ADVERTISING OBJECTIVES: PROPER SETTING AND USE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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* * * * * * *

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Not original copy. Pages of entire dissertation tend to curl. Filmed in the best possible way.

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One theoretical approach to problem solving which has been suggested in the past has been termed "goal-setting." This approach, which was synthesized by Russell Colley in his 1961 Association of National Advertisers study, is known by the acronym D A G M A R (Defining Advertising Goals for Measured Advertising Results). This DAGMAR, or goal-setting method, involves forming a hierarchy of quantitative goals in which each statement is based upon some higher-order goal. While many authors in this area seem to indicate that this method will solve management problems, conversations with industry representatives led to the conclusion that in practice most managers have been rather slow to adopt this technique.

Why is it that a theory which appears to be as strong as goal-setting is not used more extensively? The answer to this most perplexing question seems to be centered in the assumption structure of the theory. Few advertising practitioners and authors, it would seem, have bothered to question the basic assumptions of this technique. The results, apparently, have been that many firms have tried the goal-setting approach and then
abandoned it because it did not provide a satisfactory management tool. It appears that an analysis of the assumption structure of the goal-setting technique might provide some answers about where its major weaknesses lie. Once these weaknesses are discovered, a new theory may be constructed which will reduce or eliminate the restricting assumption. This new theory provides the benefits claimed for goal-setting and seems both useable and useful to industry.

The author wishes to acknowledge those who have made significant contributions to this dissertation.

My very special thanks is given to the representatives of the business world for their time and ideas. Since a majority of these individuals expressed a desire to remain anonymous, all the results of these interviews have been kept confidential. Nonetheless, these conversations are reflected throughout the pages of this dissertation.

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CHAPTER I

INTRODUCTION

Scope

The scope of this study is to explore the marketing and advertising goal-setting process. In the course of this study, the traditional methods of goal-setting and the shortcomings of this system are examined. Conclusions are also drawn as to the proper method of establishing advertising objectives and their use. This is, primarily, deductive evaluation of the goal-setting process. While application is possible in all aspects of the firm's goal-setting activities; i.e., the production department goals, the finance department goals, etc.; the primary emphasis is in the area of goal-setting for marketing and more specifically for advertising. The final aspect of this dissertation is to develop a systems approach which places goals and objectives in a usable framework.

Hypotheses

Goal-setting, in the narrow sense in which it is commonly used, involves a step-down process wherein each
goal is based upon some higher-order goal. The advocates of this technique claim many advantages. These advantages include —

1. Control and evaluation,
2. Direction and efficiency,
3. Coordination,
4. Motivation,
5. Guideposts for decisions.

The goal-setters often tend to confuse terms which are closely related to goal. These terms are —

1. Objective,
2. Forecast,
3. Quota,
4. Target,
5. Decision criterion,
6. Decision constraint.

When these words are properly defined so that most of the overlay is eliminated, many of the claimed advantages of goal-setting disappear.

Specifically the following hypothesis is tested: Goal-setting, in its common, narrow sense, can be improved upon. The null-hypothesis, then, is that goal-setting is the most efficient way of gaining the claimed advantages and that it does provide an optimum hierarchy of goals.
Existing Literature

There has been a great deal written on the subject of advertising and marketing goal-setting. It appears, however, that most of the authors in this area often accept, with little or no question, the assumption that this goal-setting process is, in fact, an optimum procedure. The goal-setting literature typically comes to conclusions such as—if you have specific goals, employees can be evaluated against this standard; goals are necessary since without them we would not know where the firm or department is heading; with properly set goals, overlaps and deficiencies can be seen; working toward a specific goal helps employee morale since people are happier working for a specific purpose rather than toward no goal.

Industry representatives indicate that they have found that goals, as generated by the goal-setting process, are not used extensively in the business world. They have suggested and implied that there may be a basic fallacy in this process even though they are not quite sure what it is. Therefore, it might seem that even though a plethora of literature is available in the goal-setting area, no one has attempted to evaluate critically the goal-setting process.

See Bibliography.
Development of the Dissertation

While preparing class lectures for a course in advertising principles, the author became aware of the lack of worthwhile literature in the area of advertising objectives. The little literature of worth which did exist seemed to be scattered and disconnected. The author came to the conclusion that there might be a need for clarification and condensation of the existing knowledge in this most basic area. After a great deal of research into the literature, it became more and more apparent that two errors are evident in most of the existing writing. The first problem that appears in the goal-setting thinking seems to be a basic confusion. This confusion stems from the fact that the goal-setters explain their technique as a step-down process of number generation, and claim advantages of the procedure which are really not due to goal-setting as they describe it. The problem seems rooted in the fact that in common terminology, the word "goal" has acquired many meanings. These include:

1. Objective,
2. Forecast,
3. Quota,
4. Target,
5. Decision criterion,
6. Decision constraint.

The word "goal" has been used to mean all of these. However, the goal-setters surveyed are using goal in a
very narrow sense, that is, a figure generated for the express purpose of basing other figures upon it. Therefore, it might seem that the goal-setters are describing their process, but claiming the advantages of these other closely related terms.

A second, and more basic problem of the goal-setting technique, is that few have questioned the basic assumption upon which the entire process rests. It appears that there are two critical assumptions involved. The first is that a model of the system exists, at least in the minds of those translating a higher goal into a lower one. If this model, or relationship, does not exist then the goal-setting process is a worthless exercise. The second assumption which the goal-setters make is that the initial figure, upon which all subsequent figures are based, will yield an optimum relationship in terms of some criterion such as profits.

This second assumption appears to be critical. Most goal-setting processes start with a number which is pulled out of the air in some fashion. This number may be, for example, the same return on investment that was gained last year or some traditional figure such as a 10% return on investment. Once this first figure is decided upon, all subsequent lower-order figures are generated. This means that if the lower-order figures are obtained, the overall company goal will follow.
The problem is that this first number may or may not yield the maximum potential for the firm. Contained in the goal-setting literature is a plea to relate goals to maximum profit. The author decided that what was needed is a formalized approach whereby lower-order goals could be directly related to profits. If the managers were asked to set goals so that several levels of profit might be gained, a functional relationship between expenditure on advertising and profitability might be established. Using this approach, the author discovered that it was no longer necessary to obtain the first number in a guesswork fashion. Rather this alternative system generates all numbers including the first.

The final step in the development of this dissertation is to find the relationships which exist between the words that are confused with the term "goal." This is done through the development of a model of the system.

Methodology

The methodology to be used in this dissertation is as follows; first, a presentation is made of a clear statement of the definitions of the words:

1. Objective
2. Goal
3. Forecast
4. Quota
5. Decision criterion
6. Decision constraint
7. Model
This section is necessary since the reason for much of the confusion in the goal-setting literature is the lack of clear definitions and differentiation of these terms. The approach to be used with the first six words is to explore the current usage and then to present a workable definition of each, based upon either current usage or logic. The final term is defined in a manner which is useful for this dissertation. While these definitions may agree with current usage, the primary purpose of presenting these definitions is to minimize the overlap which exists. By so doing, many of the problem areas become more clearly distinguishable.

