as he sees

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[1]Anon., Work Planning Bulletin 9B, "What About Pay?"
An internal publication of the Employee Compensation
Service and Individual Development Methods Service, General
Electric Company, December 14, 1965, pp. 3-4.

[2]C. David Wilkerson, "A Results-Oriented Development
Plan," The Conference Board Record, March, 1966, pp. 40-45.

fit. Third, increased freedom or autonomy for the subordinate in his work performance may be used as a reward for goal achievement.

The point, in short, is that rewards for goal attainment _can_ be considered part of goal setting, but the specialists disagree. It is beyond the scope of this study to resolve this issue. Therefore, this important issue will be included in the goal-setting measure, but the extent to which there is a correlation between rewards for goal attainment and the extent of goal setting will not be specified.

6. _The role of personal goals in manager goal setting._—At the present time the strong emphasis in goal setting is upon _work_ goals, goals that are immediately relevant to organizational functioning. Very seldom is much emphasis given in the goal-setting interaction to personal goals of the subordinate which are not related to organizational functioning. Yet this does leave the possibility of personal _development_ goals, statements of an individual's aims to improve himself in order to function better for the organization. Kimberly-Clark's program of "bank accounts" (see page 68) is an example of explicit attention to personal development goals. (Obviously self-improvement could carry over in the individual's life away from the job, but this carry-over ordinarily would be considered a by-product.)[1]

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[1]Hughes is a notable exception. See his concluding chapter, "Personal and Private Goals," (Hughes, _op. cit._, pp. 151-157).

Odiorne summarizes the thinking of many specialists:

> A manager's personal development goals will usually comprise only a small segment of his total objectives for the goal-setting period.[1]

Odiorne also puts development goals into clearer perspective:

> The establishment of goals for the manager's personal development doesn't imply that his strictly job-centered goals aren't a form of personal development also. In fact, these job-centered goals comprise the manager's major development plan, since they relate to his job performance. Even so, beyond this, there may be personal skills that, if acquired, will make it possible for the man to do his job better, and will stand him in good stead whether he is promoted, or stays in his present position.[2]

Odiorne concludes that these personal development goals are necessary, that "Self-insight isn't enough . . . to assure self-development."[3] Clearly self-development, to Odiorne, is organizationally relevant self-development.

Hughes demonstrates more forcefully the need for superior-subordinate interaction about the subordinate's personal goals. His "goal-interaction concept" specifies that "the goals of the organization cannot simply be subdivided and handed to individuals."[4] Hughes elaborates in a way that builds upon the discussion of participation in the earlier section:

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[1] Odiorne, op. cit., p. 136.

[2] Ibid., p. 127.

[3] Ibid., p. 129.

[4] Hughes, op. cit., p. 92.

> As we have repeatedly said, what is needed is
> more than participation: the company goals must
> be turned into another language, another set of
> symbols, that will be meaningful to the individual.[1]

But the individual subordinate cannot come to understand

this language by himself. His supervisor plays a key role:

"His role here is essentially that of a mediator between

the individual and the organization; that is, he aids in

the effective implementation of both the individual and

the organizational goal-setting system."[2] This demands

that the superior be specifically knowledgeable in both

individual and organizational systems and that superior-

subordinate interaction occurs.

Hughes' discussion may be misleading if it suggests

that the area of self-development goals has been elaborated

to a high degree of sophistication. McGregor's illustration

of self-development goals points up the common situation in

which these development goals are stated, tentatively and

with uncertainty by the subordinate. Harrison, the sub-

ordinate, proposes the following goals to his boss, Evans:

1. I'd like to do some reading to improve my own

    thinking about personnel administration--or

    maybe take a university course. I'd like your

    advice.

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[1] _Ibid._, p. 120.

[2] _Ibid._, p. 117.

2. I guess I haven't gained as much skill as a

manager as I need. I hear rumblings that some

of my staff are not happy with me as a boss.

I'd like to do something about this, but I'm

not sure what is the best way to proceed.[1]

Finally, Odiorne has compiled a list of activities

which might represent personal development goals. Here are

three examples from Odiorne's list:

Attendance at two seminars a year

Participation in one or two community service activities

Reading a specific number of management books.[2]

The point of this discussion of personal goals is

simply this: Other things equal, if personal goals of the

subordinate (including personal development goals) are

explicitly discussed in the goal-setting interaction between

superior and subordinate, a greater extent of goal setting

exists than if personal goals are not explicitly discussed.

The key issues summarized.--To help structure the

specifics involved in goal setting, positions have been taken

on five of the six key issues in goal setting. Each of these

positions has been shown to be realistic in light of the

present development of goal-setting concepts. In brief, the

positions taken on these issues are:

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[1]McGregor, op. cit., p. 70.

[2]Odiorne, op. cit., p. 137.

1. Superior-subordinate interaction about <u>planning</u>
   to achieve goals adds to the process of goal
   setting. This means that, other things equal,
   a greater extent of goal setting exists where
   the superior and subordinate interact about <u>both</u>
   goals and plans, rather than goals only.

2. The emphasis in goal setting is upon short-run
   rather than long-run goals. Nevertheless, other
   things equal, the superior-subordinate pair which
   considers long-run goals <u>in addition to</u> short-run
   goals will be said to be practicing goal setting
   to a greater extent.

3. <u>Individual</u> goals are emphasized in this study.
   Nevertheless, where a superior and his subordinates
   give attention to the work goals of their group
   <u>in addition to</u> attention to individual work goals,
   a greater extent of goal setting exists, other
   things equal, than where individual goals alone
   are considered.

4. Other things equal, the participative approach to
   goal setting, as defined in the discussion above,
   yields a greater extent of goal setting than an
   autocratic approach.

5. Unlike the other five areas, no position has been
   taken regarding the impact upon the extent of goal
   setting of tying rewards to goal attainment.

6. Other things equal, if personal goals of the sub-
ordinate (including personal <u>development</u> goals)
are explicitly discussed in the goal-setting
interaction between superior and subordinate, a
greater extent of goal setting exists than if
personal goals are not explicitly discussed.

As the discussion below of the independent judging of goal-
setting statements will show, the positions taken are
merely premises and will be tested in this study through
subjecting them to the aggregate evaluations of goal-
setting specialists.

Components of Goal Setting

The preceding discussion of the six key issues sets
the stage for the idea that there are various distinguishable
components or content categories in manager goal setting.
From the material already quoted it should be obvious that
no two theorists would agree completely. This section pre-
sents a few lists of components suggested by the special-
ists. Then these lists will be used to derive a list
original to this study which will be used in the present
research. Again, this list or category of components will
help in achieving the second purpose of the literature
review (stated on page 39), by providing the structuring
of the many specifics in goal-setting behavior.

General Electric has developed a model of work planning and review.[1] Useful components in this model are: "knowledge of what is expected (work planning)"; "job well done"--achievement measures, indicators, yardsticks; "assistance as needed"; "feedback of results (work review)"; "review of achievement"--matching achievement measures against performance; and "recycle work to be done." These expressions may be useful overall categories in goal setting. At a more detailed level are General Electric's "elements" of work planning which were cited earlier:

> . . . work goals, a strategy for reaching the goals, identification of alternate routes for goal attainment, the identification of resources required to meet the goals ($ budget, manpower, facilities, and information), the identification of tasks necessary for reaching each goal and the time schedule for task completion, measurements to identify progress and achievement, the identification of check points to review progress and make necessary revisions in the plan, and a plan to communicate with those who will affect or be affected by the plan's progress.[2]

House also has suggested broad categories:

> Management by objectives involves: agreeing on organizational purpose; agreeing on necessary activities; agreeing on specific results to be achieved; agreeing on operational measures of results; planning and reviewing operations on the basis of operational measures of work performed

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[1]Anonymous, "Increasing Management Effectiveness Through Work Planning," p. 5. This is an internal publication of the General Electric Company. This also appears in Jerome W. Blood, The Personnel Job in a Changing World (New York: American Management Association, 1964).

[2]Anonymous, "A Composite Description of Work Planning Based Upon Four Departments," a mimeographed paper prepared for internal use at General Electric, undated.

and results achieved; determining rewards on the
basis of work and achievement rather than person-
ality traits.[1]

Brooks has established several "criteria" for a state-

ment of results, and two of these are pertinent for present

purposes: "fix accountability and responsibility in

writing"; "establish priorities."[2]

Two other possible categories are career development

(McGregor and Hughes) and personal preferences of the sub-

ordinate (McGregor).

The six content categories below are based upon all

the literature reviewed to this point. The reader may notice

that only three of the seven key issues parallel a content

category. Key issues 5 and 7 do correspond with content

category 5; also, issue 6 parallels category 6. The other

four key issues (1, 2, 3, and 4) represent underlying con-

siderations (overall emphasis and purpose) rather than

categories of detailed statements.

The total of the following six content categories

defines goal setting and related matters:

1. Goal characteristics

2. Feedback to subordinate about performance and

   goal accountability

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[1]Robert House, "What is Management by Objectives? A
Philosophy and a Method," an unpublished paper, undated, p. 3.

[2]Earl Brooks, "Management by Objectives: Getting
Improved Results Through Planned Discussions," unpublished
paper 101:22, Graduate School of Business and Public Adminis-
tration, Cornell University, undated, p. 2.

3. Measurement or verification of how goal achievement was to be measured and degree to which goals were achieved; standards; and par

4. Paths to goals and path facilitation

5. Career development; personal preferences; and subordinate autonomy in goal setting and in related matters

6. Relation of goal attainment to individual rewards.

It will be helpful at this point to recall two points in the definition of the extent of goal setting (Chapter 2, pp. 36 ff). First, goal setting exists along a continuum from little to much goal-setting interaction. Second, levels are arbitrary divisions along this continuum which specify how much goal setting is occurring within a superior-subordinate situation.

In that definition certain of the related matters were defined explicitly, and these can be placed within the six content categories. Verification is obviously a part of 3. Feedback is part of 2. The idea of "review" appears most critically in 1, goal characteristics, but also in the goal accountability section of 2. "Recycling" also appears most critically in 1, but also in the feedback section of 2. All related matters, including those not listed above, fall within the six categories.

Measuring the Independent Variable, Extent of Goal Setting

Let us briefly review to see what ground we have covered in this chapter and in what position we are to develop a measure of the independent variable, the extent of goal setting. First, the definition of levels provides a construct through which goal setting can be measured by viewing each specific goal-setting behavior as being assignable to some one step or level along a continuum. Second, the review of the business writing generated: (a) a wide variety of specific details about goal-setting behavior that can be put into words and used as descriptive statements to be assigned to one of each of the various levels of goal setting; and (b) six content categories of goal setting which give us some assurance that as long as we include statements from each category, we are putting together a comprehensive measure of goal setting, that is, all the varieties of content found in the literature are represented among the statements used in the measure.

The two developments above suggest two further steps toward developing a measure of the extent of goal setting. First, the concept of levels must be operationalized in such a way that the goal setting taking place between a superior-subordinate pair can be measured and the pair can be said to be characterized by some specific level of goal setting. To operationalize levels in the necessary manner, Thurstone's methods for measuring attitudes were adapted

for use in this study. Second, with the six content cate-
gories as a guide and the entire review of literature as
the raw material, statements about goal setting were written.

The two steps above led to two further steps. Third,
since Thurstone's method (Step 1) calls for _judges_ to
evaluate the statements (developed in Step 2), these judges
had to be selected and contacted. Fourth, as a result of
the judging, the final measure of goal setting was designed;
at the same time a plan for administering the measure was
developed.

These four steps are explained below in the remainder
of this major section, The Independent Variable, Extent of
Goal Setting. A summary of the design and administration of
the goal-setting measure concludes the section. At that
point we will have a measure of goal setting which can be
administered to superior-subordinate pairs of managers.
(The two succeeding major sections deal with the two depend-
ent variables. Then the final major section of the chapter
brings the independent variable and two dependent variables
together, explaining the way the interrelationships were
measured in the company study.)

Adapting Thurstone's methods .--To measure the extent
of goal setting, this thesis adapted Thurstone's method of
measuring attitude, the method technically known as "equal-
appearing intervals."[1] In the case of goal setting, one is
_____
[1]L. L. Thurstone and E. J. Chave, The Measurement of
Attitude (Chicago: The University of Chicago Press, 1929).

measuring expressed behavior and perceptions about states
of the work world, rather than attitudes. Nevertheless, the
Thurstone methods seemed appropriate in that they do measure
degrees, or levels, along a single dimension. The premise
of the present research is that manager goal setting does
represent such a single dimension, provided one adheres
closely to the definition of goal setting presented in
Chapter 1 and provided one follows the preceding discussion
and resolution of conflicting issues.

Thurstone's method may be summarized as follows:

1. The researcher prepares brief statements which
   express different levels of the variable being
   studied (e.g., in the scale described by Thurstone,
   attitude toward the church is the variable, and
   the levels range from strongly favorable to
   strongly unfavorable). These statements are
   derived from interviews, transcripts, and any
   other sources which can be found, including
   written essays by the group to be measured.

2. An appropriate number of levels is determined
   (e.g., in the case of attitude toward the church,
   11 levels were chosen), and these are labeled
   alphabetically (i.e., from A to K).

3. A group of "judges" is chosen. These judges
   possess no special expertise, but (ideally at
   least) are chosen from the same population which
   will later be measured using the completed scale.

The judges are instructed that "A" represents a
very unfavorable attitude toward the church, that
"K" is very favorable, and that the letters between
are progressively more favorable, from A to K. No
further description of the letters is made, except
the middle letter (F in this case) is designated
as a neutral attitude.

4. Each judge judges the level of each statement by
placing it in its appropriate pile (e.g., in
attitude toward the church, the piles run from A
through K).

5. Working with the judgments of all the judges, the
researcher determines the "scale value" of each
statement. This scale value is simply the median
value where cumulative proportions are graphed.[1]
(A is represented by the horizontal distance of
0 to 1; B is 1 to 2; etc.) This scale value
determines the level of the statement (e.g., a
statement with scale value of 0.4 falls within
the lowest level and apparently expresses a very

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[1]To graph cumulative proportions, one puts the scale
values along the X axis (i.e., 0, 1, 2, . . . 11) and
cumulative proportions along the Y axis (i.e., .00, .10,
.20, .30 . . . 1.00). The points on this graph might show,
for example, that .16 of the population had scale values
of 1.0 or less, that .57 had scale values of 2.0 or less
. . . and by definition 1.00 had scale values of 11 or less.
A curve is then fitted to these points. The scale value is
the point on the X axis corresponding to the .50 level on
the Y axis.

favorable attitude toward the church; on the other hand, a statement with a scale value of 10.8--which falls within the "K" level--apparently expresses a very unfavorable attitude toward religion).

6. Before a particular statement is chosen for the final scale, the range of judgments is determined graphically by means of the interquartile range. (Thurstone calls this range the Q value, or ambiguity score.) This is the horizontal distance along the cumulative proportion curve from the first to the third decile.[1] If this distance is small, the judges have tended to cluster their judgments around a few levels. In other words, the judges tend to agree about the level of the statement. Otherwise, the statement is discarded because of its ambiguity.

7. A list of statements is chosen from the original, considerably longer list; and the researcher has a scale for measuring the particular variable. Thurstone employed several informal criteria in this selection, but it should be noted that a

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[1]This distance, the interquartile range, may be determined by taking the scale value (on the X axis) corresponding to .25 on the Y axis and subtracting this scale value from the scale value corresponding to .75 on the Y axis.

statement's Q value was a very important, perhaps dominant consideration.

8. Subjects are asked to check (✓) statements with which they agree and leave the others blank.

9. The researcher can determine an individual's attitude by summing the scale values of the statements checked, and dividing by the number checked, to arrive at the mean scale value.

The present adaptation of Thurstone's methods may be summarized in nine points, following the sequence of the nine points above:

1. One hundred eighteen brief statements were prepared which express different levels of goal setting and the different content categories above. (These statements are discussed in the next section and are shown in their entirety in Appendix A.) The levels range from very high to very low, that is, the entire range of the continuum. The statements were derived from interviewing managers and reading the literature on goal setting.

2. A careful consideration of the population of statements suggested that subjects could probably meaningfully discriminate no more than about seven levels of goal setting, and this number was chosen. These levels were labeled from A (highest level) to G (lowest level).

3. A list of forty judges was put together. To yield a final list of statements which were selected on the basis of expert consensus, and in this way to develop what is probably the most detailed definition of goal setting to date, Thurstone's approach to attitude measurement was modified by employing judges possessing expertise in goal setting. The judges were instructed that "A" represents a very high level of goal setting and that "G" represents a very low level. The only other level identified was "D" (the middle letter), which was described as a middle level of goal setting.

4. Each judge judged the level of each statement by circling the appropriate letter printed to the left of the statement (from A through G).[1] Since the statements were mailed to the judges in the present study, the technique of circling was more practical than sorting cards into piles. In addition, research following Thurstone's initial publication demonstrated that the circling technique is quicker for the judges and yields virtually identical results.[2]

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[1]The reader who refers to Appendix A will note an "X" in addition to the letters A through G; "X" means the statement is irrelevant to the level of goal setting.

[2]Robert H. Seashore and Kate Hevner, "A Time-Saving Device for the Construction of Attitude Scales," Journal of Social Psychology, Vol. IV, 1933, pp. 366-372.

5. Scale values for all statements were determined graphically, following Thurstone.[1]

6. The interquartile range (Q value) for each statement was determined graphically, again following Thurstone.[2]

7. A list of 42 statements was chosen from the original 118. Six statements were chosen within each of the seven levels (from A through G). Within each level the dominant selection criterion was the Q value--statements with minimum Q values were chosen, since the lower the Q value, the lower the disagreement among the specialists about level.

8. Fifty practicing managers (25 superior-subordinate pairs), who were distinct from the specialists in goal setting who served as judges, were asked to check those statements of the 42 in the list with which they agreed and to leave the others blank. (These managers are described in more detail below.)

9. The level of goal setting for each of the 50 individual practicing managers was determined by summing the scale values of the statements checked and dividing by the number checked. A mean scale

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[1] In this case the X axis (scale values) ranged from 0 to 7. As before the Y axis ranged from .00 to 1.00.

[2] The procedure is identical to that described in footnote 1 page 82.

value for each of the 25 superiors and each of
the 25 subordinates could be determined in this
way. Then, in each pair the superior's score
and the subordinate's score were totaled, and
this total was divided by two to give an indica-
tion of the level of goal setting taking place
between the pair. This averaging was done to
derive the goal-setting measure which was most
pertinent to the superior-subordinate interaction.
The emphasis upon superior-subordinate interaction
was essential, since the dependent variables (Job
Perception Index and Subordinate Effectiveness
Rating) were measured at the level of this inter-
action.

10. The reliability of the Goal-Setting Index was
determined by correlating the scale value score
of the even-numbered statements for each individual
with the scale value score of the odd-numbered
statements for that same individual and correct-
ing for what the correlation would be for all 42
items (Spearman-Brown correction formula).

The 118 statements.--Several hundred statements about
manager goal setting were derived from written and oral
statements about what was involved in goal setting. (It
should be recalled that one purpose of the review of business
writing was to provide the detailed information for deriving
these statements.) Each of these statements was written from

the point of view of a subordinate manager. Next the statements were eliminated, combined, separated, and otherwise revised until 118 statements remained,[1] each of which was hypothesized to indicate some one level of goal setting taking place within a superior-subordinate pair of managers. The exact number 118 is not significant. Such a large number was chosen to increase the probability that several statements at each of the seven levels would be available for inclusion in the final scale as demanded by Thurstone's technique. An aspect of the measurement problem is that the Thurstone technique requires that all statements finally selected need to have low Q values;[2] that is, that judges were in close agreement with respect to what level along the continuum each statement belonged in. There had to be enough statements at each of the seven levels so that those with high Q values (i.e., where the judges did not agree about the location of the statements along the continuum) could be eliminated and leave about the same number of uniformly low Q-value statements at each level. A number of statements larger than 118 was not employed because it was feared that the amount of work asked of the judges would

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[1]These are shown in Appendix A.

[2]As noted previously, the possibility was foreseen that some statements would be considered completely irrelevant to level of goal setting. Because of this possibility the judges had the option of circling an "X" to indicate that they thought the statement was irrelevant. Judges were asked to circle "X" only as a last resort.

be too burdensome and the number who would cooperate would be reduced too severely.

These statements, as is suggested above, were based on several sources. First, and before any interviewing, available books and articles on goal setting and related subjects were read. Second, the researcher interviewed various managers, authors, and consultants. These people were visited in New York City and several Michigan cities, including Lansing, Detroit, Benton Harbor, and Ann Arbor. Several others were telephoned. This interviewing was very open-ended, for the general purpose was to find out what goal setting "is all about" from the point of view of the goal-setting specialists. Finally, as a result of the reading and interviewing came preparation of the review of business writing, which in turn provides the basis for the statements.

The 118 statements finally selected were predicted to cover the seven levels of goal setting, from very low to very high, about equally. This equality was achieved deliberately by changing the wording of various statements to make them indicate more or less goal setting.