The second and major aspect of this paper deals with the concept of goal-setting. In this section an attempt is made to organize and review the current literature and thinking. A survey was made of the literature dealing with (1) objectives of the firm; (2) objectives of the marketing department; and (3) objectives of the advertising department. Specifically, the objectives of the firm to be explored are -

1. Profitability (long-run profit),
2. Survival,
3. Service,
4. Growth,
5. Owner satisfaction,
6. Employee satisfaction,
7. Absolute size,
8. Public image,
The objectives of the marketing department are these:

1. Share of market
2. Proficiency in the marketing task
3. Support of the levels of the channel
4. Sales
   A. Total
   B. Product mix
   C. Market segmentation

The advertising department has several objectives:

1. Sales message
2. Attitude (levels of
3. Awareness)
4. Corporate image

The nature of these advertising objectives is examined, as well as the interrelationships which exist among the various levels. This hierarchy is considered both in makeup and assumption.

In addition to a literature search, the author conducted several personal interviews with representatives of large industries. The author was also given access to the files of the Marketing Science Institute. The results of several hundred interviews made for related projects thus became available. The purpose of conducting these interviews was either to reinforce the impressions gained from the literature search or to correct faulty conceptions. For the most part the interviews tended to reinforce the existing literature.
Once this basic research was completed the next step was to examine the assumption structure upon which the goal-setting technique is based. Through the development of an explicit model of the goal-setting relationship, a new technique has been developed. This new technique was formed to eliminate what seemed to be the major restriction of the goal-setting process.

Finally, an attempt is made to integrate the findings of the preceding sections into a workable relationship of objectives, models, forecasts, quotas, and decision criteria. It is shown that corporate objectives serve best as ultimate decision criteria. Forecasts should be used for planning, intrafirm communication, and statements of expectations; while quotas seem best suited for psychological motivation and morale. An information system is needed for feedback in order to control and modify the system.

Lastly, a summary and conclusion section presents the major findings of the study and conclusions which may be drawn.

Source Material

The source material to be used includes both primary and secondary data. The secondary material is largely the result of library research. Advertising, marketing, and management textbooks, as well as periodicals in
these areas, are used. In addition, special studies of the Advertising Research Foundation; the Association of National Advertisers, Inc.; the American Association of Advertising Agencies; the Advertising Committee of the American Marketing Association; etc. have been reviewed.

The primary data collected for this dissertation consists of the results of a limited number of personal interviews. The number of these interviews was held to a minimum since it appeared that these conversations were not yielding answers, but rather were defining problems. However, in these interviews the major problems found in using the goal-setting technique were clarified and intensified. Once the point was reached that it was felt that further interviewing would yield only repetition, this device was discontinued.

Limitations

There are several areas which might be considered limitations in this study. First of all, as mentioned above, only a limited number of interviews were conducted to obtain primary data. Although more interviews might have been staged, it is felt that the conversations succeeded in clarifying the major problem areas. The primary purpose of the interviewing was to confirm that the ideas expressed in the literature truly reflects corporate thinking. Even though interviewing was limited to a relatively
few firms, these companies seem to be representative of those that have tried the goal-setting process.

In most of these interviews the representatives expressed the desire that the results of these conversations be kept confidential. Since the majority of these opinions are also expressed in the published literature, relevant quotations are drawn from the literature rather than from these interviews, wherever possible. Where variations or additions do occur, these exceptions are noted.

A second limitation of this study is that the primary emphasis is upon the communication-sales-profitability hierarchy of goals. It is noted that there are, in fact, several other potential relationships. These are examined briefly in this dissertation. The goal-setting literature seems most concerned with this one particular set of relationships, and therefore it has become the major concern of this study.

Another limitation is that this study is concerned with only one aspect of the decision-making process. That is, there are basically two aspects of making a decision. The first is the evaluation of alternatives while the second involves the generation of alternatives. This paper concentrates upon the alternative evaluation aspect of decision-making. It must be assumed that in order to
use either the goal-setting technique or the systems approach alternative, the manager must know what courses of action are open to him. These alternatives may be less than complete. The method presented can only be used to choose the best of what is available.

An additional limitation of this study is that the technique which is suggested in Chapter V is hypothetical. The conclusion that about eight million dollars should be spent for advertising may not reflect the needs of any particular firm. The technique should be modified to conform to the conditions faced by the particular company. Further, this technique is intended to provide only a rough approximation. The model can, obviously, be no better than the knowledge upon which it is based.

Still another limitation is that it is assumed, for the most part, that the other facets of the business are being operated as efficiently and effectively as possible. While a similar approach to the one outlined in this dissertation may be applied to any phase of the business, the major concern here is in the areas of marketing and advertising.

The final limitation of this dissertation is that a deductive approach is used. The examples used are hypothetical rather than case. Few, if any, companies may know precisely the relationships which exist between
communication measures, such as levels of awareness, and sales. The method which is outlined in Chapter V provides a method by which these relationships might be estimated. However, the deductive approach in this case does not provide specific answers to these relationship questions. This technique does present an approach which can be utilized as a management tool. This technique allows a systematic adjustment of goals which is consistent with profit maximization.
DEFINITIONS

While searching the literature and talking with representatives of industry regarding the setting of goals, a lack of consistency in terminology became apparent. There have been several differences of opinion as to what goals should or should not do. Many of these difficulties seem to arise from the confusion associated with the word "goal." Some of these differences occur because there is a difference in point of view. That is, many of the authors and the industry representatives who are mathematically oriented seem to be of the opinion that a goal should aid a manager in the evaluation of alternative courses of action. Some management people, on the other hand, seem to feel that a goal should provide motivation and control. Still others feel that goals should provide the basis of planning and communication.

Further, it might seem that many of the problems associated with goal-setting are, in fact, problems of related functions--such as forecasting, quota-setting, etc. By exploring the meanings of "goal" and the nature of the overlap with related functions, some of the current misunderstandings may be identified and resolved.

Current Usage of Goals and Objectives

As a starting point in the examination of the confusion which today exists, let us first look at some of the
statements which are being made about goals and objectives. Webster's Third New International Dictionary defines goal and objective as virtually synonyms:

Goal: The end toward which effort or ambition is directed: aim, purpose.

Objective: Something toward which effort is directed: an aim or end of action; goal.²

Colley makes another interesting comment about the distinction between goal and objective:

I made a fairly careful search of this subject, including various standard references, the literature of management and even classical literature. The result was that I found no difference in common usage between the two terms "objective" and "goal". So I invented a difference.³

The above statements would indicate that many people regard goals and objectives as synonymous. However, several of today's authors wish to draw a distinction that one term is long-run and more vaguely stated than the other. Some writers attempt to resolve this problem by adding a modifying term to qualify short-run vs. long-run. Such words as strategic vs. tactical, qualitative vs.


quantitative, ultimate vs. intermediate, and planning vs. action seem more common.

Workable Definitions of Objective and Goal

The distinction between objective and goal may be somewhat arbitrary—however, it seems necessary. The fact that Colley felt the need to invent a difference and that authors and industry representatives invent modifying terms, indicates that there is a need to make a distinction. However, to claim as the goal-setters do, that one term as clearly long-run and the other short-run may not be done completely on the basis of current usage. All that can be attempted is to choose, in a somewhat arbitrary manner, a definition which seems to reflect a consensus rather than unanimity of opinion. Therefore, the following statements are presented.

Objective. A workable statement of the meaning of objective was presented by Granger in a Harvard Business Review article:

I shall use the term objectives in the relatively broad, nonspecific sense which it commonly has in everyday business language. . . . Objective is "an aim or end of action", it is also used as an aim or guide to intermediate decisions or action.4

For the purposes of this dissertation the term objective will be chosen as the less specific of the two terms. An objective is defined as: a non-quantitative statement of intent.

Goal. Since the term objective has been chosen to represent the non-quantitative type of statement, it should be apparent that goal then is used to represent the specific, typically quantitative statements of the future. For example, the statement "my objective is to make a profit; my goal is to make one thousand dollars of profit this year" is consistent with this distinction. The term goal, used in this specific sense takes on many shades of meaning that overlap other terminology. These overlaps will be discussed later in this chapter. Nonetheless, it is because of this multimeaning of goal that it is defined in the very narrow and restricted sense which is used by the goal setters. A goal is defined to be a quantitative statement of performance established for the express purpose of basing other quantitative statements upon it. The process of establishing these statements shall be called goal-setting. It is with this goal-setting process that much of the remainder of this dissertation is concerned. Therefore, it is important to keep in mind that the term goal is used in a very narrow sense.

One may wonder at this point, why so much care is being taken to define goal in this narrow sense and
specifically exclude several of the closely related terms. One may question why words such as "forecast" or "quota" or "decision criterion" should not be called by the general term "goal." As is demonstrated in the following sections, all of these words have been used as synonyms of goal. The situation is somewhat like the one which exists for the word "germ." A germ may be a fungus or a bacteria. To the layman, it may not make much difference if both "fungus" and "bacteria" are called "germs," but to the bacteriologist the distinction is very significant. So too, the businessman should be concerned with proper terminology. It is further shown in the following sections that these words vary significantly, one from another. Thus, for the purpose of clarification, these terms are defined such that the overlap will be held to a minimum.

The problem is complicated somewhat by the use of the term goal being restricted to the very narrow meaning of the goal-setters, i.e., a quantitative statement established for the express purpose of basing other quantitative statements upon it. This restricted meaning is adopted only because it is the way in which this group uses the term and since a major portion of this dissertation analysis is of the goal-setting procedure, this narrow use of the word "goal" is necessary.
Forecast

The most common numerical goal is sales volume. . . . It may be based on trend and cycle analysis, correlation analysis, and similar statistical approaches.7

If, as Frey suggests in the above quote, the most common goal is derived through statistical or mathematical techniques, then might not this be called a forecast? A forecast, it would seem, is a quantitative prediction of a level of performance, given a set of assumptions, used as an input in planning. For example, the American Marketing Association Committee on Definitions (1960) defined a sales forecast as

An estimate of sales in dollars or physical units for a specific future period under a proposed marketing plan or program and under an assumed set of economic and other forces outside the unit for which the forecast is made. The forecast may be for a specific item of merchandise or for an entire line.

Thus, under this definition, that which Frey refers to as a goal might be reclassified as a forecast.

Quota

It is interesting to note that the American Marketing Association Committee on Definitions (1948) defined

sales quota as, "A sales goal assigned to a marketing unit for use in the management of sales effort." The 1960 statement retained most of this definition. It may be significant that the only change in wording was the removal of the words "sales goal" and the inserting of the words "projected volume of sales." One can only speculate whether this change was made because the committee felt that a projected volume of sales is, in effect, the same as a sales goal, thus supporting the usage in the previous section. Another possibility, however, is that the committee recognized that sales goal is an imprecise synonym for sales quota. This, hopefully, reflects a feeling on the part of the committee that the term goal, when used in these varied ways, loses much of its strength.

Since the word goal has been used to mean both forecast and quota, these two terms should be distinguished.

A "forecast" is the volume of sales that a company expects to obtain in a given territory. The sum of the individual territorial forecasts is the basis for company planning, such as production schedules and cash budgets.

Quotas are set in such a way as to provide a maximum incentive. Therefore, the failure to distinguish between a forecast and a quota can result in either bad planning or less effective incentive, or both.

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Based upon this distinction, then, the term quota is defined as a quantitative statement of some specific level of performance, used primarily for motivational purposes. A corollary term might be target.

This word seems to be so closely tied to motivation that it can be used as a synonym for quota. The difference, then, between forecast and quota or target is that the former represents a quantitative statement of an expected level of performance used as an input for planning, while the latter two terms refer to quantitative statements of some specific level of performance used primarily for motivational purposes.

Decision Aids

Another pair of related uses of the term goal is as a decision criterion or a decision constraint. The first, a decision criterion, seems to reflect the current usage of goals in the operations research literature. For example, Howard speaks of the operationality of a goal. He defines this term as

The capacity of that goal to be used by the decision maker in evaluating the consequences of alternative courses of action and thus enable him to decide which action is "better."

7Ibid., p. 467.
This aspect of the word "goal" is called a decision criterion and is defined as a measure of performance, such as sales or profits, which the decision-maker attempts to optimize subject to certain limitations.

A second, but related, term is a decision constraint. It is in this sense that Childs uses the word "goal":

Before the final decision can be made, it is necessary to establish a profit goal as a cutoff rate of return on capital. This is the rate with which the project's profitability can be compared in order to determine whether there is sufficient profit to justify the project.

A decision constraint is a statement intended to provide a cutoff. It should be noted that both decision criterion and decision constraint are quantitative or non-quantitative statements used to evaluate alternative courses of action or aid in decision making. The distinction is that a decision criterion provides some measure of performance which the decision maker attempts to optimize while a decision constraint provides the decision maker with a cutoff which will narrow the number of alternatives but not normally indicate which is best.

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Models

In addition to the terms examined above, one other concept will be used extensively in this paper, and therefore it should be defined. This is the concept of a model.\(^9\)

If the concept of a model is to be used in a scientific and decision making context it must be meaningful in its method of representing the "real world." This does not mean that the model must be completely accurate. Indeed, a model can never be perfect in as much as it presents an abstraction of reality and to the degree that anything which is abstracted loses some of the quality of the original, models cannot be completely accurate. The degree of accuracy which the model-builder wishes to incorporate into his abstraction usually depends upon the degree of accuracy required of the results. Thus, if a model airplane were intended merely to decorate a desk, there would be little point in making it so structurally perfect that it might fly. On the other hand, if the plane were to be used in racing, the model builder would have to make it so structurally perfect that it would fly.

\(^9\)Many of the ideas presented in this section have been drawn from Robert D. Buzzell, Mathematical Models and Marketing Management (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1964), pp. 9-16.
Types of models. In much of the quantitative methods literature, models are broken down into three classes. Buzzell lists these as:

There are several ways in which models may correspond to the real world. From this standpoint models may be classified as iconic, analogue, or symbolic. An iconic model is "like" reality in the sense that it looks like reality. Examples are photographs, maps, miniature store layouts or rough layouts of advertisements. An analogue model is based on the substitution of one property for another. For example, in a graph of monthly sales figures we substitute distance (say, between vertical lines on a paper) for time. Symbolic models represent objects, events, and processes by symbols of a logical or mathematical character. 10

In this paper the major concern is with symbolic models in decision making. These models may be both normative and descriptive. They may be normative in the sense that they prescribe what the decision maker ought to do. They may be descriptive in that they represent a mathematical statement of a situation which does in fact exist. They can be combined to enable the decision maker to see what ought to be done given the assumed situation.

Also, models may be explicit or implicit. That is, they may be written out in the form of a formal mathematical expression or they may present only the vague,

10 Ibid., pp. 13-14.
intuitive feelings of the decision-maker about a given relationship.

Mathematical models, being abstractions of reality, are neither true nor false. The usefulness of a decision model relates only to the relevance which it bears to the problem at hand. The solution to a decision model relates some measure of effectiveness to certain variables of the system being abstracted and this solution may or may not be relevant in the real world.