The 118 statements fall roughly into the six content categories above (see page 76). (Appendix D shows the 118 statements arranged by content category.) Even a cursory examination of Appendix D will reveal that the content categories were not mutually exclusive. One could argue

that statements placed in Category 1, for example, might better be placed in another category. However, this crude categorizing did serve the valuable purpose of assuring adequate representation of areas which were believed important.

Preliminary tests of the list were made prior to its mailing. First, several doctoral candidates and faculty members in the Department of Management were asked for their reactions to the wording of the various statements. Second, as a pilot run, several faculty and staff members of the University, all specialists in the personnel area, were asked to read through the instructions which would be sent to the judges, then make the requested judgments, and offer any comments for improving the entire procedure. Finally, to see whether the final scale which would be derived from the judging would be workable in industry situations, 44 statements were selected from the total list; and managers in a Detroit division of a large corporation were asked to check statements with which they agreed. They also were asked to perform the other tasks described below (the Job Perception Index and the Subordinate Effectiveness Rating) that were used to measure the other two main variables of this study.

As a result of the first two steps above minor changes were made in individual statements and in the general instructions. The preliminary test in the industry situation

did not disclose any major weaknesses in the procedure.
However, once again the wording of a few statements was
changed, especially in the direction of eliminating
"double-barreled" statements and statements subject to
multiple interpretations.

The judges.--The 40 judges were individuals known
to be knowledgeable about goal setting--managers and con-
sultants with direct experience with fairly well-formalized
goal-setting programs, and authors of books and articles on
the subject.

Mailed to the judges were: (1) the 118 statements;
(2) a cover letter explaining briefly why the addressee had
been chosen and, in somewhat more detail, the purpose of the
study;[1] (3) a separate sheet of instructions for the
judging[2] in which the concept of level of goal setting is
explained, along with explanation of the letters A through
G and X; and (4) a self-addressed, stamped envelope for
return of the list of statements. At the end of the list
space was left for the judges' comments. (The comments
received are summarized and analyzed below.)

Design of the final measure and plan for administering
it.--Based on the responses returned by the judges, it was
possible to design the final measure,[3] made up of 42 of the

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[1]The general form of the cover letter is shown in
Appendix F.

[2]This instruction sheet is reproduced in Appendix G.

[3]This measure is reproduced in Appendix I.

118 statements, as planned. In the left margin beside each statement a blank replaced the letters A through G and X. The statements were arranged in ascending order of their scale values, from first to forty-second. This was done: (1) to aid the respondents in recognizing the central dimension, level of goal setting and (2) to facilitate scoring. Previous research has shown that in attitude measurement there is no significant difference in scores obtained from randomly mixed statements as compared with statements arranged in scale-value order.[1]

The statements were derived as follows:

1. Six statements were selected within each level of scale values (six statements with scale values from 0 to 1, six from 1 to 2, . . . and six from 6 to 7). In the range from 6 to 7 only six statements appeared, so all were used. In all other levels there were more than six statements.

2. Within each level of scale values the statements with lowest Q values were identified. (It was fortunate that in the range from 6 to 7 the Q values of all six statements were acceptably low.)

3. The number of "X" judgments (that the statement is irrelevant to level of goal setting) of each statement identified in step 2 was noted.

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[1]J. W. Dunlap and A. Kroll, "Observations on the Methodology in Attitude Scales," Journal of Social Psychology, 1939, Vol. 10, pp. 475-487.

4. If the number of "X" judgments did not exceed 4, the statements were selected for the final scale. Statements with more than 4 "X" judgments were eliminated. Statements within the same level and with the next lowest Q values replaced the eliminated statements.

Superior-subordinate pairs of managers were selected, and each individual was approached separately. Both superiors and subordinates received very similar oral instructions about the general nature of the study. Ideally these instructions were to be identical, but since they were given orally they varied slightly. The subject was informed that the research was part of a doctoral dissertation and that a group of experienced specialists in goal setting had given their interpretations to a list of statements about a personnel activity. Then the instructions continued:

> Now, from your reactions and those of other managers, I'm trying to learn what's actually going on in industry at the present time. Many of the statements I'll ask you to read use the term "work goals," and here's what I mean by a work goal: A work goal is a current aim for a particular individual at his job. Or a work goal is a statement of how a man's work contributes to his company and sometimes to his personal development. And these work goals apply to a particular period of time.

Subordinates were further instructed:

> Here's where you come in. First, read each statement, then ask yourself if it is true of your own situation. If you do agree, check the statement. If you do not, leave it blank. In other words, check a statement only if it describes your situation correctly. Now before you begin, please keep in mind two other points as you go through the statements: first, check only the

statements which seem "just right" to you--those that
are neither too high nor too low, neither too weak nor
too strong; second, and let me stress ⋅his, answer as
things actually are now, not how they should be or will
be.

Because all the statements were worded from the sub-

ordinate's point of view, the superior's instructions had

to be modified to take this additional factor into account.

Instead of the paragraph immediately above, superiors were

instructed as follows:

> Here's where you come in. I'll ask your subordinate,
> Mr. _____, to read statements and check those he agrees
> with and leave the others blank. But first, I'd like
> for you to check these same statements as you see his
> situation. Now I don't want you to try to guess which
> ones he'll check. I would expect superiors and sub-
> ordinates to disagree on some of these statements.
> Rather, use this guide [the subject is handed a card
> on which the following is printed:] "If your sub-
> ordinate correctly stated the facts, which statements
> would he check?"

> So, if the statement does correctly state the facts,
> check it. If not, leave it blank. In other words,
> if the statement correctly describes your subordinate's
> situation, check it. Now take the statement on the
> back of the card as an example [on the reverse side of
> the card the following statement was printed:] "__42.
> My boss and I not only regularly put my work goals into
> writing, but we also keep them up to date." Whenever
> a statement refers to "my boss," that's you; "I" or
> "my" always refers to your subordinate, Mr. _____.
> Now, before you begin, please keep in mind two other
> points as you go through the statements: first, check
> only the statements which seem "just right" to you--
> those that are neither too high nor too low, neither
> too weak nor too strong; second, and let me stress this,
> answer as things actually are now, not how they should
> be or will be.

A summary of the design and administration of the goal-

setting measure.--Because the procedure for deriving the

Goal-Setting Index was long and involved, a brief summary

is presented here.

A list of 118 statements about work goals, goal setting and related matters was derived from the review of business writing and from interviews. Each statement was expected to lie at some one place along a continuum of goal setting. This continuum was arbitrarily divided into seven gradations or levels, A through G. The list of 118 statements was then mailed to 40 "judges," each of whom was a recognized specialist in goal setting. The judges were asked to circle one letter for each statement to indicate their considered opinion of the goal-setting level of that statement.

From this judging the final measure of goal setting was derived, with six statements selected at each of the seven levels. To the left of each of the 42 statements was a blank. (The letters A through G and X used for the original judging were deleted.) Fifty managers in the company study (eight companies) were each asked simply to check statements with which they agreed and to leave the others blank. A goal-setting score was then calculated for each individual by totaling the scale values of the statements he checked and calculating their mean. Finally, the individual superior's score was added to the corresponding subordinate's score and the total obtained was divided by two. This yielded the Goal-Setting Index (GSI) for the pair, a measure which logically can be compared with the two dependent variables. A discussion follows of those dependent variables, the Job Perception Index and the Subordinate Effectiveness Rating.

Measurement of the Two Dependent Variables

Job Perception Index

The Job Perception Index (JPI), as designed by
Duffendack and employed at his company, General Electric,
was used as one of the two dependent variables in the
present study. The device used for measuring the JPI
consists of a deck of 40 cards, each of which contains a
statement describing work performance. Here, to give an
idea of the kind of statements employed, are the items
printed on the first three of the 40 cards:[1]

1. Lead and challenge personnel by setting high
   performance standards

2. Contribute to increased productivity of
   Company personnel (may apply to your component
   or to other Company components)

3. Anticipate the requirements and demands of
   the Manager.

The researcher asked the superior and subordinate in each
pair individually to sort the deck of cards. A close
adaptation of Duffendack's set of instructions was prepared
and, for the superior, reads as follows:

> This deck contains statements about jobs which
> are of greater or lesser importance for different
> jobs in the company. Read through these statements
> and arrange them in order of importance for the job
> under your immediate supervision which we chose.

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[1]The entire deck is reproduced in Appendix L.

It is easiest to make a preliminary sorting into
three piles: very important, important, and lesser
or no importance. Then go on and arrange them in
the correct order of importance for the job.

The subordinates received these instructions:

This deck contains statements about jobs which
are of greater or lesser importance for different
jobs in the company. Read through these state-
ments and arrange them in the order of importance
your manager places on them for your job.

It is easiest to make a preliminary sorting into
three piles: very important, important, and lesser
or no importance. Then go on and arrange them in
the correct order for your job as your manager
sees it.

This procedure yielded, for each superior-subordinate pair,
two decks of cards sorted into order of importance. One
deck represented the order of importance the subordinate
thought his superior placed on various matters regarding
the subordinate's work, and the other represented the order
of importance the superior actually placed upon these
matters. By calculating the rank-order correlation,[1] it
was possible to measure the extent to which superior and
subordinate agreed. The index measures the extent to
which the subordinate understood the superior's expecta-
tions for the subordinate in his on-the-job performance.
This understanding of expectations was taken as a measure
of job understanding.

At this point an apparent inconsistency in the over-
all research design should be explained. While the GSI

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[1]Duffendack's scoring procedure was followed. This
procedure is reproduced in Appendix M.

focuses upon the <u>subordinate's</u> behavior and perceptions, the JPI focuses upon the <u>superior's</u> expectations regarding the subordinate's job. Two points should explain this seeming inconsistency. First, both instruments are in a broad sense concerned with the interaction between a particular superior-subordinate pair. Second, both instruments focus upon events or expectations relevant to the <u>subordinate's</u> position, <u>not</u> the superior's.

Next one should consider the premises underlying the Job Perception Index. First, this instrument is based on the premise that superior and subordinate need to have similar notions of the order of importance attached to various organizational matters. Without this "perceptual congruence" even the most capable and highly motivated subordinate cannot contribute optimally to the achievement of his company's objectives. Underlying the thinking is an unstated hierarchical assumption that the superior tends to be in closer touch with the overall order of importance of activities in the company. This assumption is reasonable.

Second, the relevant organizational matters can be represented, not exhaustively but representatively, by a deck of 40 cards, each of which contains a statement of a "job goal, job activity, or job characteristic." (Unfortunately Duffendack does not further define these three terms.)

Third, perceptual congruence between superior and sub-
ordinate can be measured by having each of them rank the 40
cards describing the subordinate's job into the superior's
order of importance.

The use of this measure in this thesis can be defended
against several rather obvious objections. One possible
objection is that the items in the deck may be appropriate
to General Electric managers but not to managers in other
companies, where the language and problems differ. In
defense it can be said that the items _appear_ to be applicable
to American managers generally--the terms used are such
familiar general terms as "profit," "cost," and "quality."
Furthermore, the measure was designed for a company which is
widely spread out geographically and engaged in a staggering
variety of businesses. The fact that the measure was suc-
cessfully applied by General Electric managers in many
different areas of the Company testifies that its generality
is at least a good possibility. Moreover, while expressions
unique to General Electric were found in other Company pub-
lications and in published materials written by General
Electric people, none of these unique expressions was found
in the deck.

A second objection to this measure could be that, for
one reason or another, it does not measure job understanding
in a meaningful sense. Specifically, some might argue that
differences, even large differences, between a superior and

subordinate could mean simply that each member of the pair
interpreted the words differently. Duffendack himself
counters this objection:

> A frequent first reaction to a wide difference
> on any one card is that each of you interpreted
> the words differently. That is the point of the
> PI [Perception Index]. Your employees only under-
> stand you when they know how you interpret words
> and statements.[1]

Furthermore, as suggested earlier, the particular words
which appear on the cards seem quite relevant to managers
in many different positions and companies.

A third objection, more difficult to counter than
the others, grants that the items indeed are important, but
argues that many of them are so important that one cannot
be ranked higher than another. Here is the reaction of one
manager in the present study to this deck of cards:

> Doing this is like asking which is more important
> to a man, his heart or his lungs?

This objection can be countered along two lines. First,
since both superior and subordinate are asked to rank the
cards at the same point in time (on the same day at least),
their rankings can be expected to reflect present emphasis
in light of present problems and needs. As a general
matter two cards may represent equally crucial areas, while
in light of present problems one may be more important.
Second, while the objection admittedly pinpoints a difficulty

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[1] Duffendack, "The Job Perception Index: Manager's Manual," p. 1.

for the manager who does the ranking--his difficulty in making minute distinctions--this difficulty does not affect the usefulness of the measure. The measure still may be useful because we are deriving a rough measure, not a precise one. It would indeed be miraculous to find a superior-subordinate pair with identical rankings. Similarly, it would not be reasonable to attach great significance to small differences in the scores of various pairs. On the other hand, it seems reasonable to expect a pair between which relatively good understanding exists to come closer to the same rankings than pairs with less understanding. What is mutual job understanding but the understanding of what "comes first" or what is to be emphasized?

Subordinate Effectiveness Rating (SER)

The present researcher developed a two-part rating scale through which each superior could rate his subordinate. The first part asked the superior to rate his subordinate's value to the subordinate's unit along a five-point scale. The second part of the scale asked the superior to rate the subordinate's promotability along a five-point scale. In both parts the levels 1, 3, and 5 were described. The entire scale is shown in Appendix N.

The researcher designed the rating to be completely general in order that ratings of men in different functional areas and different companies could be compared meaningfully.

The two dimensions were chosen because both represent areas which have been found in previous experience with ratings to be highly salient to managers and not necessarily highly correlated.

The preceding development of the independent variable and two dependent variables can be looked on as the first phase of this research. We are now ready to move into the second phase, the phase in which the interrelationships among these variables were measured.

Measuring the Interrelationships Among the Three Variables

Now that the three variables, the independent and the two dependent variables, have each been separately explained in what makes up the first phase of this research, we may move on to the second phase, namely, the methods by which the three variables were interrelated. Only by measuring the interrelationships among the three variables is it possible (1) to see how these three variables act on each other and (2) to define each one in terms of the other two.

Eight companies were selected for this second phase of the research. The researcher personally interviewed 50 managers (25 superior-subordinate pairs) in these eight companies. These managers each completed the Goal-Setting Index (GSI) and the Job Perception Index (JPI), and each superior rated his subordinate using the rating scale (SER) described above.

The companies chosen were corporations with numerous, geographically scattered operating units. The present research was conducted in one operating unit of each of the eight companies. Three criteria were used to select the companies and the specific operating unit in each:

1. Because of the hope to see the extent to which the results of this study could be generalized to American industry, the companies were selected to represent a variety of industries and types of operation (e.g., manufacturing, merchandising, etc.). A risk of this type of heterogeneity is that goal-setting methods that are applicable to one kind of industry may not be applicable to others, so that correlations that could occur within one type of industry may wash out when a wide range of industry is drawn upon.

2. To increase the probability of getting a wide range of levels of goal setting, the total sample included companies which have and have not empha-sized goal-setting programs and courses. This kind of heterogeneity could make correlations stand out more clearly.

3. As a practical consideration, the operating units chosen were within driving distance of Lansing, Michigan, the research base.

The subjects in this study were ordinarily selected by a separate contact man in each company within the rules described below. This contact man sometimes was a representative of corporate headquarters and sometimes was from the operating unit itself. All contact men were chosen because they were believed to be in positions in their companies from which they could grant approval for the interviewing. The names of these contact men were supplied both by faculty members in the Department of Management (including the Thesis Committee members) and fellow doctoral candidates; further, in the cases where the companies had goal-setting programs, the goal-setting specialists who were interviewed supplied names of contact people. In no case was there reason to believe that the contact men had biased the study in any systematic manner.

Three superiors were selected[1] at each operating unit, each of whom reported directly to the top manager of that unit (titles differed considerably, but we might best think of this top manager as plant manager). One immediate subordinate of each of the three was selected. In the case of both superior and subordinate the request was for the people

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[1]At one division the contact man selected four superiors, fearing that one of them might unexpectedly prove to be absent on the day of the interviewing. All were present, and all were interviewed, along with their subordinates. Thus, eight managers were interviewed at this division plus six each in the other seven units, explaining the total of 50 managers in the study.

holding the most important positions. Judging by the
integral relationship of the chosen positions to the ob-
jectives of the respective companies, the most important
people were in fact selected; the only exceptions were two
cases in which the appropriate subordinates were not in
the office on the day of the interviewing.

By seeking out the three most important managers,
the researcher avoided the problem of distinguishing line
managers from staff managers. In several instances a
manager who would customarily be considered staff, such as
a personnel director, was included in the study, but only
because the contact man judged this manager to be one of
the three most important managers reporting to the plant
manager.

In addition, the superior and subordinate were re-
quired to have at least one year's experience working
together, preferably in their present positions. In a small
number of cases this tenure criterion could not be met, but
in all cases superior and subordinate had worked together
in their present or very similar positions for at least six
months.

The researcher selected the particular organization
level for two reasons. First, the question of the efficacy
of goal setting below the level of plant manager is a real
question because of the interdependence of positions at

lower levels.[1] Second, the organization level chosen pro-
vides at least the three superiors and three subordinates
specified by the research design, and having three pairs in
each company has two advantages. First, we will have some
idea of the range of differences between companies in goal
setting and job understanding. Second, as a practical con-
sideration, the six respondents could be reached at the
same location on the same day.

Summary

This chapter has presented the method for testing the
hypotheses. This method involved: (1) developing a measure
of goal-setting interaction between superior-subordinate
manager pairs, the Goal-Setting Index; (2) applying an
existing measure, the Job Perception Index; and (3) develop-
ing a rating scale, the Subordinate Effectiveness Rating.
The step-by-step development of the Goal-Setting Index con-
sisted of two phases. The first phase included: collecting
statements about goal setting; the independent judging of
these statements by goal-setting specialists; and the
scoring of the aggregate judgments. This yielded the Goal-
Setting Index. In the second phase this Index was adminis-
tered to a sample of American managers to measure the degree
to which they employed goal setting, along with two other
possibly related variables of significance in management

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[1]Leonard Sayles, in a telephone conversation.

theory, job understanding (measured by the JPI) and subordinate effectiveness (measured by the SER). All three variables were then intercorrelated.

CHAPTER III

RESULTS AND INTERPRETATION OF MEASURING
EACH OF THE THREE MAIN VARIABLES

According to Chapter 2 the testing of the hypotheses takes place in two phases:

1. The first phase describes the three variables themselves, the independent and the two dependent.

2. The second phase concerns the interrelationships among the three variables.

This chapter reports the results and interpretation associated with the first phase, the variables themselves. Measuring the first variable, the extent of goal setting (the independent variable), involved two steps:

1. The goal-setting specialists' judging of the 118 statements.

2. The company managers' responses to the Goal-Setting Index (GSI) (42 selected from the original 118 statements).

Measuring the other two variables (the dependent variables) involved two additional steps:

3. The company managers' rankings of the Job Perception Index (JPI).

4. The superior managers' ratings of subordinates,

the Subordinate Effectiveness Rating (SER).

There were two parts to this rating: current

performance and promotability.

Chapter 3, with its emphasis on the results obtained

from measuring each of the three main variables, sets the

stage for Chapter 4, which reports the results of the second

phase, interrelating the variables.

The Goal-Setting Index (GSI), Step One:
Judging the 118 Statements

Results

The results of judging the 118 statements fell into

four successive categories: (1) judges' degree of coopera-

tion in returning their judgments; (2) constructing the

goal-setting scale (GSI), including scoring the scale values

of the items and scoring item ambiguity; (3) an incidental

matter, the X judgments; and (4) treating the written-in

comments of the judges.

Judges' degree of cooperation in returning their

judgments.--The design called for sending forty judges the

goal-setting statements and the request to judge them.

Twenty-nine usable responses came back. Of the eleven

remaining potential judges, two performed the judging but

returned their responses too late to be included in the

study.[1] Three others expressed regret that they could not

perform the judging because of time pressure. Only two

returned the statements along with a refusal to perform

the judging. (These refusals are discussed below.) The

remaining four made no response.

Constructing the goal-setting scale:

1. Scale value of items. Appendix B shows the

    scale values of each of the 118 statements,

    derived graphically from the responses of the

    29 judges. (The procedure for this graphical

    solution appears in Chapter 2, page 81.) The

    theoretical range of the scale values, each of

    which represents a level of goal setting, was set

    from 0 to 7. The obtained range was from 0.1 to

    6.7. Table 3-1 presents a distribution of the

    118 statements into each of the seven levels.

    (As explained previously, the statements were

    designed so that an approximately equal number of

    statements would appear in each level.) Table 3-2

    shows the mean of the scale values of statements

    by content categories and the distribution of the

    statements into the seven levels. (The statements

    themselves are shown by content categories in

    Appendix D.)

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[1]The judges were to return the statements by January 24,
1967. This gave each judge one week or more to make the judg-
ments after the time he received them, allowing time for the
return. The processing of the returns actually began on
February 1. The tabulations that follow include the 29 re-
sponses received by that date.

TABLE 3-1. Number of the 118 statements falling into each
of the seven levels of goal setting.