Buzzell relates model building and goals in the following quotation:

Mathematical models do not, in themselves, provide any help to the manager in defining his goals. Indeed, most models presuppose a knowledge of objectives.

For example, a linear programming model . . . is a device for maximizing a so-called "objective function" subject to specified constraints. The objective function is simply a formal way of expressing objectives. The model cannot be solved - it is, in fact, meaningless - unless objectives can be expressed in the form of an objective function. Similarly, other kinds of analytic models are designed to show what values of certain variable (representing actions by a firm) should be chosen so as to maximize or minimize other variables (representing objectives). . . .

While mathematical models do not directly assist in the identification of objectives, the latter often is an important by-product of the exercise of
attempts to develop a model. At an early stage in any model-building project, management is asked for an explicit statement of objectives... Model-building acts as a catalyst for a systematic consideration of objectives which may be far more important than any "solution" derived from models. 11

Summary and Conclusions

From the preceding discussion it should be apparent that the word "goal" has been used in so many ways that it may have lost much of its meaning. It would seem that if any degree of preciseness is to be achieved in this paper, a more exact terminology must be established. Therefore, goal will be used only in the sense of a quantitative statement established for the express purpose of basing other quantitative statements upon it. The process of establishing this statement will be called goal-setting.

Goal will be used only in this very narrow meaning. It will not be used as a synonym for quota, forecast, target, decision criterion, decision constraint, or objective. In this paper these terms will be used only as they have been defined:

1. Objective—a non-quantitative statement of intent.

2. Goal—a quantitative statement of performance established for the express purpose

11 Ibid., pp. 255-256.
of basing other quantitative statements upon it.

3. Forecast—a quantitative statement of an expected level of performance, given a set of assumptions, used as an input in planning.

4. Quota or Target—a quantitative statement of some specific level of performance, used primarily for motivational purposes.

5. Decision Criterion and Constraint—a quantitative or non-quantitative statement used to evaluate alternative courses of action or aid in decision making:
   
   A. Decision criterion—a measure of performance, such as sales or profits, which the decision-maker attempts to optimize subject to certain limitations.

   B. Decision constraint—a statement intended to provide a cutoff.

6. Model—a quantitative or non-quantitative statement which is intended to provide an abstraction of reality usable in decision making.

It will be noted that these terms are defined in a manner which describes their use. This implies that an isolated statement might fall under several categories. That is, if a quantitative statement is used for motivation it is called a quota. If the statement is to be used as a means of evaluating alternatives, it is called a decision criterion. If the statement represents the best estimate of the future and is used as an input to planning, it is termed a forecast. General, non-quantitative statements, used to establish over-all direction
are objectives. If the use to which the statement is to be put is considered, then the proper classification should become clear.
CHAPTER II

GOALS AND OBJECTIVES IN THE MANAGEMENT PROCESS

The problem of establishing proper objectives for individuals and companies is not new. However, recent behavioral studies have provided many insights into this process. Although the majority of these studies have been descriptive in nature, they still provide much of the basis for any normative discussion. Therefore, before examining the goal-setting procedure, let us briefly explore several of these more recent theories of behavior.

Concepts of Objectives and Behavior

Among the more recent theories of the relationship between objectives and behavior, the theory of rationality in problem solving and the concept of satisfice seem to be the more useful in explanation.

Rationality in problem solving. For a great many years economists have talked about the "rational man". This man had an understanding of all alternatives available in a given situation and a knowledge of the
consequences of each alternative. The "rational man" further, it was assumed, had an objective toward which he was heading. This objective was to maximize profits, or in broader terms, to maximize utility. This utility was generally an undefined term but usually it was thought of as satisfaction in some sense of the word. Therefore, all actions taken by this man were objective-directed and thus rational. Recently, however, authors have modified this theory.

The "rational man" of economic theory (who possessed perfect knowledge of static demand and cost functions and who desired only to maximize profits) is, of course, a gross distortion of the modern marketing manager. Not only is the manager dealing with a dynamic rather than static environment but his knowledge about his environment is far from perfect. . . . The term "rational" can be more generally defined to mean merely behavior which is consistent with the assumptions underlying some explicated model.¹

Thus, man is rational but he may be more complex than the original conception would indicate. If, then, rationality is defined as conformation to a model, the next step is to discover the nature of this model.

As a first step in explicating this model, let us look at some of the limits of decision as enumerated by Simon.

... When the limits to rationality are viewed from the individual's standpoint, they fall into three categories: he is limited by his unconscious skills, habits, and reflexes; he is limited by his values and conceptions of purpose, which may diverge from the organization goals; he is limited by the extent of his knowledge and information. The individual can be rational in terms of the organization goals only to the extent that he is able to pursue a particular course of action, he has a correct conception of the goal of the action, and he is correctly informed about the conditions surrounding his action. Within the boundaries laid down by these factors his choices are rational-goal-oriented.2

Within this framework of capability and information, the individual must take actions. The way in which the decision-maker structures the information he receives to conform with his objectives is then the model for which we are searching.

Utility theory provides a framework which is intended to structure information relating to each alternative in order that the optimal choice may be made.

The program of predicting behavior by means of the concept of rationality can be accomplished in many conceptual models of contemporary utility theory by assigning a "utility" measure to each outcome. More precisely there is a method of assigning a single number ("utility") to each outcome, and a single probability

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measure to each action-outcome combination, such that a person's choice of an action can be predicted in terms of the maximum expected utility!

The next step in this utility theory is to develop a functional relationship so that the increase in utility may be shown for each increment of the outcome. For example, the following graph may represent a manager's desire or utility for increments of profit.

This would indicate that as profit increases beyond a given level, one additional dollar of profit has a lower value, or utility, to the decision-maker than the previous dollar of profit. The graph would indicate that additional dollars of profit will always have some value, but this will diminish and the incremental change will approach 0 as a limit.

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An approximation of this utility function might be the "satisfice" concept presented by Simon.

The notion of satiation plays no role in classical economic theory, while it enters rather prominently into the treatment of motivation in psychology. . . If we seek to explain business behavior in the terms of this theory, we must expect the firm's goals to be not maximizing profit, but attaining a certain level or rate of profit, holding a certain share of the market or a certain level of sales. Firms would try to "satisfice" rather than to maximize.4

Thus, an approximation of the utility curve might look like this:

![Utility vs. Profit Graph]

What the satisfice approximation says, in effect, is that increments of profit have a very high utility to the decision-maker up to a certain point. Beyond this point, additional profits have 0 increments of value. The kink point might be last year's profits, a quota, or a target. The determination of this point may vary, but the concept does seem to be valid.

Conclusions which might be indicated if satisficing does, in fact exist, would be that a manager might be tempted to sacrifice long-run profits for the sake of achieving his satisfice point. That is, if it appears that this point might not be reached, a manager could cut back on an expenditure such as advertising. While this could harm the company in the long-run, the short-run satisfice point would be obtained. If the utility of extra profits were higher than the utility for additional dollars of advertising, this action is rational (consistent with an explicated model).