Level of Goal Setting	Number of Statements in the Level
0-1 (Level A)	11
1-2 (Level B)	30
2-3 (Level C)	21
3-4 (Level D)	16
4-5 (Level E)	12
5-6 (Level F)	21
6-7 (Level G)	7
TOTAL number of statements	118

2. <u>Ambiguity scores (Q values)</u>. Appendix B shows
the Q values for each of the 118 statements.
(The graphical solution for these Q values appears
in Chapter 2, page 82.) The Q values ranged
from .6 to 4.2. The mean Q value was 1.9. Table
3-3 shows the mean Q values by level, along with
corresponding Q values from Thurstone's scale.
Discussion of-the comparison of the two sets of
Q values appears below. Table 3-4 shows the
mean Q values by content categories.

TABLE 3-2. Mean of the scale values of statements by content categories and distribution of statements into levels of goal setting by content categories.

Content Category	Total No. of Statements in the Category*	Mean of Scale Values of Statements
1. Goal characteristics	34	3.1
2. Feedback...and accountability	21	2.8
3. Measurement or verification ...(and) standards (and) par	12	3.2
4. Paths to goals and path facilitation	13	3.6
5. Career development; personal preferences; subordinate autonomy....	22	3.6
6. Relation of goal attainment to individual rewards	16	2.5
TOTAL STATEMENTS	118	
OVERALL MEAN		3.1

*The judging process did not affect this total number of statements in each category. This total appears here merely to give an indication of the relative weighting of each category.

X judgments.-Table 3-5 presents the number of X judgments (that a given statement is irrelevant to level of goal setting). This table shows that 53 statements received no X judgments, 27 received one X judgment, . . . and no statements received as many as seven X judgments.

TABLE 3-3. Q values from the present study and from Thurstone's study.

Mean Q Values by Level of Goal Setting		Thurstone's Mean Q Value by Level of Attitude Toward the Church*	
Level of Goal Setting	Mean Q Value	Level of Attitude Toward the Church	Mean Q Value
0-1 (Level A)	1.4	0-1	1.8
1-2 (Level B)	1.7	1-2	1.5
2-3 (Level C)	2.1	2-3	1.6
		3-4	1.6
		4-5	1.7
3-4 (Level D)	2.2	5-6	1.8
4-5 (Level E)	2.4	6-7	2.2
5-6 (Level F)	2.0	7-8	2.3
		8-9	2.2
		9-10	2.2
6-7 (Level G)	1.5	10-11	1.6
		11-12	1.4

*The researcher calculated mean Q values from Thurstone's data as found in his Table I (Thurstone, op. cit., pp. 33-34). In Thurstone's scale, 0-1 represented the highest appreciation of the church, while 10-11 represented the strongest deprecia- tion of the church. Thurstone included the category 11-12 because one statement had a scale value of the maximum possible amount, 11.00. To use a consistent procedure, Thurstone placed this statement in the next higher category. (This procedure of including one category higher than the highest level was not necessary in the GSI, since no statements had the maximum scale value, 7.0.)

TABLE 3-4. Mean Q Values by Content Categories.

Content Category	Mean Q Value
1. Goal characteristics	1.9
2. Feedback...and accountability	1.7
3. Measurement or verification... (and) standards (and) par	1.7
4. Paths to goals and path facilitation	2.1
5. Career development; personal preferences; subordinate autonomy	2.0
6. Relation of goal attainment to individual rewards	2.3

TABLE 3-5. Distribution of the number of statements for each number of X's per statement.

Number of X's per Statement	Number of the 118 Statements Receiving this Number of X's
0	53
1	27
2	20
3	7
4	8
5	2
6	1
7 or more	0
TOTAL	118

(Possible number of X's per statement = number of judges=29)

Comments of judges.--Of the 40 goal-setting specialists
asked to judge the 118 statements, 24 made written comments
either in the space provided for comments or in a separate
letter or note. Of the 24 who commented, 21 were included
in the study as judges, one was excluded because his re-
sponse came too late, and the other two refused to perform
the judging. Appendix H shows all the comments. (In this
appendix each judge was assigned a number for identification
purposes, but no names appear in order to preserve confi-
dentiality.)

Interpretation of the Judging of the 118 Statements

Judges' degree of cooperation in returning their
judgments.--The 29 usable responses out of 40 (or 72.5 per
cent return) exceed commonly reported returns from ques-
tionnaires. If the two late responses are included in the
percentage, the return becomes 77.5 per cent.

The researcher analyzed the two refusals in an attempt
to pinpoint possible conceptual weaknesses in the 118
statements. A summary of this analysis appears below in
the interpretation of comments.

Constructing the goal-setting scale:[1]

1. Scale value of items. The statements were
selected and written so that an approximately equal number

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[1]The researcher inadvertently included two identical
statements, 9 and 106, in the list of statements to be
judged. The obtained scale value for Statement 9 was 3.3,
compared to 3.7 for Statement 106. The obtained Q value
for Statement 9 was 1.8, compared to 1.3 for Statement 106.
To some extent the context within which the two statements
appeared may explain the differences in scale values.

equal number of statements would occur at each level. Table

3-1 shows that this plan was not realized. Level G was

especially underrepresented with only seven statements.

However, this inequality turned out not to be serious since

several statements represented each level. Since many

Thurstone-type scales employ only 20 to 30 statements, a

scale for present purposes could have been constructed from

only three or four statements in each of the seven levels.

In fact, however, a larger number of statements was employed

because of the complicating fact of the different content

categories.

Table 3-2 shows that the content categories were

fairly well represented with statements at each level of

goal setting. Category 4 is the only one with a serious

deficiency; this category lacked statements at either extreme

on the goal-setting scale. The overrepresentation in some

levels was of little consequence, since statements could be

eliminated within levels by another criterion, that of Q

values.

2. <u>Ambiguity scores (Q values)</u>. The mean Q value of

the 118 statements, 1.9, compares favorably to Thurstone's

mean Q value for 130 statements of 1.8.[1] Thurstone notes

another consideration:

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[1]These comparisons are quite crude, of course, since
Thurstone's scale employed eleven levels, whereas the goal-
setting scale employed only seven.

> Since the Q value is to be used for eliminating
> ambiguous statements, it becomes a matter of some
> importance to know if the average Q-value changes
> for different parts of the scale.[1]

In the present case Table 3-3 shows that the differences are

not extremely great from one level to the next. In fact,

they compare all along the length of the scale very favor-

ably with those in Thurstone's scale measuring "attitude

toward the church."

X judgments. Table 3-5 clearly indicates that, in

the majority of statements where X judgments appeared,

not more than two of the 29 judges used this device. The

small number of statements receiving relatively large

numbers of X judgments suggests little problem of statements

which are irrelevant to goal setting.

It will be recalled that the researcher selected the

items in the final Goal-Setting Index by taking the six

statements with lowest Q values within each of the seven

levels. The criterion of irrelevancy produced only one

deviation from that procedure: Statement 14 replaced Statement

23.

Comments of judges. It is possible that the judges'

comments could suggest changes in individual statements,

in content categories or even in the design of the overall

procedure for measuring goal setting.

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[1]Thurstone, op. cit., pp. 44-45.

The researcher content analyzed the comments into
four categories:[1] (1) compliments and encouragement only;
(2) comments about goal setting; (3) criticism of the empha-
sis in the list of statements; and (4) expression of diffi-
culty in performing the judging. (3) and (4) have poten-
tially more serious implications with respect to the
adequacy of the judging process than do the earlier categories.

1. Compliments and encouragement only. The comments
of judges 3, 7, 8, and 10 fall into this category. No con-
clusions can be drawn from these comments, since they were
very general and may reflect nothing more than polite en-
couragement of research efforts.

2. Comments about goal setting. Judges 2, 4, 16, 18,
and 22 made comments about goal setting, none of which
reflected adversely upon the 118 statements. Apparently these
judges commented for the purpose of providing a clearer frame-
work for the goal-setting process.

3. Criticism of the emphasis in the list of statements.
Judges 12, 13, and 20 criticized the emphasis running through
the 118 statements. Judge 12 held that many statements were
irrelevant to goal setting. He especially criticized the
emphasis on career planning. However, few of the other

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[1]As might be expected, this categorization is not per-
fect. Some judges made comments which fell into more than
one category. In such cases the researcher employed the com-
ment which seemed dominant for purposes of categorizing.
This simple-minded categorization is useful because the
comments received were mostly brief and limited to one or
two topics.

judges noted the irrelevancies claimed by Judge 12. Judge 13 stressed that more statements about self-measurement and self-control were needed. In practically exact opposition to Judge 13, Judge 20 held that "most of these statements ignore managerial responsibility for leadership and the direction of subordinates." The researcher had included some statements of the kinds asked for by judges 13 and 20 in the 118 statements. To be specific, statements 31, 54, 68, 88, 111, and 118 cover self-measurement and self-control, as suggested by Judge 13. Statements 4, 30, 57, 70, 87, and 91 deal with leadership and direction of subordinates, as called for by Judge 20.

4. <u>Expression of difficulty in performing the judging</u>. Ten judges explained why they found the judging difficult or why they felt compelled to make various assumptions before they could judge the statements.

Four judges (1, 15, 17, and 19) objected that occasional items were ambiguous. However, the elimination of ambiguous statements by means of Q values (see Chapter 2, page 81) satisfies these objections.

Judge 5 expressed difficulty in judging, as he wrote:

> I don't quite know whether you try to assess what is the right company practice in goal-setting [or] what attitude a subordinate would evince if goal-setting were reasonably well done.

Judge 5's emphasis upon the "right" practice and goal setting which is "reasonably well done" suggest that his difficulty stemmed from his normative view of goal setting.

The other judges in this category (6, 9, 11, 14, and 21) each mentioned an underlying difficulty with the entire process of judging the 118 statements. It is possible that comments of this type might suggest revisions in the judging procedure.

Judge 6 criticized the composition of the statements:

> I am a little afraid that your items are too complex and loaded with "democratic" values that people should pay lip service to. You would be better off with shorter, crisper items!

As the researcher noted previously, goal setting *is* a normative subject among managers. For this reason it was neither possible nor desirable to eliminate all "loaded" statements. Of course, the researcher made every effort to encourage the respondents in the company study to "answer as things actually are now" (see Chapter 2, page 93). Similarly, the researcher simplified the items wherever possible in preparing them.

Judges 9, 11, 14 and 21 expressed difficulty in performing the judging because their concepts of goal setting differed from the concept implied by the 118 statements and accompanying instructions. Judge 9 mentioned a "problem with the word level." Similarly, Judge 11 reported he "had difficulty doing this," explaining his own interpretation of level of goal setting. Under Judge 11's interpretation it apparently is not entirely realistic to focus upon individual statements as limited in scope as the 118 in the list. Judge 14 reached the same conclusion, reporting:

"The one-sentence statements caused me to assume other conditions before I made the judgments."

Judge 21 reported difficulty with the judging stemming from his own emphasis upon team rather than individual goals:

> . . . my experience has convinced me that team
> goals are more important to organizational success
> than are individual goals (as a matter of fact,
> individual goal pursuit can damage organizational
> effectiveness) and that individual goals are more
> satisfactorily set and achieved within the context
> of the team.

The comments of Judges 9, 11, 14, and 21 have significant implications for this thesis. However, the researcher made no changes in the statements, instructions, or overall design of the judging for four reasons: (1) the plan for the GSI held promise for measuring how much goal setting occurs in specific situations, even if this measurement was imperfect; (2) none of the judges suggested any ways of redesigning the judging procedure to overcome the conceptual difficulties they identified; (3) there was very little agreement among the judges about the difficulties which existed; and (4) despite the difficulties the judges somehow judged the statements, and Thurstone's technique eliminates the poorest quality items (a factor the judges did not usually understand).[1]

5. <u>Comments of those who refused to judge</u>. The comments of the two goal-setting specialists who refused to make

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[1]The instructions to the judges were already so complex that the researcher was reluctant to add unnecessarily to the complexity.

the judgments could be especially instructive. The first of these specialists maintained that the term "highest level of goal setting" was not defined. He complained, "You tell me what it is not." However, in effect, the researcher asked each judge to define level of goal setting in the judge's own terms as he judged the statements. Therefore, defining "level of goal setting" in greater detail in the instructions (see Appendix G) would have weakened the study by imposing an unnecessary restriction upon the responses of the judges.

The second specialist who refused to judge reported difficulty "answering" the "questions." He wrote, "In every case I had the feeling the statement may or may not be true depending on many other conditions in the management climate." It is true that there are always other contingencies. However, the usual understanding is that one answers assuming other conditions remain unchanged. The assumption is awkward at times, perhaps; but on the whole the judges were able to keep other conditions constant as they judged each statement.

To summarize this first step in constructing the GSI, the specialists' judging of the 118 statements, despite a scattering of misgivings on their part, yielded results which permitted the construction of the GSI.

The construction of the GSI proceeded as follows.[1]
Once the judges had returned their responses to the 118
statements, the selection of the 42 statements for the GSI
was a straightforward matter. First, for each statement
the researcher determined graphically the scale values and
Q values. Then the researcher grouped the statements into
the seven levels according to their scale values (see
Appendix B). Next, the researcher selected the six state-
ments with the lowest Q values[2] from each of the seven
levels. (The researcher made one substitution where a state-
ment received an excessive number of X judgments.) The
researcher placed the 42 statements thus derived in order
of scale values (from lowest to highest).

The next section of this chapter analyzes the responses
of the company managers to the GSI.

The Goal-Setting Index (GSI), Step Two: The Managers' Responses to the 42-Item GSI

Results

The researcher administered the 42 statements to the
company sample of superior-subordinate pairs of managers
using the procedure explained previously (Chapter 2, p. 92

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[1]Explanation of the construction of the GSI appears in
more detail in Chapter 2, but it is summarized here for the
reader's convenience.

[2]Page 114 presents the reasoning behind the decision
rule to use six statements at each level.

Table 3-6 shows the GSI scores for the managers in this company sample as well as means and standard deviations for the scores. The 25 superiors scored from 3.9 to 5.7, while the subordinates scored from 4.2 to 6.1. Despite these differences in range, the means were practically identical at 5.1 and 5.2. (The theoretical range for both superiors and subordinates is from the lowest score yielded by the judging, 0.1, to the highest, 6.7.) The coefficient of correlation between superior and subordinate scores was r = .26, with a standard error of .99.[1] Taking the measure which is more relevant for present purposes, the GSI for the superior-subordinate pair,[2] the level of goal setting ranges from a low of 4.5 to a high of 5.7. The mean for the 25 superior-subordinate pairs if 5.1. (The reader will recall that theoretically the middle level is the D level, between 3 and 4.)

The researcher estimated the reliabilities of the GSI by comparing the goal-setting scale values on odd-numbered statements with the scale values on even-numbered statements. The researcher calculated the reliabilities in this manner

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[1] The calculation of the coefficient followed Leone Chesire, Milton Saffir, and L. L. Thurstone, Computing Diagrams for the Tetrachoric Correlation Coefficient (Chicago: University of Chicago Bookstore, 1933). The calculation of the standard error followed J. P. Guilford, Fundamental Statistics in Psychology and Education, 4th ed. (New York: McGraw-Hill Book Company, 1965), p. 330.

[2] The procedure for determining the GSI for the pair is explained on p. 86.

TABLE 3-6. Goal-Setting Index scores for superiors, subordinates, and superior-subordinate pairs.

Score on GSI	Number of Superior-Subordinate Pairs Receiving This Score	Number of Superiors Receiving This Score	Number of Subordinates Receiving This Score
3.9	0	1	0
4.0	0	0	0
4.1	0	0	0
4.2	0	1	2
4.3	0	1	0
4.4	0	0	1
4.5	1	0	0
4.6	3	3	1
4.7	1	1	1
4.8	1	2	0
4.9	1	0	1
5.0	2	0	1
5.1	1	1	1
5.2	6	4	7
5.3	2	4	2
5.4	0	1	0
5.5	3	1	2
5.6	2	3	1
5.7	2	2	3
5.8	0	0	1
5.9	0	0	0
6.0	0	0	0
6.1	0	0	1
TOTAL	25	25	25
MEAN	5.1	5.1	5.2
STANDARD DEVIATION	.37	.48	.43

for the 25 superior GSI scores, 25 subordinate GSI scores, and the GSI scores for the 25 superior-subordinate pairs. Table 3-7 shows the results.

TABLE 3-7. Reliability of the GSI (by correlating odd- vs. even-numbered statements).

	Coefficient of Correlation (r)[a]	Corrected co-efficient of Correlation[b]	At the 5% Level of Confidence (using Fisher's z technique):[c]	
			Lower possible limit of r[d]	Upper possible limit of r[d]
Superiors Only	.69	.82	.63*	.92
Subordinates Only	.36	.53	.17*	.77
Superior-Subordinate Pairs	.51	.68	.14*	.75

[a]This is the product-moment coefficient of correlation. The calculation followed the procedure summarized in Joseph Tiffin and Ernest J. McCormick, Industrial Psychology, 4th ed. (Englewood Cliffs, N. J.: Prentice Hall, Inc., 1958), pp. 545-547.

[b]The researcher applied the Spearman-Brown formula to correct for a scale of twice the length, as explained in J. P. Guilford, Fundamental Statistics in Psychology and Education, 4th ed. (New York: McGraw-Hill Book Company, 1965), p. 457.

[c]Calculations followed Guilford, op. cit., p. 162.

[d]Corrected r was used.

*All these correlations were obviously significantly different from zero.

Interpretation of GSI Results

The manager's response to the GSI showed that despite the complexity and diversity of the 42 statements, all of the superior and subordinate managers in the sample could make the evaluations requested (i.e., to check the statements with which they agreed). To be sure, some managers questioned the wording of several statements; and a very small number of managers could not understand the meaning of one or two statements even after some discussion with the interviewer. But these were definitely problems associated with a very small minority of the sample.

The experience of administering the GSI to managers suggests two conclusions about the GSI. First, the manager did not find the language in the statements unusual. Second, the task itself (i.e., making individual evaluations concerning many fragments of managerial behavior) was not too difficult or foreign to the respondents.

The several reliabilities of the GSI, as reported in Table 3-7, leave something to be desired, using common rule-of-thumb standards advocated by specialists in measurement. Only the superiors' GSI's, with a product-moment correlation of odds vs. even items of .82, reaches a level of reliability customarily considered adequate for research purposes. However, since research into manager goal setting is just beginning and since a wide mix of behavior and perceptions is involved, the reported reliabilities may be adequate.

In summary, the GSI is an operational measuring device. However, the reliabilities obtained suggest some reservations about the usefulness of the GSI in its present form. Nevertheless, because this thesis is exploratory, hypothesis testing goes ahead and uses the GSI scores obtained. The conclusions drawn in Chapter 5 take into account the reservations about the GSI reliabilities.

The Job Perception Index (JPI)

Results

The reader will recall that each of the 50 managers in the company study sorted the deck of 40 cards into order of importance. Then the researcher calculated the rank order correlation for each of the 25 superior-subordinate pairs[1] and obtained 25 scores on the JPI. These correlation scores were all positive, ranging from .01 to .60. The mean JPI was .30. Table 3-8 shows the distribution of the scores.

Interpretation of JPI Results

The mean in the present study (.30) is lower than the mean of the General Electric data (.47). Unfortunately, it was not possible to calculate the statistical significance of this difference between means since the raw scores for the General Electric sample were not available. The

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[1]The procedure for this computation is presented in Appendix M.

TABLE 3-8. JPI scores for the 25 superior-subordinate pairs.

Groupings of Rank-order Correlations (JPI Scores)	Number of Pairs Receiving Scores in Each Grouping
.01 - .05	4
.06 - .10	1
.11 - .15	4
.16 - .20	1
.21 - .25	0
.26 - .30	1
.31 - .35	3
.36 - .40	2
.41 - .45	2
.46 - .50	1
.51 - .55	3
.56 - .60	3
TOTAL	25
MEAN	.30

researcher asked Duffendack for his interpretation of the different results for the two samples. Duffendack responded in part:

> I can offer no readily obvious explanation for the differences in averages. Your distribution does fall well within the range of our distribution, so we do find many scores like yours, and many managers whose average scores would parallel those you found.[1]

[1] Stanley C. Duffendack, in a letter to the researcher dated April 13, 1967.

The present results with the JPI for the sample of executives in the present study apparently fall within the range encountered in General Electric groups. There is no reason to suppose that the sample in the present study is very different from General Electric groups or that the JPI was measuring something very different in the present research.

The Subordinate Effectiveness Rating (SER)

Results

The rating form used for the SER appears in Appendix N. In each superior-subordinate pair of managers (N = 25 pairs) the superior rated the subordinate along two five-point scales (from 1 to 5). Table 3-9 shows the distribution of ratings along each scale.

The correlation between the two five-point scales of the SER, the ratings of current performance on the one hand and promotability on the other, was found to be .10.

Interpretation of SER Results

The low correlation between the two scales suggested that the two scales were independent and there would be little point in combining the two ratings.

To interpret briefly, the two scales of the SER, treated separately, provide measures useful in testing the hypotheses.

TABLE 3-9. Ratings on the SER.