Another conclusion which can be made about this model is in the area of alternative evaluation. Assume a decision-maker were forced to choose between two alternatives. The first alternative has a high probability of achieving exactly the satisfice profit level. The second alternative might yield a higher than satisfice profit, but also might return a lower than satisfice level. Even if the probability of gaining this extra profit were fairly good, the decision-maker would "rationally" choose the more certain alternative. The logic of this decision can be illustrated by the following example. Let us suppose the satisfice point were set at $200,000 of profit and the manager is forced to decide between two alternatives of equal investment costs. The first
alternative is 95% certain to return at least $200,000. The second alternative is 60% certain of returning at least $200,000 but has a 20% chance of gaining $500,000 and a 20% chance of realizing only $100,000. The manager's utility function, which if assumed linear through the origin might be expressed as

\[ y = 0.7C; \quad C = X \quad \text{when} \quad X \leq \$200,000 \]
\[ C = 200,000 \quad \text{when} \quad X > \$200,000 \]

where \( y \) = utility value
and \( X \) = expected profit

The expected value of the two alternatives could then be compared. In the first instance the utility of $200,000 expected profit is 140,000 times 95%, (the probability of receiving it) or 133,000. In the second case the total expected value would be the sum of the expected values at each of the return probabilities. For this alternative the expected value be expressed as:

<table>
<thead>
<tr>
<th>Expected Profit</th>
<th>Utility Scale Equivalent</th>
<th>Times</th>
<th>Value on Utility Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>( X )</td>
<td>( C )</td>
<td>( .7 )</td>
<td>( y )</td>
</tr>
<tr>
<td>100,000</td>
<td>100,000</td>
<td>( .7 )</td>
<td>70,000</td>
</tr>
<tr>
<td>200,000</td>
<td>200,000</td>
<td>( .7 )</td>
<td>140,000</td>
</tr>
<tr>
<td>500,000</td>
<td>200,000</td>
<td>( .7 )</td>
<td>140,000</td>
</tr>
<tr>
<td>Value on Utility Scale</td>
<td>Probability of Occurrence</td>
<td>Expected Value</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>70,000</td>
<td>0.20</td>
<td>14,000</td>
<td></td>
</tr>
<tr>
<td>140,000</td>
<td>0.60</td>
<td>84,000</td>
<td></td>
</tr>
<tr>
<td>140,000</td>
<td>0.20</td>
<td>28,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total Expected Value</strong></td>
<td></td>
<td><strong>126,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

Thus, under the satisfice model the manager would choose the first alternative which has an expected value of $133,000$ over the second alternative which has an expected value of $126,000$.

Although it is recognized that the satisfice model is an approximation of the utility function, it might be questioned as to just how accurate it is. The satisfice idea is based upon the assumption that needs are at some point satisfied or satiated. When referring to physical needs in a limited time period, this seems to be true. After eating tremendous quantities of food or drinking a great deal of water in a given short time interval, one becomes satiated. However, even in this instance, one last sip or bite may still have some utility. That is, the utility of additional increments may very quickly approach 0 as a limit, but may never reach it. Further, it is possible that the psychological need can never be satiated. There may always be room for more love or
higher status. Thus, a more realistic approximation of utility might be high utility for increments up to a certain point and then substantially lower utility for increments (but greater than 0) above this point. If this were the case in the previous example the decision might have been different. If the utility function were

\[ y = .7C; \quad C = X \quad \text{when} \quad X \leq 200,000 \]
\[ C = 200,000 + \frac{X - 200,000}{.7} \quad \text{when} \quad X > 200,000 \]

where \( y \) = utility value and \( X \) = expected profit

then the expected value of the second alternative would have increased.

<table>
<thead>
<tr>
<th>Expected Profit</th>
<th>Utility Scale Equivalent</th>
<th>Times</th>
<th>Value on Utility Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>( X )</td>
<td>( C )</td>
<td>( y )</td>
<td></td>
</tr>
<tr>
<td>100,000</td>
<td>100,000</td>
<td>.7</td>
<td>70,000</td>
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<tr>
<td>200,000</td>
<td>200,000</td>
<td>.7</td>
<td>140,000</td>
</tr>
<tr>
<td>500,000</td>
<td>200,000</td>
<td>.7</td>
<td></td>
</tr>
<tr>
<td>+300,000</td>
<td>+300,000</td>
<td>.2</td>
<td>200,000</td>
</tr>
<tr>
<td>Value on Utility Scale</td>
<td>Probability of Occurrence</td>
<td>Expected Value</td>
<td></td>
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<td>------------------------</td>
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<tr>
<td>70,000</td>
<td>.20</td>
<td>14,000</td>
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<tr>
<td>140,000</td>
<td>.60</td>
<td>84,000</td>
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</tr>
<tr>
<td>200,000</td>
<td>.20</td>
<td>40,000</td>
<td></td>
</tr>
<tr>
<td>Total Expected Value</td>
<td></td>
<td>138,000</td>
<td></td>
</tr>
</tbody>
</table>

Thus, the second alternative with a total expected utility of 138,000 would have been selected over the first alternative which had a total of 133,000.

Obviously, this example is greatly over-simplified. Outcome may not fall upon discreet steps. The utility function is more likely curvilinear. The probabilities of events may not always be known. Nonetheless, this model does provide a frame of reference for decision-makers. That is, by combining this method with a decision criterion, such as maximization of total utility, the decision-maker may weigh alternatives and select the one which best fills the decision criterion.

Classification of Objectives

Now that we have seen how goals fit within a decision making framework, let us now turn to a discussion of the classification of objectives. It should be noted in this discussion that objectives are broad, overall statements and goals are translations of objectives
into specific statements. The primary concern in this section is the classification of objectives. The translation of these objectives into goals is the subject of the next several chapters.

The broadest breakdown of types of objectives might be economic and non-economic or social objectives. Basically, economic objectives follow from the broad decision criterion of maximization of profitability. The decision constraint of keeping the firm in existence is usually assumed. Therefore, a statement such as maximization of return on investment over the long-run is typical.

The social objectives of an enterprise are described by Ansoff. He says that there are three classes of social objectives.

The first contains management objectives which in many respects tend to be consonant with economic objectives. One key management objective, however, may act in opposition to economic goals: management's drive to perpetuate itself.

The second class of non-economic objectives can be described as enlightened self-interest. Examples of activities that further this type of objective include the efforts of the Weyerhaeuser Timber Company, which undertakes to contribute to a national campaign for preservation of national resources.

The third class is philanthropic objectives - those that are not reducible to
Based upon industry interviews, the economic objectives of most firms seem to dominate their social objectives. Primarily the economic objectives form the basis for goals and goal-setting. The goal-setting process is an attempt to place the establishment of these economic goals on a scientific basis. The social objectives are presently established on a judgmental basis. This is because there is rarely an explicit decision criterion against which alternatives can be objectively evaluated.

The non-economic objectives on the other hand, seem to follow when they do not interfere with the maximization of profit up to some point (possibly a satisfactory point). When profits are below this level and a conflict does arise, these social objectives are typically cut back to a minimal requirement. This is a necessary level if the firm is to survive within the social, political, and ethical framework within which it exists.

For example, a satisfice point of paying out dividends which are equal to last year's pay-out, might be established. Suppose that a manager were faced with only two alternatives. The first is spending a sum of money upon plant modernization which is intended to make the workers more content. The second alternative is paying out a dividend equal to last year's pay-out. If these two alternatives are in conflict, most managers would choose the dividend over the modernization alternative. However, these alternatives may not be mutually exclusive. That is, it may be that the manager may do both. The manager may not undertake the extensive plant modernization originally planned under the assumption that profits would be sufficient to cover the dividend. The manager, under these conditions, may cut the modernization to the minimum level he feels possible and pay the remainder as dividends. The significant point is that in most firms, the non-economic requirement is the one which is cut to a minimum.  