Rating	SER$_1$ (performance) Number of Subordinates Receiving This Rating	SER$_2$ (promotability) Number of Subordinates Receiving This Rating
1	1	2
2	0	3
3	0	6
3.5*	1	-
4	14	11
4.5*	1	1
5	8	2
TOTAL	25	25

*In the three instances in which the ratings are not whole numbers, the manager making the rating could not choose between two adjacent whole numbers. In these instances he was permitted to rate his subordinate midway between the two numbers.

Summary

The analysis of the first of the two steps in measuring goal-setting activity, namely, the specialists' judging of the 118 statements, suggested that the judging phase of the research provided an adequate base from which to build a measure of the independent variable, level of goal setting.

The analysis of the second of the two steps indicated that the GSI, as put together, could serve as an operational

measure. The reliabilities for the GSI scores were rather low but nevertheless probably adequate for the exploratory level of this research.

The measurement characteristics of the JPI were such as to warrant its acceptance as an operational measure.

Finally, the measurement characteristics of the two SER ratings indicated their adequacy for the present research.

CHAPTER IV

RESULTS AND INTERPRETATION OF INTER-

CORRELATIONS BETWEEN THE VARIABLES

This chapter presents the intercorrelations between

the measures of goal setting (GSI), the measure of job

understanding (JPI), and the two components of the rating

(SER).

There are three measures of the GSI: the superior's

GSI, the subordinate's GSI, and the GSI for the superior-

subordinate pair. Chapter 3 reported the low correlation

between superior and subordinate scores (.26). This cor-

relation suggested that superior and subordinate results

should be reported separately, in addition to the results

for the pair.

Chapter 3 also reported a low correlation (.10)

between the two components of the SER, the performance

rating and the promotability rating. This correlation made

it clear that the SER measured two distinct variables and

that there was little point in working with the total SER.

The procedure in Chapter 3 of separating results from

interpretation of those results will be continued. Tables

4-1, 4-2, and 4-3 contain the results of the intercorrela-

tions, and the paragraphs accompanying each table interpret

those results.

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The correlation coefficients reported in tables 4-1, 4-2, and 4-3 are tetrachoric r's.[1] Each standard error reported is a standard error of a zero tetrachoric r.[2]

Intercorrelations Between the GSI's and the JPI

Table 4-1 presents the intercorrelations.

TABLE 4-1. Intercorrelations between the GSI's and the JPI.

| | JPI | |
	Correlation Coefficient	Standard Error
Superior's GSI	.30	.32
Subordinate's GSI	.14	.32
Pair's GSI	.36	.32

When a correlation coefficient is as low as those in Table 4-1, the important question is whether the two variables are truly correlated or whether the coefficient was obtained by chance.[3] Rejecting the null hypothesis ($r = 0$) at the .05 level of confidence would require that the obtained r in each case be 1.96 or more times the standard error. In fact each r in Table 4-1 is less than 1.96 times

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[1]Leone Chesire, Milton Saffir, and L. L. Thurstone, Computing Diagrams for the Tetrachoric Correlation Coefficient (Chicago: University of Chicago Bookstore, 1933).

[2]Guilford, op. cit., p. 330.

[3]Guilford, op. cit., p. 162.

its standard error and the null hypothesis cannot be
rejected. This means that the correlation coefficients in
Table 4-1 may have occurred by chance and that there may
well be no correlation between the variables.

Intercorrelations Between the GSI and
the Components of SER

Table 4-2 reports the intercorrelations.

TABLE 4-2. Intercorrelations between the GSI's and the
components of the SER.

	SER_1 (Present Performance)		SER_2 (Promotability)	
	Correlation Coefficient	Standard Error	Correlation Coefficient	Standard Error
Superior's GSI	.45	.32	.67	.31
Subordinate's GSI	.11	.32	.60	.31
Pair's GSI	-.10	.32	.16	.31

Again, rejecting the null hypothesis ($r = 0$) at the
.05 level of confidence would require that the obtained r
in each case be 1.96 or more times the standard error. This
test is approximately met in the correlations between both
the subordinate's GSI and SER_2 (promotability) and the
superior's GSI and SER_2. In these two cases the null hypoth-
esis can be rejected. This means that these correlations
are unlikely to have occurred by chance. For the other four

correlations in Table 4-2 the null hypothesis cannot be rejected; these correlations may well have occurred by chance.

Intercorrelations Between the JPI and the Components of the SER

Table 4-3 shows the intercorrelations.

TABLE 4-3. Intercorrelations between the JPI and the components of the SER.

| | JPI | |
	Correlation Coefficient	Standard Error
SER_1 (Present Performance)	-.01	.33
SER_2 (Promotability)	.22	.33

Following the reasoning and calculations in the previous sections of this chapter, the null hypothesis cannot be rejected. The correlations reported may well have occurred by chance.

Summary

This chapter presented the results and interpretation of intercorrelations between the variables. This chapter and Chapter 3 presented all the relevant results and interpretation of results. Chapter 5 draws material from Chapter 3 and Chapter 4 as part of its evidence in the testing of hypotheses.

CHAPTER V

TESTING THE HYPOTHESES, CONCLUSIONS, AND

IMPLICATIONS FOR FUTURE RESEARCH

ON GOAL SETTING

With the results and interpretation of Chapters 3 and
4 as a foundation, Chapter 5 reports the tests on the hypothe-
ses and then draws overall conclusions from the present
research.   The chapter concludes with implications for
future empirical research into goal-setting behavior.

Testing the Hypotheses

Hypothesis 1:   There are significant, identifiable
commonalities of viewpoint among the various systems
of manager goal setting; and these commonalities will
be reflected in the independent judgments of a sample
of various specialists in goal setting.

This hypothesis is confirmed.   Following is the
evidence.

One body of evidence confirming Hypothesis 1 is the
successful development of the Goal-Setting Index (GSI).
From surveying the writing about manager goal setting, the
researcher was able to put together 118 statements, each
of which describes some significant aspect of behavior
occurring when a superior and a subordinate interact during
goal setting.

In the process of deriving the statements, six content categories emerged. The researcher might have developed six indexes, one for each of the categories. Instead, he found it possible to consider the six categories as parts of one broad activity, namely, goal setting. Each of the six categories simply became a somewhat separate facet of the overall activity.[1]

Next the researcher asked 40 goal-setting specialists to judge the extent of goal setting indicated by the behavior spelled out in each of the 118 statements. The fact that 29 performed the judging as requested lends further support to the hypothesis. While several of these 29 expressed suggestions and criticisms, all of them performed the judging as requested. Nine of the remaining eleven gave reasons of time or sent in their answers too late; only two indicated they found it impossible to perform the judging.

A second body of evidence confirming Hypothesis 1 is the statistical evidence obtained in connection with the judging of the statements. The fact that the judges were able to go through the statements, one by one, and think that they were all in the same universe is one support for Hypothesis 1, as we have already seen. In addition, when the researcher checked how closely the judges agreed with

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[1]The six statements served the useful function in later constructing the GSI of insuring that all six dimensions of goal-setting behavior were fairly represented in the GSI.

each other after having independently judged the statements, he found considerable agreement. If agreement had been low, high Q values would have resulted. Instead, the Q values found in this study were closely parallel to those Thurstone obtained in constructing his prototype scale many years ago (see Table 3-3, p. 112).

More support for Hypothesis 1 comes from the small number of X judgments that the judges used. The judges evidently did not find many statements which they considered irrelevant to the extent of goal setting.

A still further way of supporting Hypothesis 1 is quite different from the preceding ones. This way asks the reader to read through the 42 statements in the GSI, those with the lowest Q values, and judge for himself the high degree to which they reflect similar content. See Appendix K in which the statements appear by levels as follows:

Level	Statement Numbers
0-1 (lowest level of goal setting)	1 through 6
1-2	7 through 12
2-3	13 through 18
3-4 (middle level of goal setting)	19 through 24
4-5	25 through 30
5-6	31 through 36
6-7 (highest level of goal setting)	37 through 42

Besides studying the statements by <u>levels</u>, the reader may get a different but nevertheless confirming view of content similarity by studying the statements by the six content categories. Although Appendix C presents all 118 statements by level, Appendix K may be more useful at this point since it is limited to those statements with the lowest Q values in the judging. These 42 statements, of course, made up the GSI.

> Hypothesis 2: <u>The extent of goal setting</u> taking place within a superior-subordinate pair of managers can be measured where goal setting is viewed as a wide-ranging concept involving not only work goals and the process of setting goals but also various related matters.[1]

This hypothesis is at least partially confirmed. Following is the evidence.

The Goal-Setting Index, developed in this study, and administered successfully to 25 superior and 25 subordinate managers, stands as a limited piece of evidence that the extent of goal setting can be measured as specified in the hypothesis.

A factor limiting the confirmation of Hypothesis 2 is the relatively low split-half reliabilities found for two of the three GSI measures. The researcher found that only the superior managers' GSI's had reliabilities high enough

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[1]The reader will recall that these related matters include verification, feedback, review, and recycling. For a more complete discussion, see Chapter 1, p. 3.

to be acceptable if one uses common rules of thumb that
authorities in measurement advocate. The subordinates'
GSI's were relatively unreliable. Since the GSI's for the
superior-subordinate pair are each simply the mean of the
superior's GSI score and the subordinate's GSI score, the
low reliability of the combined score can perhaps be
explained by the relatively unreliable component, the sub-
ordinate's GSI.

At the same time some anticipated indirect evidence
that the GSI measured goal-setting behavior did not emerge.
Hypotheses 3 and 4 involved interrelating the GSI with other
variables. If the correlations hypothesized had been high
in the expected direction (positive), the logical relation-
ships between the GSI and the other variables would have
been demonstrated. Then, insofar as the other variables
had content validity, this content validity would have
generalized to the GSI. Since the intercorrelations tended
not to be significantly different from zero, what the GSI
measures in this intercorrelational setting is not clear.
Possible explanations for these low intercorrelations
appear below in the discussion about the support for the
remaining three hypotheses, all of which involve the inter-
correlations.

There is one other relationship between Hypothesis 2
and the low intercorrelations that remains to be explained
in connection with Hypotheses 3, 4, and 5. Just as

reliability is an important consideration in Hypothesis 2,
the support for Hypotheses 3 and 4, which is in the form
of intercorrelations, also depends upon the reliability of
the various measures. Although the adequacy of the
reliabilities of the GSI, the JPI, and even of the SER may
be in some respects deficient, the analysis that follows, made
on the working assumption that the reliabilities are ade-
quate for exploratory purposes, points to interesting areas
of investigation.

The following three hypotheses concern the interrela-
tionships among the three main variables of the study.

Hypothesis 3: The extent of goal setting within
each superior-subordinate pair of managers is positively
correlated with the job understanding of that pair
(where job understanding is measured by perceptual
congruence and where extent of goal setting is measured
by all three methods: superior's view, subordinate's
view, and combined view).

This hypothesis is not supported. A brief reminder
of the rationale of the hypothesis precedes the evidence.

The researcher's review of the writing on goal set-
ting strongly suggested the hypothesized relationship.
The rationale was that superior-subordinate interaction
during goal setting led to increased job understanding.
Because of goal setting the subordinate could not help but
understand more clearly what his superior expected him to do.

The correlations between the three measures of extent
of goal setting (the GSI) and the measure of job understand-
ing (the JPI) are not significantly different from zero.
(Table 4-1 reports these correlations.)

Hypothesis 4: <u>The extent of goal setting</u> within a superior-subordinate pair of managers is positively correlated with the superior's ratings of the subordinate (where extent of goal setting is measured by the three ways).

This hypothesis is partly supported. A brief reminder of the rationale of the hypothesis precedes the evidence.

The extent of goal setting occurring within a superior-subordinate pair, following the writers on goal setting, leads to better performance on the part of the subordinate as he learns what is expected in more detail and as he comes to have targets to shoot for. The researcher began with the often-postulated causal relationship between goal setting and present performance. The researcher added a further assumption that the higher levels of performance caused by high levels of goal setting would show up in the superior's ratings of his subordinate's present performance and promotability.

Of the six correlations shown in Table 4-2, two are statistically significant: the positive correlations between the superior's GSI and the promotability rating; and the positive correlation between the subordinate's GSI and the promotability rating.

These positive findings provide tentative support for the idea that goal-setting efforts on the part of the pair lead to better chances for considering the subordinate promotable. The more the superior sets goals with a particular subordinate, the more promotable he considers the subordinate to be. Also, the more the subordinate sets goals

with his superior, the more promotable the superior thinks

the subordinate is. This support of the hypothesis is

limited by the fact that no significant relationship occurred

between the combined GSI for the pair and the promotability

rating.

None of the three correlations between goal setting

and present performance is statistically significant.

Hypothesis 5: The job understanding within a
superior-subordinate pair of managers (measured by
perceptual congruence) is positively correlated with
the superior's ratings of the subordinate.

This hypothesis is not supported. A brief reminder

of the rationale of the hypothesis follows.

Throughout the management literature is the notion

that if the subordinate understands his superior's expecta-

tions the subordinate can achieve higher levels of perform-

ance. Although comparing performance across different

companies and different functions is difficult, the SER

provided a promising measure to reflect different levels

of performance.

Neither of the correlations between job understanding

and ratings is statistically significant (see Table 4-3).

Conclusions

This section builds on the rationale of the hypotheses

and the findings from testing the hypotheses. The conclu-

sions begin with a summary statement of the three hypotheses

that involve interrelationships, namely, Hypotheses 3, 4,

and 5. From testing these three hypotheses the researcher unearthed several complexities surrounding goal-setting behavior. Following the discussion of these complexities, the final section presents implications for future research on goal setting.

The research in this thesis hypothesized that all of the eleven intercorrelations among the three basic variables would be positive. In point of fact, only two of these correlations turned out to be significantly different from zero. These conclusions aim to provide summary explanations for all the above findings.

Discussion of the two positive correlations appears below in the appropriate section on extent of goal setting and ratings. What are possible explanations for the lack of correlation in the other nine cases? (1) The first possibility is that if one takes the nine low coefficients of correlation at their face value, then there exists no relationship between the variables represented by these correlations. (2) The second possibility is that the variables may be positively interrelated, in keeping with the hypotheses, but that these nine interrelationships did not show up in the present study because of either or both the following sub-possibilities: (a) other variables

intervene and were not measured in this research;[1] (b) the measures employed were not sufficiently reliable. Discussion of this last possibility, insufficient reliability, appears in a later section, implications for future research. In this discussion of conclusions the researcher assumes for the moment that the measures, GSI and JPI, are sufficiently reliable, though perhaps at no more than a borderline level, to permit considering possibilities (1) and (2a).

Each of the three sections immediately following explores the conclusions suggested by possibilities (1) and (2a). In each discussion of possibility (1) the ramifications of this possibility receive attention and in each discussion of possibility (2a) an example of an intervening variable appears.

Possible Explanations of the Findings
of Hypothesis 3, Which Tests the
Correlations Between Extent of Goal
Setting and Job Understanding

Suppose that one concludes from the evidence with respect to Hypothesis 3 that there is no relationship between the extent of goal-setting behavior and the superior-subordinate pair's mutual job understanding. This lack of relationship

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[1]This thesis had built into its design the testing of the effects of one intervening variable, job understanding. Underlying Hypotheses 3, 4, and 5 was the premise that job understanding intervenes between goal setting and the ratings. The low correlation found in Hypotheses 3 and 5 did not support the premise of this particular intervening variable.

would suggest that an important claim made by many advocates
of goal setting does not prove to be true, namely, that goal-
setting efforts bring about a significant meeting of the
minds between superior and subordinate about what the superior
expects from the subordinate.[1] If present goal-setting
efforts do not bring about such a meeting of the minds,
managers might either redesign present goal-setting efforts
or, if redesign is not feasible, de-emphasize goal setting.

The second possibility, as the researcher suggested
above, is that a correlation does exist, but that other
variables intervene. For example, the degree of influence
of the superior manager on his own superiors could be an
intervening factor. If the superior is not very influential,
his subordinates may not feel that understanding this
superior's expectations is important.[2] Therefore, he may
have no incentive to attain the kind of job understanding
measured in this thesis. On the other hand, if the superior
is influential with his own superiors, the subordinate may

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[1]For a fuller discussion of this claim of the goal-
setting advocates see the review in Chapter 2 of business
writing about goal setting. Specifically, see page 42 in
Chapter 2 (Drucker), page 43 (McGregor), and page 46 (Hughes).

[2]A dramatically clear example is the case of "Tony
Rodwell" (in William R. Dill, et al., The New Managers,
Englewood Cliffs, N. J., 1962, pages 68-76). Rodwell, a
recent college graduate, after only a few months' experience
with his company, was assigned as assistant to the chief of
production scheduling. Rodwell knew that the factory
manager considered this chief to be a weak manager, and for
this reason Rodwell made no particular effort to understand
the chief's expectations.

feel that the best chance for his own advancement lies in understanding his superior's expectations.[1]

Possible Explanations of the Findings of Hypothesis 4, Which Tests the Correlations Between Extent of Goal Setting and Ratings

First, as a result of the relationship between extent of goal setting and the promotability rating, one might conclude that the expected positive relationship does exist. By setting and meeting goals through several periods the subordinate presumably practices a process of improvement; and this should enhance his promotability rating (the second component of the SER).[2]

The positive relationship found between goal setting and the promotability rating is the only relationship in this study which suggests a possible positive effect of goal setting. Even this finding is limited by the fact that the

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[1]The importance of the superior's influence upon the subordinate's behavior, at the foreman level at least, has been documented by Donald C. Pelz in "Influence: A Key to Effective Leadership in the First-Line Supervisor," Personnel, 1952, Vol. 29, pages 209-217.

[2]The researcher recognizes a limitation of the number of highly promotable managers in a total company; i.e., even given great growth of the company and many executives nearing retirement age, there are only limited numbers of vice-presidencies and other top positions. However, this limitation does not preclude a given superior from having significantly more than his share of promotable subordinate managers. In fact, some students of executive development have discovered certain managers who had attained only fairly low organization levels themselves who nevertheless consistently trained young men for top-level positions.

relationship held only with the superior's GSI and subordinate's GSI, and not with the pair's GSI.

Second, as a result of correlating goal setting with performance ratings, one might conclude that no relationship exists between the two variables. Again such a conclusion would tend to contraindicate claims made by goal-setting advocates. Several advocates argue that many managers do not have a clear idea of what results the boss expects and further that goal-setting efforts can remedy this lack. Once remedied, the subordinate presumably can perform better; and this better performance should show up in his superior's rating of his current performance. If goal-setting efforts do not improve the present performance of the subordinate, managers may again wish to either redesign or de-emphasize these goal-setting efforts.

The results of correlating the GSI with the performance rating might also be explained in terms of intervening variables. For example, the subordinate's level of aspiration may be a factor. Suppose that initially a superior-subordinate pair is not practicing goal setting to a large extent and the subordinate's aspiration level is low (where "low" is taken to mean that, if the superior was aware of this aspiration level, he would find it unsatisfactory). Now suppose the pair begins practicing a higher level of goal setting with no change in the subordinate's

aspiration level.[1] Because of the goal-setting interaction

the superior may come to comprehend more fully how low the

subordinate's aspiration level is and for this reason rate

the subordinate's current performance <u>lower</u> than before the

increased goal setting. This suggests that a future

hypothesis might read:

> Given a high aspiration level of the subordinate
> ("high" in the eyes of the superior), the extent of
> goal setting is positively correlated with the
> superior's ratings of the subordinate's current
> performance.

The researcher notes in passing a serious oversimplification

found in most of the writing about goal setting; namely, the

implicit assumption that those who are to set goals for

their own work have high aspiration levels.[2]

<u>Possible Explanations of the Findings</u>
<u>of Hypothesis 5, Which Tests the</u>
<u>Correlations Between Job Understand-</u>
<u>ing and Ratings</u>

From the evidence on Hypothesis 5, one might conclude

that no relationship exists between job understanding and

the ratings of subordinate effectiveness. This conclusion

would stand in opposition to that reached by Harrison based

on his research at the worker level (summarized in Chapter

1, page 26.

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[1]The subordinate's aspiration level may be independent
of goal-setting behavior.

[2]McGregor touches upon the question of top managers'
assumptions about levels of aspiration when he relates the
incident of the man who was promoted against his wishes
(McGregor, <u>op. cit.</u>, pages 50-51).

On the other hand, one might hypothesize intervening variables to explain the results of testing Hypothesis 5. For example, it may well be that the subordinate's understanding of his superior's expectations is only the first step toward improved performance, and that the pair must also come to <u>agree</u> about the expectations.

Suppose one accepts the working assumption that the measures are adequately reliable. Then, in all three areas of correlation, a choice explaining the nine cases of lack of correlation remains open: Either the hypothesized relationships do not exist, or the relationships are complicated by intervening variables. Any such intervening variables in any of the three areas would suggest need for further research, for which specific suggestions appear below.

Complexities Surrounding Goal-Setting Behavior

The low coefficients of correlation found in testing Hypothesis 3, the present performance but not the promotability finding of Hypothesis 4, and Hypothesis 5 suggest rather strongly that the relationship between goal setting and other vital areas may not be so simple and direct as is commonly assumed. The evidence neither covers a sufficient breadth of variables nor is precise enough to demonstrate conclusively that goal-setting efforts are not paying off. However, this thesis at least suggests the wisdom of a

very careful approach to goal setting since goal-setting behavior stands in a complex relationship to other organizational variables.

This complex relationship should not be very surprising since researchers have often found great complexity where relationships had appeared to be obvious. For example, psychologists have found that the concept of "mechanical ability" is not unidimensional as common sense might suggest, but rather that a given person may possess a high aptitude for some types of mechanical activity but low aptitude for others. Similarly, researchers have encountered a very complex relationship between two matters which once seemed obvious, workers' morale and productivity.

At the more relevant level of research into superior-subordinate interaction, General Electric researchers[1] found that a number of logically expected relationships did not exist. Here are two striking examples of the General Electric findings:

(1) Praise had little effect on performance or attitudes.

(2) "Participation" had little effect on goal achievement.[2]

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[1] E. Kay, J. R. P. French, Jr., and H. H. Meyer, A Study of the Performance Appraisal Interview (New York: Behavioral Research Service, General Electric Company, 1962).

[2] Ibid., p. 25.

In goal setting, common sense suggests that explicitly agreed-upon goals with specific times of accomplishment lead to greater improvement in performance than would occur without such goals. And, in fact, General Electric researchers found such a relationship (reported in Chapter 1, p. 11). These researchers not only found many components of goal setting (See Chapter 1, p. 14), but also a complicated structure of relationships between such presently relevant matters as goal setting, performance appraisal, participation in planning, and superior's criticism of subordinate's performance, to name a few (see Chapter 1, pp. 11-15 and Chapter 2, pp. 52, 53, and 75). The present research attempted to extend across several organizations the variables identified at General Electric and other individual companies. Working in several organizations makes the relationships even more complex.[1]

Implications for Future Research on Goal Setting

The findings in this thesis suggest value to research along two lines: (1) research to develop more reliable measures of goal setting and related measures such as the Job Perception Index and (2) further research to unravel the complex relationships between goal-setting behavior and other significant organizational relationships. The positive

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[1]Research findings across organizations hold the promise of generalizing more widely than do research findings within a single organization.

relationship found between goal setting and promotability
ratings, if confirmed in future research, has important
implications for management theory.

Future researchers may find the GSI helpful in develop-
ing more reliable measures of goal setting. First and most
obvious, the basic method could be employed with variations
in the exact procedure used. For example, subjects might
check only a certain number of statements with which they
agree most strongly. Second, a narrower range of subject
matter might produce a more reliable measure of goal setting.
Future researchers could utilize the results of the judging
reported in Chapter 3 but design a new measure of goal
setting by eliminating one or more of the content categories
before deriving the final scale.

A factor analysis could prove valuable. Each factor
might become the basis for a separate measure of an impor-
tant and independent aspect of goal-setting behavior.

A promising application of the GSI or other measure of
goal-setting behavior is to administer the measure to a
larger number of subjects than in the present study and then
perform sub-group analysis of the resulting data. Important
information may result with respect to the scores of:
women vs. men; line vs. staff; subjects in different companies.
In addition, the general wording of the GSI suggests it can
be employed in non-business organizations.

Future researchers may develop new measures of the possible effects of goal-setting behavior in addition to improving existing measures. Among the new measures the work of various researchers in organizational effectiveness is promising. That is, goal-setting researchers could borrow various measures of organizational effectiveness as dependent variables, keeping the extent of goal setting as independent. The Job Perception Index, borrowed for this thesis from General Electric, is an example of an existing measure which can be improved. A first step toward increasing the generality of this JPI might be to develop a new deck of cards following the same format as the General Electric researchers followed, except in a different company setting. Then both the new and original decks could be administered for a comparison of reliabilities.

In the second area of research, that of unraveling complex relationships, the low correlations between variables reported in this thesis provide challenging questions for future researchers. The researcher has suggested the possibility of intervening variables and has presented examples of them that could be worth explaining.

Final Statement

The findings of this thesis research show goal-setting behavior to be conceptually complex and difficult to measure. Nevertheless, the measurement of goal setting so far explained holds much promise of contributing to the untangling of the

intricate relationships among the many variables relevant to
organizational functioning. The two positive relationships
found between goal-setting efforts and promotability, if
confirmed by future investigation, may point a research-
supported way toward better illumination of one of the many
dark corners in management theory. At the same time the
lack of significant positive relationships in most areas
where these positive relationships should occur provides
challenging questions for future research. This research
at least represents a small beginning in seeing some of the
factors involved in understanding goal setting and other
logically related management activities.

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APPENDICES

APPENDIX A

THE 118 STATEMENTS

APPENDIX A

THE 118 STATEMENTS

Name of Judge_____

MANAGERS' STATEMENTS

A B C D E F G X 1. Goal setting for individual managers is a continuing process at my organization level.

A B C D E F G X 2. My boss acts as though he never heard of goal setting for individual managers.

A B C D E F G X 3. I have verifiable work goals; I mean, at the date agreed upon, my boss can tell readily how close I've come to accomplishing my goals.

A B C D E F G X 4. My boss thinks it is important to discuss the problems of my job with me, but we don't do enough of it.

A B C D E F G X 5. I have a fairly clear idea of what's par or normal performance in my job, but it could be clearer.

A B C D E F G X 6. It's only when there's an emergency "upstairs" that I get any indication how I'm doing, and then it's usually negative.

A B C D E F G X 7. My boss has a written copy of my work goals for this period, and he refers to it during the period.

A B C D E F G X 8. I have a written list of work goals, but I don't remember exactly what they are.

A B C D E F G X 9. Sometimes my boss asks me just how I plan to reach my work goals, and sometimes he doesn't.

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A B C D E F G X 10. I'm lucky if I get any hint from any of the higher managers how well I'm doing my job.

A B C D E F G X 11. Most of the time, but not always, salary increases are based on improvement in individual performance.

A B C D E F G X 12. When the boss tells us about the new goals and plans for his unit, he carefully takes into account the goals that were set for last month or last quarter.

A B C D E F G X 13. My boss is interested in my development, and views setting work goals as a step in the right direction.

A B C D E F G X 14. My boss' idea of par for my job is ridiculous.

A B C D E F G X 15. My boss feels uncomfortable about pinning me down on target dates and similar matters.

A B C D E F G X 16. At my organization level we don't bother meeting at regular times to set goals for each individual manager, but we are continually thinking about these individual goals.

A B C D E F G X 17. Sometimes my boss understands how much my performance depends on things I can't control, and sometimes he doesn't understand.

A B C D E F G X 18. My boss won't give me time off for any kind of personal development or executive development, unless it's obviously related to my current work.

A B C D E F G X 19. My boss and I work together to determine my standards of performance, and I feel he really considers my point of view.

A B C D E F G X 20. If my boss and I could agree more fully what levels of performance are reasonable for my job, we could set more useful work goals.

A B C D E F G X 21. At my organization level we give more attention to the goals of my immediate superior's work group than we do to each individual's goals.

A B C D E F G X 22. My boss and I discuss what activities he must perform in order that I can carry out my responsibilities.

A B C D E F G X 23. There doesn't seem to be any logic to the way salary increases are given in this company.

A B C D E F G X 24. My work is too complex to express in terms of standards of performance.

A B C D E F G X 25. Salary action is tied too closely to goal attainment, with the result that my pay fluctuates too much because of factors outside my control.

A B C D E F G X 26. My boss and I have agreed on specific things I need to do to improve myself (such as night school, special assignments, conferences, etc.).

A B C D E F G X 27. Sometimes when my boss and I talk about my performance, I feel like a defendant on trial.

A B C D E F G X 28. When my boss and I talk about my work goals, I find myself maneuvering for easy goals, since my salary depends on how well I reach these goals.

A B C D E F G X 29. My boss and I talk less about what I need to accomplish than about various other matters, such as how much time I'll need.

A B C D E F G X 30. My boss usually expects me to complete an assignment by an exact date.

A B C D E F G X 31. My boss is somewhat permissive; he encourages me to set some, but not all, the goals for my own work.

A B C D E F G X 32. With all the things my boss expects me to be doing, I just don't know what he considers most important right now.

A B C D E F G X 33. My performance could be expressed fairly well in numbers, ratios, or percentages, but my boss and I haven't got around to working it out yet.

A B C D E F G X 34. My boss might discuss my career plans with me, but he'd view it as more or less outside his responsibility.

A B C D E F G X 35. When things go wrong, sometimes I know exactly what aspect of my performance was not up to par, and sometimes I don't.

A B C D E F G X 36. The main thing I have to answer to my boss for is my attainment of the goals we agreed upon.

A B C D E F G X 37. When my boss holds a meeting of his immediate subordinates, in his enthusiasm for working on the big picture, he forgets the individual goals that have been worked out for each of us.

A B C D E F G X 38. My boss and I have talked about how I might get a promotion, but the discussion has never been very specific.

A B C D E F G X 39. I get formal feedback that adequately covers my goals and responsibilities.

A B C D E F G X 40. My boss is very understanding about extenuating circumstances which cause me to fall short of our expectations.

A B C D E F G X 41. My boss really wants all of us at my level to understand the goals of his organizational unit and how this unit fits into the total company picture.

A B C D E F G X 42. My boss will sit down and talk about my long-term career goals _if_ I push him hard enough.

A B C D E F G X 43. On the whole I get feedback about my performance in plenty of time to use it.

A B C D E F G X 44. I'm not satisfied if I merely meet the low level of work goals which seems to satisfy my boss.

A B C D E F G X 45. My boss seldom praises me when I've got praise coming.

A B C D E F G X 46. The way my boss handles the discussion of my weaknesses with me, anyone in my position couldn't help get a little defensive.

A B C D E F G X 47. I'm not too clear about my immediate superior's work goals.

A B C D E F G X 48. My boss and I find that it's best not to talk about my goal achievement and my salary at the same meeting.

A B C D E F G X 49. Without the feedback I get from official channels, my performance might suffer somewhat, but not too much.

A B C D E F G X 50. At my organization level, about equal percentage increases in salary generally go to everybody whenever increases are passed out.

A B C D E F G X 51. After my boss and I have gone to the trouble of agreeing on my work goals, then he comes around and interferes before I've had a chance to prove myself.

A B C D E F G X 52. At my organization level, individual rewards depend somewhat on luck but more on performance.

A B C D E F G X 53. I've got so many goals I have trouble keeping track of them all.

A B C D E F G X 54. Although my boss has a pretty good idea of what my goals ought to be, he lets me state them first and then we work them out.

A B C D E F G X 55. There are too many times when I don't really know what the boss expects of me.

A B C D E F G X 56. Once my boss and I agree on my goals, I can't get them changed, no matter what.

A B C D E F G X 57. Every so many months my boss and I sit down and decide how much I'm supposed to accomplish by specific dates in the future. When these dates actually arrive, we talk about how I did and what I should be shooting for during the next time period.

A B C D E F G X 58. My boss doesn't care whether or not we've ever set goals for my work, just as long as I get the work done that he's counting on me to do.

A B C D E F G X 59. At my organization level we're lucky if we have plans for tomorrow, let alone next week or next month.

A B C D E F G X 60. There are ways my boss can check whether my performance meets prior expectations, but these ways are not completely effective.

A B C D E F G X 61. A lot of times my boss and I agree on my work goals, but we don't get around to discussing how I'm going to reach them.

A B C D E F G X 62. It's very important, in my job, to meet agreed upon deadlines on time.

A B C D E F G X 63. If I wrote out a list of my work goals and plans for the coming month, I think my boss would find my list appropriate, but I can't be entirely sure.

A B C D E F G X 64. My boss and I not only regularly put my work goals into writing, but we also keep them up to date.

A B C D E F G X 65. The only real feedback I get about my performance comes through informal channels.

A B C D E F G X 66. My boss determines <u>what</u> and <u>how well</u> I should be doing <u>before</u> he talks to me, and very seldom changes his mind about these matters.

A B C D E F G X 67. Unless he's getting unusual pressure from higher management, I don't see much of my boss.

A B C D E F G X 68. My boss expects me to do some independent thinking about what I should be doing in my job.

A B C D E F G X 69. I suppose individual rewards are mostly fair and reasonable at my organizational level, but some politics is involved.

A B C D E F G X 70. Sometimes my boss has to make the final decision about how I should spend my time, but other times we agree.

A B C D E F G X 71. The best managers at my level around here can work out their own plans to meet their goals without a lot of trips to the boss' office.

A B C D E F G X 72. Once in a while when my boss and I talk about my performance, I feel I must stress my successes and "play down" my failures.

A B C D E F G X 73. If I were to put forth just a little less effort than usual the next six months, this would show up in the rewards I got.

A B C D E F G X 74. I have some measures of my performance in practically every area of my responsibility.

A B C D E F G X 75. I don't see any personal benefit from trying to achieve the higher levels of performance my boss keeps yelling about.

A B C D E F G X 76. My immediate superior should give me more help getting necessary inputs of any and all kinds; because he doesn't, I miss some of my goals and targets each time period.

A B C D E F G X 77. At one time or another my boss and I have talked seriously about what's par performance for my job and we have come a long way, but we continue to disagree in a few areas, mostly of minor importance.

A B C D E F G X 78. My boss and those of us at my organiza-
tion level all seem to agree that <u>how</u>
an individual reaches his work goals is
his own business.

A B C D E F G X 79. I'm not always exactly sure which one
of my special assignments and continuing
responsibilities is supposed to be done
first.

A B C D E F G X 80. I get some specific feedback about my
performance, but I need more.

A B C D E F G X 81. Except for once or twice a year, I
get no indication from any of the higher
managers about how well I'm doing my
job.

A B C D E F G X 82. Generally, when I encounter a really
serious obstacle, my boss and I dis-
cuss it and revise my work goals
accordingly.

A B C D E F G X 83. The idea of continuing improvement is a
way of life at my organization level.

A B C D E F G X 84. If I miss some of my goals, I can
plead extenuating circumstances, and
my boss usually will let me off the
hook.

A B C D E F G X 85. I have some understanding of the
objectives of the total company, but I
could do a better job if I knew more.

A B C D E F G X 86. My boss is only mildly concerned about
my personal preferences when he and I
discuss my work.

A B C D E F G X 87. All too often when my boss tells us
about changes he hopes to see around
here, he demonstrates he doesn't know
much about what's going on.

A B C D E F G X 88. If I asked my boss what my ideal set
of work goals should be for the coming
period, he'd probably encourage me to
work this out myself rather than
just tell me.

A B C D E F G X 89.   Now and then when profitable new areas of responsibility come up for me, my boss and I don't catch them in time.

A B C D E F G X 90.   My boss doesn't seem to realize that many of my operating problems can't be anticipated in the planning stages.

A B C D E F G X 91.   As long as I'm getting expected results, my boss usually won't bug me.

A B C D E F G X 92.   Regardless of how well I've been setting goals and meeting them, my boss always seems to be "looking over my shoulder."

A B C D E F G X 93.   My boss will not talk to me about my career plans and personal goals, even if I bring up the subject.

A B C D E F G X 94.   Sometimes the boss acts as though we all share his personal goals and desires and we don't have any of our own.

A B C D E F G X 95.   I don't know what my boss would consider a "good job" on the work I've been doing for the past two weeks.

A B C D E F G X 96.   For me to get ahead, pleasing my boss is at least as important as tangible accomplishments.

A B C D E F G X 97.   My boss seems too busy with current problems to talk with me about my career plans.

A B C D E F G X 98.   I have some understanding of what it takes for me to get a raise.

A B C D E F G X 99.   My boss tries not to discuss my salary during the same meeting we talk about my work goals and progress toward goals, but this separation just doesn't work.

A B C D E F G X 100.   If my boss and I took time out to sit down and talk things over more frequently we might not get caught short as much as we do.

A B C D E F G X 101. Achieving the results my boss expects often requires more of his support than I can get.

A B C D E F G X 102. My performance on the job would improve if my boss took more account of my long-term personal or life goals.

A B C D E F G X 103. Sometimes my boss is too lenient with me about meeting my goals, and I'm not really held accountable for much of anything.

A B C D E F G X 104. Sometimes my boss knows enough about the work I do to make sound judgments about my performance and salary, and sometimes he doesn't.

A B C D E F G X 105. With only the information I get from the boss and other official channels, I wouldn't have any idea how to improve my performance.

A B C D E F G X 106. Sometimes my boss asks me just how I plan to reach my work goals, and sometimes he doesn't.

A B C D E F G X 107. My boss seems to have only a vague idea of what I'm doing most of the time.

A B C D E F G X 108. My boss gives me some ideas, but I need more help from him to decide how to correct my performance deficiencies.

A B C D E F G X 109. My boss and those of us at my organization level do not plan very much. Mostly, we play everything "by ear."

A B C D E F G X 110. I don't know what this year's goals for the total company are.

A B C D E F G X 111. My boss definitely sets the <u>limits</u> on what my goals should be, but <u>within</u> those limits he lets me set my own goals.

A B C D E F G X 112. Some things my boss has said convince me he isn't at all aware of the obstacles I face.

A B C D E F G X 113. My boss and I have worked out effective ways to measure some areas of my performance which once seemed unmeasurable.

A B C D E F G X 114. My boss out and out tells me what my work goals are to be for the coming time period, no matter what I think they should be.

A B C D E F G X 115. The only reason my boss tells me how I stand is because the company requires it.

A B C D E F G X 116. Not only do my boss and I work out my goals at regular goal-setting time, but he gives me every chance to put in my two cents between goal-setting sessions.

A B C D E F G X 117. Much of the information I get about my performance is objective and not just subjective, and this helps.

A B C D E F G X 118. There is a neat balance here between giving a man at my level his preferences and what the company needs doing.

Now please go back and make sure that you have circled one letter for each item.

COMMENTS:

APPENDIX B

SCALE VALUES, Q VALUES, AND X JUDGMENTS

OF THE 118 STATEMENTS

Scale values, Q values, and X judgments of the 118 statements.

Statement Number	Scale Value	Q Value	X Judgments	Statement Number	Scale Value	Q Value	X Judgments
1.	5.8	4.2	2	31.	4.5	2.2	1
2.	0.4	1.6	0	32.	1.7	1.0	0
3.	6.1	1.2	0	33.	1.3	2.0	0
4.	2.7	2.3	3	34.	1.4	1.4	3
5.	3.2	2.4	0	35.	2.4	2.1	1
6.	0.3	1.2	0	36.	5.9	2.8	0
7.	5.6	1.6	0	37.	2.8	2.5	0
8.	2:3	2.0	0	38.	1.8	2.2	3
9.	3.3	1.8	1	39.	5.8	1.8	0
10.	0.2	1.0	1	40.	4.5	2.1	1
11.	4.2	2.9	4	41.	6.3	2.2	1
12.	5.3	1.6	1	42.	3.3	1.9	3
13.	5.7	1.2	0	43.	5.5	1.4	0
14.	0.9	1.4	4	44.	4.5	1.9	2
15.	1.9	1.6	2	45.	1.8	3.0	4
16.	2.3	2.7	1	46.	1.7	1.3	2
17.	2.3	1.8	2	47.	1.9	2.4	0
18.	3.3	2.2	5	48.	4.2	3.3	4
19.	6.2	2.2	0	49.	3.1	2.0	1
20.	3.9	2.6	2	50.	0.9	1.0	1
21.	3.1	2.1	0	51.	1.6	1.4	0
22.	5.8	3.4	1	52.	4.1	2.4	1
23.	0.2	1.2	5	53.	1.9	1.5	0
24.	0.5	0.8	2	54.	5.9	1.2	0
25.	3.4	3.2	2	55.	1.4	0.8	0
26.	4.5	1.9	2	56.	2.1	1.7	0
27.	1.5	2.2	2	57.	6.7	1.4	0
28.	1.9	3.2	0	58.	1.6	2.4	0
29.	2.1	2.1	0	59.	0.1	0.6	0
30.	4.5	1.8	2	60.	2.8	2.1	0

Statement Number	Scale Value	Q Value	X Judgments	Statement Number	Scale Value	Q Value	X Judgments
61.	3.7	1.8	0	91.	5.0	2.2	0
62.	5.3	2.6	1	92.	1.5	1.5	1
63.	3.3	2.3	0	93.	0.4	2.6	3
64.	6.3	1.4	0	94.	1.7	1.6	0
65.	1.5	1.0	0	95.	0.7	3.0	1
66.	1.9	2.1	0	96.	1.1	1.6	4
67.	1.5	2.6	6	97.	1.3	2.2	4
68.	5.0	1.9	1	98.	3.2	2.3	2
69.	3.1	2.8	4	99.	3.2	1.8	2
70.	4.4	2.8	1	100.	1.7	1.7	0
71.	5.8	2.4	0	101.	2.5	1.6	2
72.	2.8	1.9	1	102.	2.8	2.6	2
73.	5.3	2.6	0	103.	1.5	1.4	0
74.	5.8	1.4	0	104.	2.6	1.7	0
75.	1.0	1.8	1	105.	1.0	1.6	0
76.	2.6	2.6	3	106.	3.7	1.3	0
77.	4.8	1.2	1	107.	1.1	1.0	0
78.	4.9	3.7	0	108.	2.3	1.8	0
79.	5.6	2.1	1	109.	0.3	1.4	0
80.	3.1	2.0	1	110.	1.4	2.0	2
81.	2.3	1.9	1	111.	5.0	1.7	0
82.	5.3	1.6	0	112.	1.6	1.5	1
83.	6.1	1.2	2	113.	5.7	1.0	0
84.	2.0	2.6	0	114.	2.2	2.2	0
85.	3.3	2.3	2	115.	1.6	1.3	1
86.	2.1	2.3	3	116.	6.2	1.2	0
87.	1.1	1.0	3	117.	5.7	1.4	1
88.	4.9	2.0	0	118.	5.8	1.8	2
89.	2.3	1.5	1				
90.	2.4	1.6	2				

APPENDIX C

GOAL-SETTING STATEMENTS BY LEVEL

OF GOAL SETTING

LEVEL G (0-1) (Lowest Level)

2. My boss acts as though he never heard of goal setting for individual managers.

6. It's only when there's an emergency "upstairs" that I get any indication how I'm doing, and then it's usually negative.