Summary and Conclusions

Are corporate decision-makers rational? They are rational if the actions they take are consistent with

6 These conclusions are based primarily upon the information received in the personal interviews conducted for this dissertation.
some explicated model. What is the nature of the model? Early economic writing referred to the "rational man" theory. This hypothetical man had one objective; to maximize utility. This rational man had a knowledge of all alternatives, all factors which influenced outcomes, and thus, all outcomes. However, rational man in a dynamic environment with a less than perfect knowledge of his surroundings brought forth more complex statements of behavior. Man in the decision making process is limited by many things. The more restricting seem to be skills, habits, reflexes, values and conception of purpose—to the extent of his knowledge of the given situation, and where he is expected to be headed.

Within this framework the individual must take action. Models of the decision process, such as utility theory, seem to present a workable explanation of man's actions. However, it might seem that rather than the smooth curvilinear function, as is suggested in this theory, there might be a kink in this curve. That is, below a given point additional units of whatever is being measured (profits, return on investment, sales, etc.) have high utility. Above this point, additional units have relatively low utility. Thus, if we take the utility of different outcomes and weigh them by the probabilities of occurrence, the total expected value may be
found and this can be compared with expected values of other alternatives. The utility function becomes all important in explicating the model. It will be the task of future research to examine this problem more closely.

It might be hypothesized that this point of the kink, or satisfice point, may be termed a goal in the sense that it may be a quantitative statement established for the express purpose of basing other quantitative statements upon it. As goals are established in a hierarchy, they may form the satisfice points for decision-makers in the firm.
CHAPTER III

GOAL-SETTING POINT OF VIEW

Russell Colley and his followers\(^1\) have presented a point of view which is so carefully constructed that to argue against it is difficult. However, the representatives of many large industries express the opinion that while Colley sounds good on paper, his theory is relatively unused. Why is it that a theory which is as strong and logical as Colley's is not used? The answer to this perplexing problem will be explored in the next three chapters of this dissertation.

In order to evaluate this theory it is necessary to examine it in detail, to see how it is constructed and to explore what, if any, assumption of its make-up, pose restrictions upon its use. It should be noted at the outset of this discussion that Colley never, in fact mentions a hierarchy of goals or even specifically states how one goal is based upon a higher order goal. Nonetheless, Colley does refer to a need for consistency with

\(^1\)The followers of Russell Colley are prominent indeed. They number in their company authors such as John A. Howard, Jay W. Forrester, and C. West Churchman who are building on the Colley concept.
other higher goals even though he does not demonstrate how this is to be achieved. Many of the other followers of goal-setting, however, have attempted to show these interrelationships.

Since the introduction of DAGMAR\(^2\) which is the acronym for Colley's book, many advertisers have been setting more precise goals. It will be recalled from a previous chapter that goal has been defined as a quantitative statement established for the expressed purpose of basing other quantitative statements upon it and that goal-setting is the process by which this is done.

**Objectives of the Firm**

Almost every management textbook includes a section on the objectives of the firm. Some authors contend that service is the major objective of the company. The argument presented is usually based upon the reasoning that a business firm is the creation of a society and therefore owes a debt to that society. This debt is paid by offering a service. The service oriented writers argue further that profit is important, but not primary.

Other management spokesmen contend that profit is the primary objective of business. They reason that if the firm is to make a profit it must offer a service, but

\(^2\)Russell Colley, *Defining Advertising Goals for Measured Advertising Results* (New York: Association of National Advertisers, Inc., 1961). The term DAGMAR shall be used for all further references to this work.
offering a service will not necessarily result in a profit. Therefore, if a firm adopts the profit orientation, service will naturally follow from it. By maximizing it's profits, the firm will maximize its service.

This disagreement may be partially resolved for even in the service arguments, a profit orientation is often recognized to reflect a shorter-run view. Ultimately the firm may be service oriented, but in the short run, a profit orientation may be adopted as a decision criterion. Thus, for decision making in the short run, a profit orientation seems appropriate under both orientations. The point may be well taken, however, that ultimately the firm must be service oriented and that the profit decision criterion is only a short-run substitute.

Since this paper is presented from a decision making point of view, profit will be regarded as the primary objective of the firm under normal conditions.³ This does not mean, however, that the social objectives referred to in the previous chapter are absent. They are merely of lower relative importance. Decision making is

³This contention refers to the normal business firm. Companies which are established on a non-profit basis may have other orientations. Also, some large and mature organizations may feel that profits are no longer of primary concern.
often easier if a profit orientation is adopted. That is, it may be relatively easier to choose between two alternatives of equal investment if one returns 2% on investment and the other returns 20%. The decision of whether to support the local school for the blind or to help the school for retarded children, assuming both are equally worthy, may not be as easy a decision to make. Thus, if alternatives can be examined on economic grounds, that is, cost versus return, decision making may be relatively easier.

Why is a profit oriented decision easier? The answer may be that the criteria for judgment is clearer. In the purely profit oriented decision, the alternative which yields the highest return on investment in terms of present value is the one which is selected. In the decisions involving more-complex consideration, personal prejudices and questions of ethics may dominate. The goal-setting approach, which is viewed in the next several chapters is an attempt to establish profit oriented criteria which are useable at lower levels in the corporate hierarchy of decision making.

Before discussing the non-profit objectives of the firm, it is necessary to explore briefly the relationship between goals and objectives. This relationship is simple. Goals are based upon objectives. Objectives,
being broad, non-quantitative statements of intent, are often unuseable in a decision making context. For example, objectives such as those of the A.C. Gilbert Company, as quoted by Koontz and O'Donnell, have little or no meaning as they now stand:

2. Being a good citizen in communities of operation; assuming a share of community responsibilities.
3. Research, development of know-how and an ever-advancing technology.
4. Making the company a better place to work; getting enjoyment out of work; good wages; fair play; recognizing the dignity of the individual; maintaining a progressive personnel program.4

Unfortunately, it appears that many of today's largest industries support statements that are not much more workable than these. 

Most of the corporate objectives, listed below, imply that precise statements will be made to answer the questions, "Where?", "How Much?", and "In what time period?" Nonetheless, as they appear on lists of corporate objectives, these statements seem to be of little more value than those of the A.C. Gilbert Co. The goal-setting process is one attempt to translate vague statements into workable criteria. It is in the

translation of objectives into workable statements that the hierarchy of objectives becomes important. Since realistic decision criteria depend upon the relationships in the hierarchy of objectives, as well as environmental constraints, the nature of this hierarchy of objectives is examined in the remainder of this chapter.

If maximum profit or profitability (return on investment) is the major corporate objective, what are some of the other corporate objectives? These lower-order objectives usually include statements about the following:

1. Survival
2. Growth
3. Absolute size
4. Service
5. Owner satisfaction
6. Employee satisfaction
7. Public image
8. Philanthropic intent

Survival. It seems clear that unless a company is in existence, there is little point in attempting to accomplish any other objective. For most companies this objective is so obvious that it is often just assumed and not stated. In other organizations, especially young firms, survival is the most important objective.

Growth. Once the existence of a company is assured, then the management typically makes some type of statement about growth. These statements may be of a
general nature, such as, "We shall grow," or "To maintain a high growth rate."

**Absolute size.** Many companies find it helpful to make statements of intended absolute size. This may be a relative type of statement as "To be a leader in the industry," or "To have market dominance."

**Service.** Most statements of corporate objectives state, or imply, some reference to a service objective. As noted earlier, there is some discussion as to whether service is more important than profit in the ranking of objectives. Statements such as "To produce a quality product," or "To try to take the customers point-of-view" appear on many statements of objectives.

**Owner satisfaction.** Keeping the stockholders happy is certainly one of the prime considerations of most companies. Thus, many companies include statements in their list of objectives such as, "To make our company an attractive investment," or "To maintain a high dividend payout policy."

**Employee satisfaction.** "To deal fairly with labor unions" or "To make the company a good place to work" appear as stated objectives in many companies.

**Public image.** Today more and more companies are aware that corporate image is important if they are to survive and make profits. Therefore, as might be
expected these firms include statements such as "To present a good public image" on their lists of objectives.

Philotampic intent. Several of the larger companies seem to feel the desire to make their community or country a better place in which to live. Therefore, they make investments which are felt to help society, but cannot be justified on the basis of returning (even in the long run) more than the outlay of funds. Thus, some large companies will make a sizeable dollar investment in programs to promote what are felt to be worthy projects even though the increase in sales, which result from these programs, may be minimal.

Difficulties in Using These Objectives

The major problem in using statements such as those listed above is that it is often impossible to understand exactly what they mean. That is--"to maintain a high dividend payout," or "to make the company a good place to work", or "to have market dominance"--all may sound very ambitious, but what do they really mean? What is a high dividend pay-out? Is it a high pay-out equal to the one of the last year? Is it equal to the highest pay-out in the industry? Is it a pay-out of all retained earnings? What does it mean? The same logic can be used with all such statements. The problem is that in present form
statements of this type are not workable. To make them workable they must be translated into useable statements. These useable statements might be in the form of decision criteria or decision constraints. This translation is normally done on an intuitive basis. That is, a manager looks at these statements and then in his mind makes the translation into a decision aid. Might it not make more sense to commit these decision aids to writing so all who see them will know exactly what they mean?

Most of the translation will more than likely, be made into decision criteria, decision constraints, or satisfice points (as discussed in Chapter II). If the decision criterion were to maximize profits or profitability, the other statements—survival, growth, size, service, etc.—might be stated as a decision constraint (a statement intended to provide a cutoff).

These translations give rules for action. They say, in effect, that once the manager has satisfied all decision constraints he should maximize profitability. However, profitability may, itself, be a decision constraint. That is, a certain level of profits may be established as a decision constraint. This type of statement might take the form, "To realize, at least X percentage return on investment." Nonetheless, one or more of the decision aids must have an open end so that
when all other criteria have been fulfilled, the manager will be left with an aid in judgment.

Constraints on Corporate Objectives

In the formation of objectives and in their translation into workable statements, the manager should bear in mind that additional constraints are placed upon his decisions. These are the constraints of business environment. While some may be modified, at any given moment in time they are relatively fixed.

These constraints do not warrant a lengthy discussion as they will vary from firm to firm. Some of the more common of these environmental constraints might be listed:

1. Taxes  
2. Anti-trust legislation  
3. Labor unions  
4. Business ethics  
5. Competition  
6. By-laws of the Corporation  
7. Resources (quality, quantity, price)  
8. Capital requirements and availability  
9. Society sanction  
10. Potential of the industry  
11. Risk willingness of the firm

The establishment and review of corporate objectives and their translation into workable statements cannot be done in a vacuum. The way in which these environmental constraints, decision constraints, and decision criterion fit together can be seen in Figure I. This may
be somewhat simplified in that only one decision criterion is shown, while in fact, there may be several. Also, there may be other environmental and decision constraints in particular instances. Nonetheless, this does represent a summary of more important factors in the establishment of corporate decision constraints and criterion.

In the following figure the outer circle shows the environment constraints. Within these constraints, the decision constraints are formed as illustrated on the intermediate circle. Finally, the decision criterion (assume that only one is relevant) is pictured in the inner circle.
FIGURE I
MODEL OF RELATIONSHIP AMONG ENVIRONMENTAL CONSTRAINTS, DECISION CONSTRAINTS, AND DECISION CRITERION

MAXIMIZE PROFITABILITY

ABSOLUTE SIZE

SURVIVAL

PROFITS

BUSINESS ETHICS

LABOR UNIONS

ANTI-TRUST LEGISLATION

TAXES

RISK WILLINGNESS

OWNER SATISFACTION

PHILANTHROPIC INTENT

EMPLOYEE SATISFACTION

SERVICE

GROWTH

BY-LAWS OF THE CORPORATION

RESOURCES QUALITY QUANTITY PRICE

REQUIREMENTS AND AVAILABILITY

CAPITAL

SOCIETY SANCTIONS

TRANSPORT POTENTIAL

INDUSTRY
Objectives of the Marketing Department.

The objectives of the marketing department are related to those over-all objectives of the company (as enumerated in the previous section). As is true of company objectives, those of the marketing department are not formed in a vacuum. Smart identified several of the more important constraints in a recent article. He said:

The most common mistake is to establish objectives so vague that they are meaningless. Such goals as to increase volume, to provide a sales tool to implement over-all marketing objectives, to be competitive in the marketplace, all ignore the basic reason for using a promotional effort and make it impossible to evaluate the results.

The promotion objective is the key to the entire complicated activity that ultimately involves all areas of the marketing team plus manufacturing, legal, and so forth. It should be a precise definition of a promotional opportunity that grows logically out of a keen awareness of all the factors that influence a product. Here are some examples.

Share of the Market . . . A low share of the market for your brand might call for an objective of securing new uses, which a product with a high share of market might more easily secure plus volume by increasing usage among current users. . . .

Over-all marketing objectives . . . The promotion objectives should be a logical outgrowth of the product's broad marketing objective.
Competition . . . In a highly competitive field, your competition might well dictate your objectives. In such fields as coffee, detergents, cereals and dog food, your objectives might well be to match competitive rates and/or to develop new techniques which could not be quickly copied.

Consumer usage profit . . . The principle user of a brand is an important factor in setting objectives and creating programs that appeal to key users. The consumer and usage profit would, for example, tell you quickly that you are smarter to try to hold current users rather than seek new users on a product like Instant Postum, where it is difficult to have a reason to induce trial.

How much money do you have to spend? . . . Too often we find champagne objectives on a beer pocketbook. If you have the dollars to afford a gusty promotion, you can set yourself a gusty objective, but if you can afford only a self-liquidating premium, select a realistic goal.5

In addition to those constraints listed above these should also be considered:

1. Production capacity
2. Expansion capacity and company's philosophy toward expansion
3. Managerial capabilities
4. Industry potential
5. Dealer and/or salesman aggressiveness
6. Channels of distribution available

7. Budgets  
8. Consumer tastes, attitudes, and needs  
9. Price  
10. Product differentiation  
11. Weather  
12. Legal (Robinson-Patman Act, etc.)