10. I'm lucky if I get any hint from any of the higher managers how well I'm doing my job.

14. My boss' idea of par for my job is ridiculous.

23. There doesn't seem to be any logic to the way salary increases are given in this company.

24. My work is too complex to express in terms of standards of performance.

50. At my organization level, about equal percentage increases in salary generally go to everybody whenever increases are passed out.

59. At my organization level we're lucky if we have plans for tomorrow, let alone next week or next month.

93. My boss will not talk to me about my career plans and personal goals, even if I bring up the subject.

95. I don't know what my boss would consider a "good job" on the work I've been doing for the past two weeks.

109. My boss and those of us at my organization level do not plan very much. Mostly, we play everything "by ear."

LEVEL F (1-2)

15. My boss feels uncomfortable about pinning me down on target dates and similar matters.

27. Sometimes when my boss and I talk about my performance, I feel like a defendant on trial.

28. When my boss and I talk about my work goals, I find myself maneuvering for easy goals, since my salary depends on how well I reach these goals.

32. With all the things my boss expects me to be doing, I just don't know what he considers most important right now.

33. My performance could be expressed fairly well in numbers, ratios, or percentages, but my boss and I haven't got around to working it out yet.

34. My boss might discuss my career plans with me, but he'd view it as more or less outside his responsibility.

38. My boss and I have talked about how I might get a promotion, but the discussion has never been very specific.

45. My boss seldom praises me when I've got praise coming.

46. The way my boss handles the discussion of my weaknesses with me, anyone in my position couldn't help get a little defensive.

47. I'm not too clear about my immediate superior's work goals.

51. After my boss and I have gone to the trouble of agreeing on my work goals, then he comes around and interferes before I've had a chance to prove myself.

53. I've got so many goals I have trouble keeping track of them all.

55. There are too many times when I don't really know what the boss expects of me.

58. My boss doesn't care whether or not we've ever set goals for my work, just as long as I get the work done that he's counting on me to do.

65. The only real feedback I get about my performance comes through informal channels.

66. My boss determines <u>what</u> and <u>how well</u> I should be doing <u>before</u> he talks to <u>me</u>, and <u>very seldom</u> changes his <u>mind</u> about these matters.

67. Unless he's getting unusual pressure from higher management, I don't see much of my boss.

75. I don't see any personal benefit from trying to achieve the higher levels of performance my boss keeps yelling about.

87. All too often when my boss tells us about changes he hopes to see around here, he demonstrates he doesn't know much about what's going on.

92. Regardless of how well I've been setting goals and meeting them, my boss always seems to be "looking over my shoulder."

94. Sometimes the boss acts as though we all share his personal goals and desires and we don't have any of our own.

96. For me to get ahead, pleasing my boss is at least as important as tangible accomplishments.

97. My boss seems too busy with current problems to talk with me about my career plans.

100. If my boss and I took time out to sit down and talk things over more frequently, we might not get caught short as much as we do.

103. Sometimes my boss is too lenient with me about meeting my goals, and I'm not really held accountable for much of anything.

105. With only the information I get from the boss and other official channels, I wouldn't have any idea how to improve my performance.

107. My boss seems to have only a vague idea of what I'm doing most of the time.

110. I don't know what this year's goals for the total company are.

112.   Some things my boss has said convince me he isn't at
       all aware of the obstacles I face.

115.   The only reason my boss tells me how I stand is
       because the company requires it.

LEVEL E (2-3)

4. My boss thinks it is important to discuss the problems
    of my job with me, but we don't do enough of it.

8. I have a written list of work goals, but I don't
    remember exactly what they are.

16. At my organization level we don't bother meeting at
    regular times to set goals for each individual
    manager, but we are continually thinking about these
    individual goals.

17. Sometimes my boss understands how much my performance
    depends on things I can't control, and sometimes he
    doesn't understand.

29. My boss and I talk less about what I need to accomplish
    than about various other matters, such as how much
    time I'll need.

35. When things go wrong, sometimes I know exactly what
    aspect of my performance was not up to par, and
    sometimes I don't.

37. When my boss holds a meeting of his immediate subordi-
    nates, in his enthusiasm for working on the big
    picture, he forgets the individual goals that have
    been worked out for each of us.

56. Once my boss and I agree on my goals, I can't get
    them changed, no matter what.

60. There are ways my boss can check whether my perform-
    ance meets prior expectations, but these ways are not
    completely effective.

72. Once in a while when my boss and I talk about my
    performance, I feel I must stress my successes and
    "play down" my failures.

76. My immediate superior should give me more help getting
    necessary inputs of any and all kinds; because he
    doesn't, I miss some of my goals and targets each
    time period.

81. Except for once or twice a year, I get no indication
    from any of the higher managers about how well I'm
    doing my job.

82. If I miss some of my goals, I can plead extenuating circumstances, and my boss usually will let me off the hook.

86. My boss is only mildly concerned about my personal preferences when he and I discuss my work.

89. Now and then when profitable new areas of responsibility come up for me, my boss and I don't catch them in time.

90. My boss doesn't seem to realize that many of my operating problems can't be anticipated in the planning stages.

101. Achieving the results my boss expects often requires more of his support than I can get.

102. My performance on the job would improve if my boss took more account of my long-term personal or life goals.

104. Sometimes my boss knows enough about the work I do to make sound judgments about my performance and salary, and sometimes he doesn't.

108. My boss gives me some ideas, but I need more help from him to decide how to correct my performance deficiencies.

114. My boss out and out tells me what my work goals are to be for the coming time period, no matter what I think they should be.

LEVEL D (3-4) (Middle Level)

5. I have a fairly clear idea of what's par or normal performance in my job, but it could be clearer.

9. Sometimes my boss asks me just how I plan to reach my work goals, and sometimes he doesn't.

18. My boss won't give me time off for any kind of personal development or executive development, unless it's obviously related to my current work.

20. If my boss and I could agree more fully what levels of performance are reasonable for my job, we could set more useful work goals.

21. At my organization level we give more attention to the goals of my immediate superior's work group than we do to each individual's goals.

25. Salary action is tied too closely to goal attainment, with the result that my pay fluctuates too much because of factors outside my control.

42. My boss will sit down and talk about my long-term career goals _if_ I push him hard enough.

49. Without the feedback I get from official channels, my performance might suffer somewhat, but not too much.

61. A lot of times my boss and I agree on my work goals, but we don't get around to discussing how I'm going to reach them.

63. If I wrote out a list of my work goals and plans for the coming month, I think my boss would find my list appropriate, but I can't be entirely sure.

69. I suppose individual rewards are mostly fair and reasonable at my organizational level, but some politics is involved.

80. I get some specific feedback about my performance, but I need more.

85. I have some understanding of the objectives of the total company, but I could do a better job if I knew more.

98. I have some understanding of what it takes for me to get a raise.

99. My boss tries not to discuss my salary during the same meeting we talk about my work goals and progress toward goals, but this separation just doesn't work.

106. Sometimes my boss asks me just how I plan to reach my work goals, and sometimes he doesn't.

LEVEL C (4-5)

11. Most of the time, but not always, salary increases are based on improvement in individual performance.

26. My boss and I have agreed on specific things I need to do to improve myself (such as night school, special assignments, conferences, etc.).

30. My boss usually expects me to complete an assignment by an exact date.

31. My boss is somewhat permissive; he encourages me to set some, but not all, the goals for my own work.

40. My boss is very understanding about extenuating circumstances which cause me to fall short of our expectations.

44. I'm not satisfied if I merely meet the low level of work goals which seems to satisfy my boss.

48. My boss and I find that it's best not to talk about my goal achievement and my salary at the same meeting.

52. At my organization level, individual rewards depend somewhat on luck but more on performance.

70. Sometimes my boss has to make the final decision about how I should spend my time, but other times we agree.

77. At one time or another my boss and I have talked seriously about what's par performance for my job and we have come a long way, but we continue to disagree in a few areas, mostly of minor importance.

78. My boss and those of us at my organization level all seem to agree that <u>how</u> an individual reaches his work goals is his own business.

88. If I asked my boss what my ideal set of work goals should be for the coming period, he'd probably encourage me to work this out myself rather than just tell me.

LEVEL B   (5-6)

1. Goal setting for individual managers is a continuing process at my organization level.

7. My boss has a written copy of my work goals for this period, and he refers to it during the period.

12. When the boss tells us about the new goals and plans for his unit, he carefully takes into account the goals that were set for last month or last quarter.

13. My boss is interested in my development, and views setting work goals as a step in the right direction.

22. My boss and I discuss what activities he must perform in order that I can carry out my responsibilities.

36. The main thing I have to answer to my boss for is my attainment of the goals we agreed upon.

39. I get formal feedback that adequately covers my goals and responsibilities.

43. On the whole I get feedback about my performance in plenty of time to use it.

54. Although my boss has a pretty good idea of what my goals ought to be, he lets me state them first and then we work them out.

62. It's very important, in my job, to meet agreed upon deadlines on time.

68. My boss expects me to do some independent thinking about what I should be doing in my job.

71. The best managers at my level around here can work out their own plans to meet their goals without a lot of trips to the boss' office.

73. If I were to put forth just a little less effort than usual the next six months, this would show up in the rewards I got.

74. I have some measures of my performance in practically every area of my responsibility.

79. I'm not always exactly sure which one of my special assignments and continuing responsibilities is supposed to be done first.

82. Generally, when I encounter a really serious obstacle, my boss and I discuss it and revise my work goals accordingly.

91. As long as I'm getting expected results, my boss usually won't bug me.

111. My boss definitely sets the <u>limits</u> on what my goals should be, but within those <u>limits</u> he lets me set my own goals.

113. My boss and I have worked out effective ways to measure some areas of my performance which once seemed unmeasurable.

117. Much of the information I get about my performance is objective and not just subjective, and this helps.

118. There is a neat balance here between giving a man at my level his preferences and what the company needs doing.

LEVEL A (6-7) (Highest Level)

3. I have <u>verifiable</u> work goals; I mean, at the date agreed upon, my boss can tell readily how close I've come to accomplishing my goals.

19. My boss and I work together to determine my standards of performance and I feel he really considers my point of view.

41. My boss really wants all of us at my level to understand the goals of his organizational unit and how this unit fits into the total company picture.

57. Every so many months my boss and I sit down and decide how much I'm supposed to accomplish by specific dates in the future. When these dates actually arrive, we talk about how I did and what I should be shooting for during the next time period.

64. My boss and I not only regularly put my work goals into writing, but we also keep them up to date.

83. The idea of continuing improvement is a way of life at my organization level.

116. Not only do my boss and I work out my goals at regular goal-setting time, but he gives me every chance to put in my two cents between goal-setting sessions.

APPENDIX D

THE 118 STATEMENTS, ORGANIZED BY

CONTENT CATEGORIES

I. GOAL CHARACTERISTICS

1. Goal setting for individual managers is a continuing process at my organization level.

2. My boss acts as though he never heard of goal setting for individual managers.

8. I have a written list of work goals, but I don't remember exactly exactly what they are.

12. When the boss tells us about the new goals and plans for his unit, he carefully takes into account the goals that were set for last month or last quarter.

16. At my organization level we don't bother meeting at regular times to set goals for each individual manager, but we are continually thinking about these individual goals.

21. At my organization level we give more attention to the goals of my immediate superior's work group than we do to each individual's goals.

29. My boss and I talk less about <u>what</u> I need to accomplish than about various other matters, such as how much time I'll need.

30. My boss usually expects me to complete an assignment by an exact date.

32. With all the things my boss expects me to be doing, I just don't know what he considers most important right now.

37. When my boss holds a meeting of his immediate sub-ordinates, in his enthusiasm for working on the big picture, he forgets the individual goals that have been worked out for each of us.

47. I'm not too clear about my immediate superior's work goals.

51. After my boss and I have gone to the trouble of agreeing on my work goals, then he comes around and interferes before I've had a chance to prove myself.

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57. Every so many months my boss and I sit down and decide
how much I'm supposed to accomplish by specific dates
in the future. When these dates actually arrive, we
talk about how I did and what I should be shooting
for during the next time period.

59. At my organization level we're lucky if we have plans
for tomorrow, let alone next week or next month.

63. If I wrote out a list of my work goals and plans for
the coming month, I think my boss would find my list
appropriate, but I can't be entirely sure.

64. My boss and I not only regularly put my work goals
into writing, but we also keep them up to date.

79. I'm not always exactly sure which one of my special
assignments and continuing responsibilities is
supposed to be done first.

83. The idea of continuing improvement is a way of life
at my organization level.

87. All too often when my boss tells us about changes he
hopes to see around here, he demonstrates he doesn't
know much about what's going on.

89. Now and then when profitable new areas of responsibility
come up for me, my boss and I don't catch them in time.

91. As long as I'm getting expected results, my boss
usually won't bug me.

92. Regardless of how well I've been setting goals and
meeting them, my boss always seems to be "looking
over my shoulder."

100. If my boss and I took time out to sit down and talk
things over more frequently, we might not get caught
short as much as we do.

107. My boss seems to have only a vague idea of what I'm
doing most of the time.

109. My boss and those of us at my organization level do
not plan very much. Mostly, we play everything "by
ear."

4. My boss thinks it is important to discuss the problems
of my job with me, but we don't do enough of it.

15. My boss feels uncomfortable about pinning me down on target dates and similar matters.

41. My boss really wants all of us at my level to understand the goals of his organizational unit and how this unit fits into the total company picture.

44. I'm not satisfied if I merely meet the low level of work goals which seems to satisfy my boss.

58. My boss doesn't care whether or not we've ever set goals for my work, just as long as I get the work done that he's counting on me to do.

62. It's very important, in my job, to meet agreed upon deadlines on time.

70. Sometimes my boss has to make the final decision about how I should spend my time, but other times we agree.

85. I have some understanding of the objectives of the total company, but I could do a better job if I knew more.

110. I don't know what this year's goals for the total company are.

II. FEEDBACK TO SUBORDINATE ABOUT

PERFORMANCE AND GOAL ACCOUNTABILITY

6. It's only when there's an emergency "upstairs" that
   I get any indication how I'm doing, and then it's
   usually negative.

7. My boss has a written copy of my work goals for this
   period, and he refers to it during the period.

10. I'm lucky if I get any hint from any of the higher
    managers how well I'm doing my job.

35. When things go wrong, sometimes I know exactly what
    aspect of my performance was not up to par, and
    sometimes I don't.

36. The main thing I have to answer to my boss for is my
    attainment of the goals we agreed upon.

39. I get formal feedback that adequately covers my goals
    and responsibilities.

40. My boss is very understanding about extenuating cir-
    cumstances which cause me to fall short of our
    expectations.

43. On the whole I get feedback about my performance in
    plenty of time to use it.

49. Without the feedback I get from official channels, my
    performance might suffer somewhat, but not too much.

53. I've got so many goals I have trouble keeping track
    of them all.

55. There are too many times when I don't really know
    what the boss expects of me.

56. Once my boss and I agree on my goals, I can't get
    them changed, no matter what.

65. The only real feedback I get about my performance
    comes through informal channels.

67. Unless he's getting unusual pressure from higher
    management, I don't see much of my boss.

80. I get some specific feedback about my performance, but I need more.

81. Except for once or twice a year, I get no indication from any of the higher managers about how well I'm doing by job.

84. If I miss some of my goals, I can plead extenuating circumstances, and my boss usually will let me off the hook.

103. Sometimes my boss is too lenient with me about meeting my goals, and I'm not really held accountable for much of anything.

105. Wigh only the information I get from the boss and other official channels, I wouldn't have any idea how to improve my performance.

115. The only reason my boss tells me how I stand is because the company requires it.

117. Much of the information I get about my performance is objective and not just subjective, and this helps.

III. MEASUREMENT OR VERIFICATION OF HOW GOAL ACHIEVEMENT

WAS TO BE MEASURED AND DEGREE TO WHICH GOALS WERE

ACHIEVED; STANDARDS; AND PAR

3. I have <u>verifiable</u> work goals; I mean, at the date agreed upon, my boss can tell readily how close I've come to accomplishing my goals.

5. I have a fairly clear idea of what's par or normal performance in my job, but it could be clearer.

14. My boss' idea of par for my job is ridiculous.

20. If my boss and I could agree more fully what levels of performance are reasonable for my job, we could set more useful work goals.

24. My work is too complex to express in terms of standards of performance.

33. My performance could be expressed fairly well in numbers, ratios, or percentages, but my boss and I haven't got around to working it out yet.

60. There are ways my boss can check whether my performance meets prior expectations, but these ways are not completely effective.

74. I have some measures of my performance in practically every area of my responsibility.

77. At one time or another my boss and I have talked seriously about what's par performance for my job and we have come a long way, but we continue to disagree in a few areas, mostly of minor importance.

95. I don't know what my boss would consider a "good job" on the work I've been doing for the past two weeks.

104. Sometimes my boss knows enough about the work I do to make sound judgments about my performance and salary, and sometimes he doesn't.

113. My boss and I have worked out effective ways to measure some areas of my performance which once seemed unmeasurable.

IV. PATHS TO GOALS AND PATH FACILITATION

9. Sometimes my boss asks me just how I plan to reach my work goals, and sometimes he doesn't.

7. Sometimes my boss understands how much my performance depends on things I can't control, and sometimes he doesn't understand.

22. My boss and I discuss what activities he must perform in order that I can carry out my responsibilities.

61. A lot of times my boss and I agree on my work goals, but we don't get around to discussing how I'm going to reach them.

71. The best managers at my level around here can work out their own plans to meet their goals without a lot of trips to the boss' office.

76. My immediate superior should give me more help getting necessary inputs of any and all kinds; because he doesn't, I miss some of my goals and targets each time period.

78. My boss and those of us at my organization level all seem to agree that how an individual reaches his work goals is his own business.

82. Generally, when I encounter a really serious obstacle, my boss and I discuss it and revise my work goals accordingly.

90. My boss doesn't seem to realize that many of my operating problems can't be anticipated in the planning stages.

101. Achieving the results my boss expects often requires more of his support then I can get.

106. Sometimes my boss asks me just how I plan to reach my work goals, and sometimes he doesn't.

108. My boss gives me some ideas, but I need more help from him to decide how to correct my performance deficiencies.

112. Some things my boss has said convince me he isn't at all aware of the obstacles I face.

V. CAREER DEVELOPMENT; PERSONAL PREFERENCES;

AND SUBORDINATE AUTONOMY IN GOAL SETTING

AND IN RELATED MATTERS

13. My boss is interested in my development, and views setting work goals as a step in the right direction.

18. My boss won't give me time off for any kind of personal development, unless it's obviously related to my current work.

19. My boss and I work together to determine my standards of performance, and I feel he really considers my point of view.

26. My boss and I have agreed on specific things I need to do to improve myself (such as night school, special assignments, conferences, etc.).

31. My boss is somewhat permissive; he encourages me to set some, but not all, the goals for my own work.

34. My boss might discuss my career plans with me, but he'd view it as more or less outside his responsibility.

38. My boss and I have talked about how I might get a promotion, but the discussion has never been very specific.

42. My boss will sit down and talk about my long-term career goals _if_ I push him hard enough.

54. Although my boss has a pretty good idea of what my goals ought to be, he lets me state them first and then we work them out.

66. My boss determines _what_ and _how well_ I should be doing _before_ he talks to me, _and_ _very_ seldom changes his mind about these matters.

68. My boss expects me to do some independent thinking about what I should be doing in my job.

86. My boss is only mildly concerned about my personal preferences when he and I discuss my work.

88. If I asked my boss what my ideal set of work goals should be for the coming period, he'd probably encourage me to work this out myself rather than just tell me.

93. My boss will <u>not</u> talk to me about my career plans and personal goals, even if I bring up the subject.

94. Sometimes the boss acts as though we all share his personal goals and desires and we don't have any of our own.

97. My boss seems too busy with current problems to talk with me about my career plans.

98. I have some understanding of what it takes for me to get a raise.

102. My performance on the job would improve if my boss took more account of my long-term personal or life goals.

111. My boss definitely sets the <u>limits</u> on what my goals should be, but within those <u>limits</u> he lets me set my own goals.

114. My boss out and out tells me what my work goals are to be for the coming time period, no matter what I think they should be.

116. Not only do my boss and I work out my goals at regular goal-setting time, but he gives me every chance to put in my two cents between goal-setting sessions.

118. There is a neat balance here between giving a man at my level his preferences and what the company needs doing.

VI. RELATION OF GOAL ATTAINMENT TO INDIVIDUAL REWARDS

11. Most of the time, but not always, salary increases are based on improvement in individual performance.

23. There doesn't seem to be any logic to the way salary increases are given in this company.

25. Salary action is tied too closely to goal attainment, with the result that my pay fluctuates too much because of factors outside my control.

27. Sometimes when my boss and I talk about my performance, I feel like a defendant on trial.

28. When my boss and I talk about my work goals, I find myself maneuvering for easy goals, since my salary depends on how well I reach these goals.

45. My boss seldom praises me when I've got praise coming.

46. The way my boss handles the discussion of my weaknesses with me, anyone in my position couldn't help get a little defensive.

48. My boss and I find that it's best not to talk about my goal achievement and my salary at the same meeting.

50. At my organization level, about equal percentage increases in salary generally go to everybody whenever increases are passed out.

52. At my organization level, individual rewards depend somewhat on luck but more on performance.

69. I suppose individual rewards are mostly fair and reasonable at my organizational level, but some politics is involved.

72. Once in a while when my boss and I talk about my performance, I feel I must stress my successes and "play down" my failures.

73. If I were to put forth just a little less effort than usual the next six months, this would show up in the rewards I got.

75. I don't see any personal benefit from trying to achieve
    the higher levels of performance my boss keeps yelling
    about.

96. For me to get ahead, pleasing my boss is at least as
    important as tangible accomplishments.

99. My boss tries not to discuss my salary during the
    same meeting we talk about my work goals and progress
    toward goals, but this separation just doesn't work.

APPENDIX E

DISTRIBUTION OF STATEMENTS INTO LEVELS
OF GOAL SETTING BY CONTENT CATEGORIES

Distribution of statements into levels of goal setting by content categories.

Content Category	Total No. of Statements in the Category	Number of Statements Falling In:						
		Level A 6-7	Level B 5-6	Level C 4-5	Level D 3-4	Level E 2-3	Level F 1-2	Level G 0-1
I	34	4	5	3	3	6	10	3
II	21	0	5	1	2	4	7	2
III	12	1	2	1	2	2	1	3
IV	13	0	3	1	3	5	1	0
V	22	2	5	3	3	3	5	1
VI	16	0	1	3	3	1	6	2
TOTALS	118	7	21	12	16	21	30	11

APPENDIX F

FORM OF THE LETTER TO THE JUDGES

FORM OF THE LETTER TO THE JUDGES[1]

(Name)
(Address)
(City)

Dear Mr. _____:

I have every reason to believe you are a leading specialist
in manager goal setting, or what is often called management
by objectives or management by results. From talking with
you . . . [or "from reading your book . . . ," etc.].
Will you help me with my doctoral dissertation on goal
setting?

The research on this subject is still quite limited,
despite widespread enthusiasm for goal setting in connection
with performance appraisal, performance improvement, and
motivating managers. An attempt will be made in this
research project to measure how much goal setting behavior
exists in specific company units, as well as what forms this
behavior takes. Then, to discover the effects of goal set-
ting behavior in various situations, these measurements will
be compared with other measures--of mutual job understanding
and of individual manager effectiveness. In addition, data
from participating companies will supply norms through
which other researchers may compare goal setting in other
companies. These norms will be made generally available,
and should be of considerable theoretical and practical
value. But prior to this research the measure of goal-
setting behavior must be constructed. This is where I need
your help.

You are being asked to judge the enclosed list of statements
about goal setting. I have based these statements on ideas
derived from the literature on goal setting and from con-
versations with managers, authors, and consultants. You
will find the specific instructions with the list.

A self-addressed envelope is enclosed, and it will help
immensely if you can return your judgments to me by January
24. The judging should go rather smoothly and quickly. I
will certainly appreciate your cooperation and hope that
you will find serving as a judge a rewarding and intellect-
ually challenging way of sharing your expertise.

Sincerely yours,

Jack L. Mendleson
Assistant Instructor and Doctoral Candidate

---

[1]The actual letters sent out were only one page in
length (narrower margins and smaller type were used).

APPENDIX G

JUDGES' INSTRUCTIONS

JUDGES' INSTRUCTIONS[1]

1. As a first step in developing a scale to measure how much goal setting takes place in specific company situations, I am asking you and other specialists to judge various managers' statements about goal setting by assigning them to seven different classes.

2. We will call these classes A, B, C, D, E, F, and G, and you will find these letters directly to the left of each statement. When you come across a statement which you believe expresses the highest level of goal-setting practice, circle the letter A. For a statement which seems to be "in the middle," circle D (the middle letter), while for those statements which express the lowest level of goal-setting practice, circle G. Other levels of goal setting may be indicated by circling one of the other possible letters to represent intermediate ratings. Be sure you circle one letter, and only one letter, for each statement.

3. As you judge these statements, please consider each one separately. Take each statement as the only piece of information you have about the situation in which the goal-setting behavior is taking place. The basic question is:
   Given just this piece of information, what level of goal setting seems to exist?

4. Your task is:
   a. not to evaluate the desirability of any of these statements, or the desirability of goal setting as a whole.
   b. not to consider whether the behavior described in the statement actually occurs in all companies. (The final form of the scale will allow for the many different situations that can happen.)
   c. just to relax and take each statement separately as it comes. You will notice that these statements are expressed from the point of view of a subordinate in a superior-subordinate pair; at a later stage in which you are not involved, the statements will also be expressed from the superior's point of view.

5. In addition to the letters A through G, the letter X appears to the left of each statement. You may circle the X if you should find that the statement gives no information whatever about level of goal setting.

---

[1]The actual instructions sent out were only one page in length (narrower margins and smaller type were used).

Each statement on this list was chosen because one or more
specialists believed it was related to level of goal setting.
But naturally opinions differ even among the specialists,
and one or more of the statements may strike you as irrele-
vant to level of goal setting. In every case first try to
classify the statement in one of the regular classes, that
is, A through G. If this is impossible, circle X as a last
resort.

6. For purposes of this judging, here is what is involved
   in a work goal:

   a. A work goal is a current aim or current end for a
      particular individual at his job, or an individual
      performance objective. Or a man's work goals may
      be expressed as statements of how his current work
      contributes to his company and, sometimes, to his
      personal development.
   b. Work goals, in the present sense, apply to specific
      individuals, not to an overall unit in an organiza-
      tion.
   c. Work goals apply to a particular period of time.
      For this reason, they should be considered distinct
      from standing objectives and items on a manager's
      job description.

7. Experience indicates that it will probably take you
   thirty-five minutes to make these judgments. Space is
   provided at the end of the list for your comments,
   which could also help me.

APPENDIX H

JUDGES' COMMENTS

JUDGES' COMMENTS

Judge 1:

Interesting. You have some double-header items
which are hard to evaluate.

Judge 2:

Numbers 34, 38, 41, 42, 93, 96, 97, and 102 are
summed up by 118 (the principle that Ordway Tead
wrote about in 1926 and which Chris Argyris has
been writing ever since) and its corrolary: the
very difficult problem of balancing short-term and
long-term goals. Everyone knows it must be done
but is difficult. If your question 1 stated this,
it would rate an "a." As is, 1 is fuzzy--
implies that goals are indefinite even for short
periods.

Re 24--some recent thinking calls for simpler
standards than those of 10 years ago. Re 25--depends
on the job--ok to tie directly for certain kinds of
selling and piecework-oriented units--for others it
could be wrong and unfair. Re 30-33, the kind of
work is a real factor. Certain deadlines can be
flexible--and perhaps should be--others not. Re
48--ok--but can you cite me a reference on how the
salary interview should be conducted?

Re 91, 92--The "how" has (or can have) policy implica-
tions--for example the district sales mgr. with a high
volume, profitable district but using entertainment
and methods "beyond the pale" ethically.

It seems likely that your results will be most
interesting. Perhaps I might offer a comment to the
effect that many of the statements carry implications
for specific managerial skill levels. These would
include personal ability in communications as well
as diagnostic capability.

Judge 3:

I am very much interested in the study you have asked
me to contribute to by filling out your questionnaire.
There is much written and said these days about goal
setting, management by objectives, etc. What really
counts, of course, is the practice and usefulness of
these approaches.

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Please keep me in mind when making the results of your study available. If it is convenient for you, I might ask for the opportunity to discuss the subject with you.

Judge 4:

As requested, you will find enclosed my responses to the questionnaire that you asked me to complete. I'm sorry to be slow in responding, but both weekend and weekday business pressures prevented me getting to it until yesterday. Because there is a high possibility you may not be able to read my writing, the following dictation to my secretary duplicates the comments included on page 9:

"Thank you for including me.

"No student or practitioner of management can really argue with the theory of M.B.O. The trouble is that the poor devil who proposes it to his own company 'suggests' that M.B.O. has not existed before and any management that adopts the technique 'admits' it has not had M.B.O. before that date. In any particular company, the 'visible facts' may seem to point to M.B.O. as a solution but, in real life, the 'subtle facts' make a difference. Good luck in your research. Someone really needs to help us all identify the data. The equation certainly has a lot of variables, however."

In addition to those comments, I suggest the following questions to you: My opinion as covered in my answers to the questions relates, of course, to me and my boss. There are two natural questions related to this - (1) would another person be as comfortable with my boss as I am, and (2) could I derive as much satisfaction from a relationship with a different boss in the same work situation?

Interim standard setting is, without a question, a valuable management tool whether those interim standards are set jointly or independently.

Again, thanks for including me and best of luck with the project.

Judge 5:

I don't quite know whether you try to assess what is the right company practice in goal-setting [or] what attitude a subordinate would evince if goal-setting were reasonably well done. I have chosen the first alternative, i.e., I have assumed that the subordinate's statement correctly expresses what goes on rather than how he sees it subjectively.

Judge 6:[1]

Good luck on the project!

Hope you find something interesting. We need more research in the area.

I am a little afraid that your items are too complex and loaded with "democratic" values that people should pay lip service to. You would be better off with shorter, crisper items!

Judge 7:

I have recorded the weights which I believe each of the attached statements about goal setting would reflect, as requested in your letter of January 11.

I'd like to add that the individual statements, as well as the general approach you have devised, strike me as showing a keen insight into the subject and its problems. Please keep us in touch with your study as it advances.

Judge 8:

I am glad to have had the opportunity to serve as a judge and hope your research is fruitful. If possible, I would also like to see your dissertation when finished.

Judge 9:

See problem with the word level. I think I took the running rule to check the least amount consistent with the statement or for some the opposite. Some difficulty in keeping out preferences re means-ends, where no structural relation to the level of goal setting.

---

[1]This judges' response was received too late to be included in the scoring.

Judge 10:

>   Your dissertation looks quite interesting. I would
>   be very much interested in knowing how you intend
>   to implement it.

Judge 11:

>   I had difficulty doing this because I guess I see:
>   A as (1) negotiated written plans (goals and
>   routes and measures)
>   (2) based on translated business goals
>   (3) reviewed, recycled and revised periodically
>   by both
>   D as pieces of A
>   G as none of A

>   The attitudinal items gave me no input about level.
>   Nor did the salary evaluation ones.

>   Hope it's helpful.

Judge 12:

>   Many of these statements relate to the general level
>   of management practice, administrative morale, inter-
>   personal relationships, and other matters irrelevant
>   to goal setting. (Perhaps I have interpreted it
>   too narrowly as approximately equivalent to "manage-
>   ment by objectives.") The seeming emphasis on career
>   planning implies a relationship that escapes me. I
>   feel that if anything I should have marked more "x's."

Judge 13:

>   There is almost no emphasis on self-measurement and
>   self-control as most desirable and possible when
>   goals are clear, specific and measurable. So many
>   items relate to feedback from boss and others above
>   that the impression is left that this is critical.
>   Actually it is the improved ability to get feedback
>   from the facts of the situation that make goal-setting
>   as attractive as it is.

Judge 14:

>   The one-sentence statements caused me to assume
>   other conditions before I made the judgment.

Judge 15:

> As with most forms of this type, certain questions
> are subject to multiple interpretation, however, in
> general it caused little difficulty.
>
> Good luck.

Judge 16:

> Please remember that the goal-setting behavior
> evidenced by most of the above statements will
> largely depend on such closely-related elements as:
>   philosophy of management in a given company
>   (e.g., centralized vs. decentralized,
>   authoritarian vs. participative)
>   degree to which company's information system is
>   geared to the needs of operating management
>   structure and provisions of compensation
>   program
>   managerial ability of superior
>   managerial ability of subordinate
>   tenure of subordinate in his current job
> --in short, on a lot of elements of the total
> management process in a company as well as several
> personal considerations.
>
> I am glad to have had the opportunity to participate
> in your program. If you end up publishing, I would
> appreciate it if you would send me a copy of your
> work.
>
> Many thanks.

Judge 17:

> Some of the statements (marked) are ambiguous.
> [Those marked were 66, 82, 99]

Judge 18:

> You no doubt realize that each judge will be influenced
> by his "philosophy" or view of how and by whom work
> goals are set--as well as how they are used in terms
> of performance evaluation. The letter he circles will
> depend upon whether he is proponent of:
>   (1) Management by results (primarily top-down
>   goal-setting),
>   (2) Management by objectives (collaboration, but
>   still somewhat top-down), or
>   (3) Management by Integration and Self-Control
>   (a truly participative approach).

I think you can see how I've tried to "balance"
the three in my response. <u>Please keep me posted!</u>
Thanks.

Judge 19:

Those items that have to do with "level of performance"
(e.g. 5, 14, and maybe 6, 10) could occur in the
absence of goal-setting, but are rated <u>as if</u> goal setting
existed or as points one would take into consideration
in establishing or evaluating goal setting.

Some statements seem to suggest an "attitude" on
the part of the subordinate--these were rated high
or low on the basis of whether or not the attitude
would favor or interfere with goal-setting.

Judge 20:

Unfortunately I feel that most of these statements
ignore managerial responsibility for leadership and
the direction of subordinates. I would have hoped
that a better split of question types had been used.
Otherwise, thanks for letting me have this fun with
this.

(Additional note attached to the letter):
Thank you for this fine letter and for asking me
to participate in your study. Good luck on your
Doctorate. I would appreciate any releasable
material you prepare.

Judge 21:

I have some difficulty with this conceptually, but
I've tried to be helpful. My problem is that my
experience has convinced me that team goals are
more important to organizational success than are
individual goals (as a matter of fact, individual
goal pursuit can damage organizational effectiveness)
and that individual goals are more satisfactorily
set and achieved within the context of the team.

Judge 22:

As I look back over my judgments, it occurs to me
that they reflect a consistent adherence to what
may some day be considered a "conservative" or
"classical" approach to the application of perform-
ance objectives for managers. Perhaps a more
experimental or flexible attitude will make sense
in a few years--but this is still an under-developed

technique, and that is probably why I go "down the line" with the basic principles of the concept, as I understand them.

My congratulations for making it easy for your "judges" to be of some assistance to you. I am sure your efforts, if carried out according to plan, will be helpful to the further application of the idea of "management by results."

Good luck on your dissertation.

Non-Judge 1:

Frankly, the term "highest level of goal setting" is not defined. You tell me what it is not. Instead of a highly quantifiable but meaningless approach why don't you do a thorough interview of what actually goes on in one or more organizations.

For example:
Take a cut:
Pres.
VP Mfg.
Supt.
G.F.
F.
HE

A very sound description of what actually goes on now would be most novel, most unique and most helpful. I assure you that if you try this you will stop talking about "level of goal setting." There is no such thing. Enclosed is a reprint I think will help you think more about your subject. I hope you haven't got a firm "set" on an approach which is likely to be quite meaningless.

Non-Judge 2:

I am returning your questionnaire.

I am afraid I have only partially filled it out. I must confess that I had real difficulty answering the questions. In every case I had the feeling the state-ment may or may not be true depending on many other conditions in the management climate. I therefore felt inadequate about filling in the rest of it.

I trust you will get what you want, however, from the other people that receive your questionnaire.

APPENDIX I

THE GOAL-SETTING INDEX

____ 1. At my organization level we're lucky if we have plans for tomorrow, let alone next week or next month.

____ 2. I'm lucky if I get any hint from any of the higher managers how well I'm doing my job.

____ 3. It's only when there's an emergency "upstairs" that I get any indication how I'm doing, and then it's usually negative.

____ 4. My work is too complex to express in terms of standards of performance.

____ 5. At my organization level, about equal percentage increases in salary generally go to everybody whenever increases are passed out.

____ 6. My boss' idea of par for my job is ridiculous.

____ 7. My boss seems to have only a vague idea of what I'm doing most of the time.

____ 8. There are too many times when I don't really know what the boss expects of me.

____ 9. My boss might discuss my career plans with me, but he'd view it as more or less outside his responsibility.

____10. The only real feedback I get about my performance comes through informal channels.

____11. With all the things my boss expects me to be doing, I just don't know what he considers most important right now.

____12. The way my boss handles the discussion of my weaknesses with me, anyone in my position couldn't help get a little defensive.

____13. Once my boss and I agree on my goals, I can't get them changed, no matter what.

____14. Now and then when profitable new areas of responsibility come up for me, my boss and I don't catch them in time.

___15. My boss gives me some ideas, but I need more help
from him to decide how to correct my performance
deficiencies.

___16. My boss doesn't seem to realize that many of my
operating problems can't be anticipated in the
planning stages.

___17. Achieving the results my boss expects often
requires more of his support than I can get.

___18. Sometimes my boss knows enough about the work I
do to make sound judgments about my performance
and salary, and sometimes he doesn't.

___19. Without the feedback I get from official channels,
my performance might suffer somewhat, but not too
much.

___20. At my organization level we give more attention to
the goals of my immediate superior's work group
than we do to each individual's goals.

___21. My boss tries not to discuss my salary during the
same meeting we talk about my work goals and
progress toward goals, but this separation just
doesn't work.

___22. My boss will sit down and talk about my long-term
career goals _if_ I push him hard enough.

___23. I get some specific feedback about my performance,
but I need more.

___24. Sometimes my boss asks me just how I plan to reach
my work goals, and sometimes he doesn't.

___25. At my organization level, individual rewards depend
somewhat on luck but more on performance.

___26. My boss and I have agreed on specific things I need
to do to improve myself (such as night school,
special assignments, and conferences).

___27. My boss usually expects me to complete an assignment
by an exact date.

___28. My boss is very understanding about extenuating cir-
cumstances which cause me to fall short of our
expectations.

___29. I'm not satisfied if I merely meet the low level of work goals which seems to satisfy my boss.

___30. At one time or another my boss and I have talked seriously about what's par performance for my job and we have come a long way, but we continue to disagree in a few areas, mostly of minor importance.

___31. Generally, when I encounter a really serious obstacle, my boss and I discuss it and revise my work goals accordingly.

___32. My boss is interested in my development, and views setting work goals as a step in the right direction.

___33. My boss and I have worked out effective ways to measure some areas of my performance which once seemed unmeasurable.

___34. Much of the information I get about my performance is objective and not just subjective, and this helps.

___35. I have some measures of my performance in practically every area of my responsibility.

___36. Although my boss has a pretty good idea of what my goals ought to be, he lets me state them first and then we work them out.

___37. I have verifiable work goals; I mean, at the date agreed upon, my boss can tell readily how close I've come to accomplishing my goals.

___38. The idea of continuing improvement is a way of life at my organization level.

___39. Not only do my boss and I work out my goals at regular goal-setting time, but he gives me every chance to put in my two cents between goal-setting sessions.

___40. My boss really wants all of us at my level to under-stand the goals of his organizational unit and how this unit fits into the total company picture.

___41. My boss and I not only regularly put my work goals into writing, but we also keep them up to date.

___42. Every so many months my boss and I sit down and decide how much I'm supposed to accomplish by specific dates in the future. When these dates actually arrive, we talk about how I did and what I should be shooting for during the next time period.

APPENDIX J

SCALE VALUES AND Q VALUES OF THE

GSI STATEMENTS

Scale values and Q values of the GSI statements.

Statement Number	Scale Value	Q Value	Original Statement Number	Statement Number	Scale Value	Q Value	Original Statement Number
1.	0.1	0.6	59	22.	3.3	1.9	42
2.	0.2	1.0	10	23.	3.1	2.0	80
3.	0.3	1.2	6	24.	3.7	1.3	106
4.	0.5	0.8	24	25.	4.1	2.4	52
5.	0.9	1.0	50	26.	4.5	1.9	26
6.	0.9	1.4	14	27.	4.5	1.8	30
7.	1.1	1.0	107	28.	4.5	2.1	40
8.	1.4	0.8	55	29.	4.5	1.9	44
9.	1.4	1.4	34	30.	4.8	1.2	77
10.	1.5	1.0	65	31.	5.3	1.6	82
11.	1.7	1.0	32	32.	5.7	1.2	13
12.	1.7	1.3	46	33.	5.7	1.0	113
13.	2.1	1.7	56	34.	5.7	1.4	117
14.	2.3	1.5	89	35.	5.8	1.4	74
15.	2.3	1.8	108	36.	5.9	1.2	54
16.	2.4	1.6	90	37.	6.1	1.2	3
17.	2.5	1.6	101	38.	6.1	1.2	83
18.	2.6	1.7	104	39.	6.2	1.2	116
19.	3.1	2.0	49	40.	6.3	2.2	41
20.	3.1	2.1	21	41.	6.3	1.4	64
21.	3.2	1.8	99	42.	6.7	1.4	57

APPENDIX K

THE 42 STATEMENTS OF THE GSI ORGANIZED

BY CONTENT CATEGORIES

I. GOAL CHARACTERISTICS
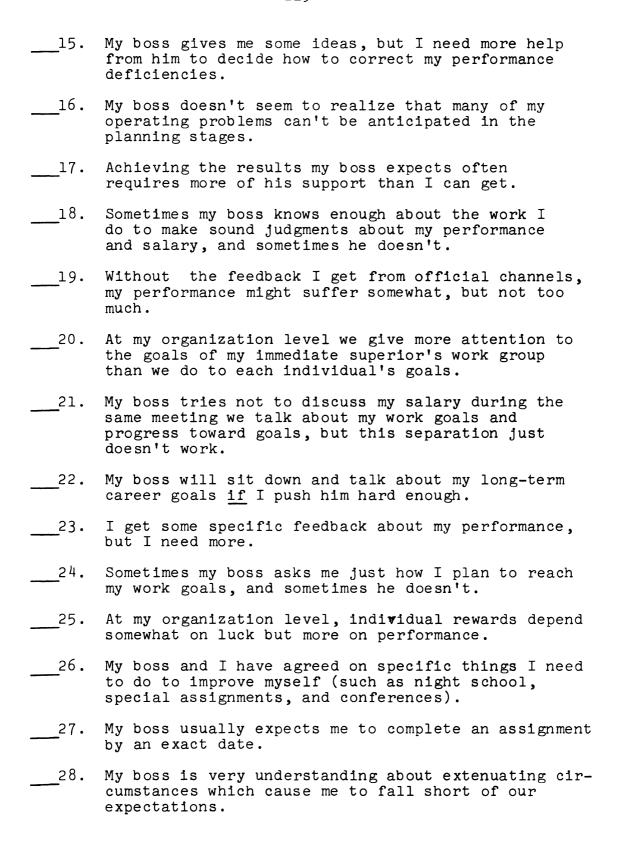
1. At my organization level we're lucky if we have plans for tomorrow, let alone next week or next month.

7. My boss seems to have only a vague idea of what I'm doing most of the time.

11. With all the things my boss expects me to be doing, I just don't know what he considers most important right now.

14. Now and then when profitable new areas of responsibility come up for me, my boss and I don't catch them in time.

20. At my organization level we give more attention to the goals of my immediate superior's work group than we do to each individual's goals.

27. My boss usually expects me to complete an assignment by an exact date.

29. I'm not satisfied if I merely meet the low level of work goals which seems to satisfy my boss.

38. The idea of continuing improvement is a way of life at my organization level.

40. My boss really wants all of us at my level to understand the goals of his organizational unit and how this unit fits into the total company picture.

41. My boss and I not only regularly put my work goals into writing, but we also keep them up to date.

42. Every so many months my boss and I sit down and decide how much I'm supposed to accomplish by specific dates in the future. When these dates actually arrive, we talk about how I did and what I should be shooting for during the next time period.

II. FEEDBACK TO SUBORDINATE ABOUT PERFORMANCE

AND GOAL ACCOUNTABILITY

2. I'm lucky if I get any hint from any of the higher managers how well I'm doing my job.

3. It's only when there's an emergency "upstairs" that I get any indication how I'm doing, and then it's usually negative.

8. There are too many times when I don't really know what the boss expects of me.

10. The only real feedback I get about my performance comes through informal channels.

13. Once my boss and I agree on my goals, I can't get them changed, no matter what.

19. Without the feedback I get from official channels, my performance might suffer somewhat, but not too much.

23. I get some specific feedback about my performance, but I need more.

28. My boss is very understanding about extenuating circumstances which cause me to fall short of our expectations.

34. Much of the information I get about my performance is objective and not just subjective, and this helps.

III. MEASUREMENT OR VERIFICATION OF HOW GOAL ACHIEVEMENT

WAS TO BE MEASURED AND DEGREE TO WHICH GOALS WERE

ACHIEVED; STANDARDS; AND PAR

4. My work is too complex to express in terms of standards of performance.

6. My boss' idea of par for my job is ridiculous.

18. Sometimes my boss knows enough about the work I do to make sound judgments about my performance and salary, and sometimes he doesn't.

30. At one time or another my boss and I have talked seriously about what's par performance for my job and we have come a long way, but we continue to disagree in a few areas, mostly of minor importance.

33. My boss and I have worked out effective ways to measure some areas of my performance which once seemed unmeasurable.

35. I have some measures of my performance in practically every area of my responsibility.

37. I have verifiable work goals; I mean, at the date agreed upon, my boss can tell readily how close I've come to accomplishing my goals.

IV.   PATHS TO GOALS AND PATH FACILITATION

15. My boss gives me some ideas, but I need more help from him to decide how to correct my performance deficiencies.

16. My boss doesn't seem to realize that many of my operating problems can't be anticipated in the planning stages.

17. Achieving the results my boss expects often requires more of his support than I can get.

24. Sometimes my boss asks me just how I plan to reach my work goals, and sometimes he doesn't.

31. Generally, when I encounter a really serious obstacle, my boss and I discuss it and revise my work goals accordingly.

V. CAREER DEVELOPMENT; PERSONAL PREFERENCES; AND

SUBORDINATE AUTONOMY IN GOAL SETTING AND

IN RELATED MATTERS

9. My boss might discuss my career plans with me, but he'd view it as more or less outside his responsibility.

22. My boss will sit down and talk about my long-term career goals if I push him hard enough.

26. My boss and I have agreed on specific things I need to do to improve myself (such as night school, special assignments, and conferences).

32. My boss is interested in my development, and views setting work goals as a step in the right direction.

36. Although my boss has a pretty good idea of what my goals ought to be, he lets me state them first and then we work them out.

39. Not only do my boss and I work out my goals at regular goal-setting time, but he gives me every chance to put in my two cents between goal-setting sessions.

VI. RELATION OF GOAL ATTAINMENT TO

INDIVIDUAL REWARDS

5. At my organization level, about equal percentage increases in salary generally go to everybody whenever increases are passed out.

12. The way my boss handles the discussion of my weaknesses with me, anyone in my position couldn't help get a little defensive.

21. My boss tries not to discuss my salary during the same meeting we talk about my work goals and progress toward goals, but this separation just doesn't work.

25. At my organization level, individual rewards depend somewhat on luck but more on performance.

APPENDIX L

THE 40 STATEMENTS MAKING UP THE

JOB PERCEPTION INDEX

THE 40 STATEMENTS MAKING UP THE

JOB PERCEPTION INDEX

1. Lead and challenge personnel by setting high performance standards.

2. Contribute to increased productivity of Company personnel (may apply to your component or to other Company components).

3. Anticipate the requirements and demands of the Manager.

4. Maintain good work habits (punctuality, clean desk or work area, etc.).

5. Improve communication with and/or between others.

6. Organize human and material resources more efficiently.

7. Develop new ideas, techniques and methodology to solve current and anticipated problems.

8. Create optimum work relationships with organizational units or groups in and out of the Company, to accomplish your, or the Company, goals.

9. Control and/or reduce cost of products, services, or other outputs (may apply to your own work or to the outputs of others).

10. Collect and interpret facts and information relevant to continuing problems.

11. Develop an effective coordinated team effort (may apply to your own or to other Company components).

12. Direct the work of others.

13. Control and/or improve the quality of products, services, or other outputs (may apply to your own work or to the outputs of other Company components).

14. Improve the definition of jobs and work methods (may apply to your own job, to your component, or to other Company components).

15. Improve level of technical skill and knowledge (may apply to yourself, to your component, or to other Company components).

16. Respect the feelings of others.

17. Contribute to the Company's fulfillment of its responsibility to the public.

18. Work hard voluntarily.

19. Work independently without close supervision.

20. Develop and improve methods and systems of control and measurement (may apply to your component or to other Company components).

21. Create optimum relationships with Company and component personnel to accomplish your, or the Company, goals.

22. Meet commitment for product or services to those in or out of the Company who use your work, product or other output.

23. Contribute to customer acceptance of Company products and services, to sales, and to market position.

24. Handle emergency situations when they arise.

25. Improve utilization of manpower through selection and training of personnel (may apply to your component or to other Company components).

26. Make good impression on others, good personal appearance, etc.

27. Control and/or reduce expenditure of funds for plant, equipment and other facilities.

28. Make reasoned, objective and timely decisions through the exercise of judgment.

29. Handle unpleasant situations aggressively.

30. Develop long range objectives, plans and programs (long range is over 18 months).

31. Compensate employees fairly and adequately (may apply to your component or to other Company components).

32. Improve performance results through personnel development (may apply to yourself, your component, or other Company components).

33. Control and/or reduce personnel cost (may apply to your component or to other Company components).

34. Develop short range goals, plans, programs and procedures (short range is 18 months or less).

35. Contribute to the creation of profit.

36. Increase productivity of Company personnel by using and improving individual coaching (may apply to your component or to other Company components).

37. Delegate authority, assign responsibility and establish measures of accountability.

38. Pricing of products and/or of services.

39. Create good will and cooperative climate with other organizational units.

40. Increase acceptance and use by others of products, services, or other outputs through delivery of, and emphasis upon, value (output may be products, services, reports, recommendations, designs, systems, etc.).

APPENDIX M

SCORING THE JOB PERCEPTION INDEX

APPENDIX M

SCORING THE JOB PERCEPTION INDEX

The following material is reproduced from "Instructions for Using the Job Perception Index," by Stanley C. Duffendack, Individual Development Methods Service, General Electric Company. The material describes the entire procedure for calculating a superior-subordinate pair's "Perception Index."

Administering and Scoring the P.I.

1. Each manager ranks the forty statements by sorting the cards in order of importance for the jobs of his subordinates. A manager may sort the cards for each job, or he may feel that several jobs are so similar that one card ranking will do for these several jobs. There is no time limit but a guide of 10 - 15 minutes may be given.

2. The card numbers are written under STEP ONE on the Job Statement Card Sort - Work Sheet (see attached Exhibit 1). Label the work sheet to identify who did the sorting and which job it is for.

3. Now follow STEP TWO on the work sheet and write in the rank number of each card.

4. Each subordinate ranks the forty statements by sorting the cards for his own job in the order of importance he thinks his manager places them for his (the subordinate's) job. There is no time limit but a guide of 10 - 15 minutes may be given.

5. Write the card numbers on the Job Statement Card Sort - Work Sheet under STEP ONE. Write the identifying information.

6. Now follow STEP TWO of the Work Sheet and write in the rank numbers of each card.

7. Now use the Job Statement Card Sort Perception Index Calculation Sheet. (See attached Exhibit 2.) For each card number write in, for the manager and his subordinate, the rank numbers from STEP TWO of the Work Sheet.

8. For each card record the difference between the rank assigned by the manager and the rank assigned by the subordinate. Record each difference under the column labeled "Diff."

9. Square each number in the "Diff." column and record it in the columns labeled "Squared Diff."

10. Add the columns of "Squared Diff." and record the sum in the space provided.

11. Now use the Conversion Table: (see attached Exhibit 3). Look down the columns labeled "Sum of Squared Differences" until you find the sum of squared differences you are looking for. If you do not find your exact number, locate the two numbers between which your number falls.

    If you have found your exact number, find the corresponding number in the column labeled "Rank Order Correlation." If you have not found your exact number, find the number in the "Rank Order Correlation" column which corresponds with the higher of the sum of squared differences between which it falls. The corresponding rank order correlation is the P.I. and is written in the space provided in the calculation sheet.

12. Now refer to the Interpretive Guide for the P.I. Interpret the P.I. by either using the Norm to indicate relative position or by using the Interpretive Guide for a verbal interpretation.

13. Carry out the above steps to find the P.I. for each manager-subordinate pair.

EXHIBIT 1

JOB STATEMENT CARD SORT - WORK SHEET

Cards sorted for: My Job
                 Subordinate's Job _____

DEPARTMENT _____

NAME _____

MY JOB TITLE _____

TIME ON JOB _____ yrs. _____ mos.

SECTION _____

UNIT _____

DATE _____

STEP ONE:

Use the left hand columns to record the rank order in which the cards are sorted. Put the number of the card that is most important beside Rank 1, the number of the card that is next most important beside Rank 2, and so on for all 40 cards.

Rank Order	Card Number	Rank Order	Card Number
1.		21.	
2.		22.	
3.		23.	
4.		24.	
5.		25.	
6.		26.	
7.		27.	
8.		28.	
9.		29.	
10.		30.	
11.		31.	
12.		32.	
13.		33.	
14.		34.	
15.		35.	
16.		36.	
17.		37.	
18.		38.	
19.		39.	
20.		40.	

STEP TWO:

Use the recorded ranks to work out the card item ranks. Put the rank order of card 1 beside card 1, put the rank order of card 2 baside card 2 and so on for all 40 cards.

Card Number	Rank Order	Card Number	Rank Order
1.		21.	
2.		22.	
3.		23.	
4.		24.	
5.		25.	
6.		26.	
7.		27.	
8.		28.	
9.		29.	
10.		30.	
11.		31.	
12.		32.	
13.		33.	
14.		34.	
15.		35.	
16.		36.	
17.		37.	
18.		38.	
19.		39.	
20.		40.	

EXHIBIT 2

JOB STATEMENT CARD SORT
PERCEPTION INDEX CALCULATION SHEET

DEPARTMENT_____   SECTION_____

UNIT_____   DATE_____

JOB TITLE CARDS SORTED FOR _____

MANAGERS NAME_____   SUBORDINATES NAME_____

_____

1. From step two on the Record & Work Sheet, find the Rank assigned by the Manager to each Card and put the Rank beside the appropriate Card Number in the Column labeled MGR.

2. From step two on the Record & Work Sheet, find the Rank assigned by the Subordinate to each Card and put the Rank beside the appropriate Card Number in the Column labeled SUB.

3. For each card calculate the difference between the Rank assigned by the Manager and the Rank assigned by the Subordinate. (Subtract Mgr.'s Rank from Sub.'s Rank or vice versa.) Record each difference under the column labeled DIFF.

4. Square each obtained difference and record under the column labeled Squared Diff.

5. Add up the 40 squared differences and record the total in the space labeled SUM Squared Diff.

6. From the P.I. Conversion Table find the Perception Index and record it in the space provided.

Card Number	MGR.	SUB.	DIFF.	Squared Diff.	Card Number	MGR.	SUB.	DIFF.	Squared Diff.
1.	___	___	___	___	21.	___	___	___	___
2.	___	___	___	___	22.	___	___	___	___
3.	___	___	___	___	23.	___	___	___	___
4.	___	___	___	___	24.	___	___	___	___
5.	___	___	___	___	25.	___	___	___	___
6.	___	___	___	___	26.	___	___	___	___
7.	___	___	___	___	27.	___	___	___	___
8.	___	___	___	___	28.	___	___	___	___
9.	___	___	___	___	29.	___	___	___	___
10.	___	___	___	___	30.	___	___	___	___
11.	___	___	___	___	31.	___	___	___	___
12.	___	___	___	___	32.	___	___	___	___
13.	___	___	___	___	33.	___	___	___	___
14.	___	___	___	___	34.	___	___	___	___
15.	___	___	___	___	35.	___	___	___	___
16.	___	___	___	___	36.	___	___	___	___
17.	___	___	___	___	37.	___	___	___	___
18.	___	___	___	___	38.	___	___	___	___
19.	___	___	___	___	39.	___	___	___	___
20.	___	___	___	___	40.	___	___	___	___

Sum of Squared Differences_____

Perception Index_____

EXHIBIT 3

JOB PERCEPTION INDEX CONVERSION TABLE

Sum of Squared Differences	Rank Order Correlation	Sum of Squared Differences	Rank Order Correlation	Sum of Squared Differences	Rank Order Correlation	Sum of Squared Differences	Rank Order Correlation	Sum of Squared Differences	Rank Order Correlation	Sum of Squared Differences	Rank Order Correlation	Sum of Squared Differences	Rank Order Correlation
106	.99	3304	.69	6502	.39	9701	.09	12898	-.21	16096	-.51	19294	-.81
213	.98	3411	.68	6609	.38	9807	.08	13005	-.22	16203	-.52	19401	-.82
319	.97	3517	.67	6715	.37	9913	.07	13111	-.23	16309	-.53	19507	-.83
426	.96	3624	.66	6822	.36	10020	.06	13218	-.24	16416	-.54	19614	-.84
533	.95	3731	.65	6929	.35	10127	.05	13325	-.25	16523	-.55	19721	-.85
639	.94	3837	.64	7035	.34	10233	.04	13431	-.26	16629	-.56	19827	-.86
746	.93	3944	.63	7142	.33	10340	.03	13538	-.27	16736	-.57	19934	-.87
852	.92	4050	.62	7248	.32	10446	.02	13644	-.28	16842	-.58	20040	-.88
959	.91	4157	.61	7355	.31	10553	.01	13751	-.29	16949	-.59	20147	-.89
1066	.90	4264	.60	7462	.30	10660	.00	13858	-.30	17056	-.60	20254	-.90
1172	.89	4370	.59	7568	.29	10766	-.01	13964	-.31	17162	-.61	20360	-.91
1279	.88	4477	.58	7675	.28	10873	-.02	14071	-.32	17269	-.62	20467	-.92
1385	.87	4583	.57	7781	.27	10979	-.03	14177	-.33	17375	-.63	20573	-.93
1492	.86	4690	.56	7888	.26	11086	-.04	14284	-.34	17482	-.64	20680	-.94
1599	.85	4797	.55	7995	.25	11193	-.05	14391	-.35	17589	-.65	20787	-.95
1705	.84	4903	.54	8101	.24	11299	-.06	14497	-.36	17695	-.66	20893	-.96
1812	.83	5010	.53	8208	.23	11406	-.07	14604	-.37	17802	-.67	21000	-.97
1918	.82	5116	.52	8314	.22	11512	-.08	14710	-.38	17908	-.68	21106	-.98
2025	.81	5223	.51	8421	.21	11619	-.09	14817	-.39	18015	-.69	21213	-.99
2132	.80	5330	.50	8528	.20	11726	-.10	14924	-.40	18122	-.70	21320	-1.00
2238	.79	5436	.49	8634	.19	11832	-.11	15030	-.41	18228	-.71		
2345	.78	5543	.48	8741	.18	11939	-.12	15137	-.42	18335	-.72		
2451	.77	5649	.47	8847	.17	12045	-.13	15243	-.43	18441	-.73		
2558	.76	5756	.46	8954	.16	12152	-.14	15350	-.44	18548	-.74		
2665	.75	5863	.45	9061	.15	12259	-.15	15457	-.45	18655	-.75		
2771	.74	5969	.44	9167	.14	12365	-.16	15563	-.46	18761	-.76		
2878	.73	6076	.43	9274	.13	12472	-.17	15670	-.47	18868	-.77		
2984	.72	6182	.42	9380	.12	12578	-.18	15776	-.48	18974	-.78		
3091	.71	6289	.41	9487	.11	12685	-.19	15883	-.49	19081	-.79		
3198	.70	6396	.40	9594	.10	12792	-.20	15990	-.50	19188	-.80		

APPENDIX N

SUBORDINATE EFFECTIVENESS RATING (SER)

Division_____   Position_____

I. Most managers perform their work adequately. A few
   may be a little weak in an essential or two of
   successful performance. A few make extremely valuable
   contributions to the operating results of their unit.
   In terms of what this man has already contributed,
   how does he stand with respect to his overall value
   to his unit?

PLEASE CIRCLE THE NUMBER WHICH BEST STATES YOUR JUDGMENT.

| 1 | 2 | 3 | 4 | 5 |

Not an outstand-   Makes a good con-   Extremely valuable
ing asset to the   tribution to the   to the unit in the
unit in the com-   unit for which I   company for which
pany for which I   am responsible--   I am responsible--
am responsible--   about what I   makes a good deal
not quite the con-   would normally   more contribution
tribution at   expect of one of   than I would nor-
times that I   my subordinate   mally have any
would expect from   managers.   reason to expect
one of my sub-   from one of my sub-
ordinate managers.   ordinate managers.

II. Most managers are probably going to advance no more
    than one or two levels above their present level, if
    that much. Some are already over their heads. A few
    are going close to or all the way to the top.

PLEASE CIRCLE THE NUMBER WHICH BEST STATES YOUR JUDGMENT

| 1 | 2 | 3 | 4 | 5 |

Has gone about   Could go up   Real promise of
as far as he   another level   going a long way.
can or maybe   or two in time.
even too far.