While this list may not be all inclusive, it does seem to contain the major restrictions upon the marketing department. It is within this framework of constraints that the marketing manager must establish his objectives. These usually take the form of statements referring to:

1. Share of market  
2. Proficiency in the marketing task  
3. Support of the levels of the channel of distribution  
4. Sales  
   A. Total  
   B. Product mix  
   C. Market segmentation

Relationship Between the Objectives of the Firm and the Objectives of the Marketing Department

As the objectives of the marketing department are translated into goals (quantitative statements established for the express purpose of basing other quantitative statements upon them), the hierarchy of the firm's objectives become the guiding framework. Weidenbaum refers to this translation of goals in the following statement:

The transition is almost instinctive from the belief profit maximization that
should be the desired goal to the certainty that it must obviously be the accepted goal of entrepreneurs. Profit maximization may be the dominant goal of a business enterprise, but that is not necessarily the situation. A large business organization may have a diversification of goals.

In practice, there are many forms which the goals and objectives of an enterprise may take. Management may wish to maintain - or increase - the historical growth in sales or earnings. It may wish to attain a given percentage rate of return on investment. A certain diversification of the product line or market served may be desired. None or all of these objectives may be aimed at. In fact, they may be interrelated and many of them may be derivatives of an explicit or implicit profit maximization goal. . . . (From this) sales objectives can be set in the form of maintaining or improving market share.

The goal-setters, however, seem to feel that a statement such as maximization of profits is too weak. They indicate that a specific figure for profits should be set. This specific goal makes the task of setting lower-order goals easier. Indeed, without this specific figure the goal-setting process would not exist.

For the sake of illustration, an hypothetical company will be used to show how the goal-setting process translates a corporate goal of profitability into a

marketing sales goal. Assume that the directors of a company adopt the policy that the return on invested capital should be 10% a year. In this hypothetical example, let us assume that the invested capital is 100 million dollars. The profits for the year, then, should be 10 million dollars. This 10 million dollars of profit then becomes one of the company's goals. The next step in the goal-setting process is to translate the profit goal into a sales goal. The marketing manager must decide what level of sales will produce the profit goal of the company. He may, in this example, feel that if the company could sell 40 million dollars of goods, the profit goal could be achieved. The marketing manager may then break this total sales figure into goal statements for each of the products produced. He may also translate the sales goals into goals for each of the sales territories. He may finally establish a share of market goal based upon estimates of the industry potential as related to his sales goal.

In this process of translating the total sales goal into lower-order goals, the marketing manager may check the consistency of these goals. That is, if it appears that the sales goals for the product mix will not, in fact, total 40 million dollars, the marketing manager may wish to modify the total sales goal. This would most
probably involve conferences with superiors, but the net result should be a realistic figure which the marketing manager feels he can achieve.

Inherent in this process of translation of a profit goal into a sales goal, is some estimate of costs. The marketing manager must know, or estimate, how much the production costs and overhead cost will be. This figure may be estimated by standard costing for the relevant range of production. For purposes of simplification, assume that all costs, other than the direct marketing costs for each product produced, is 50% of the selling price. For the 40 million dollar sales goal, then, costs other than direct marketing costs would be 20 million dollars. The remaining 20 million dollars then must be divided between the marketing department and the return on investment goal of 10 million dollars. This budget figure gives the marketing manager one more check upon the consistency of his sales goal. He can estimate whether the stated sales goal can be achieved with a budget of 10 million dollars. If the marketing manager feels that this is impossible, the sales goal may be modified. If, on the other hand, this sales goal

7If this were not the situation, the final profit from the product mix would reflect this. The marketing manager should bear this in mind. However, it should pose no limitation to the analysis.
is a likely figure, then the consistency has been shown.

Once the consistency has been checked for all aspects of the marketing department, the goal-setting activities stop and the implementation--through establishment of strategies and policies--starts. Strategy decision--such as what is the optimum marketing mix--must be made. Decisions are needed as to the allocation of money for such marketing forces as

1. Advertising
2. Personal selling
3. Sales promotion
4. Publicity
5. Display
6. Packaging
7. Exhibits
8. Product availability
9. Product design

These types of decisions spring from the marketing goals. However, in many cases there is an interaction or feedback. That is, if the optimum allocation of the 10 million dollar marketing budget cannot produce the sales goal, then again some modification may be in order. Nonetheless, once consistency is established, all actions taken by the marketing department are consistent with the goals of the corporation.

Objectives of the Advertising Department

Again, as was true in the previous two categories of objectives, decisions as to proper advertising
objectives are limited by constraints external to the decision-maker. Just as corporate and marketing objectives cannot be set in a vacuum, so too, advertising objectives depend upon environmental considerations. Some of the more important limitations seem to be:

1. Budgets
2. Legal (Pure Food and Drug Acts, etc.)
3. Media available
4. Nature of competitor advertising
5. Creative talent and resources available
6. Philosophy of the firm
7. Nature of the product
8. Present levels of attitude
9. Seasonality and newness of the product
10. Current incorrect information about the firm and/or product.

With these constraints in mind, the advertising manager must make statements or set objectives about his sales message, desired levels of awareness, proper attitude, and corporate image. These may be further classified into categories such as:

1. Sales message
   A. Reminder
      1) New uses
      2) More frequent uses
   B. Impulse
   C. News
      1) Tie ins
      2) Special terms
      3) Deals
      4) New policy
   D. Salesmen's aids

2. Attitude
   A. Brand image
   B. Product benefits
   C. False impressions
D. "Family image"
E. Confidence
   1) Market
   2) Salesmen

3. Awareness
   A. Quality
   B. Dependability
   C. Product
      1) Package
      2) Trademark
   D. Brand
      1) Package
      2) Trademark

4. Corporate image
   A. Service
   B. Dependability
   C. Progressiveness
   D. Leadership

While an advertising manager might not have to make all of the above decisions, this list is intended to show some of the complexities involved.

Nature of Statement of Communication Goals

Whether the primary function of advertising is selling or communicating will be considered in the next chapter. In either case, most advertising goals are stated in communication terms. Lucas and Britt outline the more common of the communication terms.

(1) Initial attention- . . . How many people see or hear an advertising message.
(2) Perception - awareness or identification of the stimulus - not its full meaning, but its sensory qualities.
(3) Interest or continued favorable attention - involves feelings as well as ideas and may vary greatly in intensity.

(4) Comprehension - whether or not they (messages) are understood.

(5) Feelings and emotional responses - the more the feelings are intensified, the more emotional the experience becomes.

(6) Belief, intention, and decision - all related to favorable response to advertising. They . . . cannot be directly observed by others.

(7) Imagery - means for classifying and remembering all experience. (It) includes mental concepts of objects, events, qualities, relationships, and bodily experiences.

(8) Association - recall of past experiences necessitates associations.
   (A) Pure recall - without cues to remind.
   (B) Aided recall - with a number of cues.
   (C) Recognition - (ability to) pick out and identify the product or idea.

Thus, with these communication terms in mind the advertising manager must set the goals for his department in such a way as to be consistent with the goals of the marketing department and the entire company. The specific hierarchy of goals will be considered in the next chapter.

Summary and Conclusions

By way of summarizing this chapter, the following three figures are presented. The first (Figure II) shows how the objectives of the firm, the marketing department, and the advertising department interrelate. The nature of these interworkings is examined in the next chapter.

The second (Figure III) summarizes the nature of communication goals as expounded by Lucas and Britt. The third (Figure IV) presents a list of some of the more important environmental constraints put upon the establishment of objectives.
Figure II

Interrelations Among Objectives of the Firm, The Marketing Department And The Advertising Department

PROFITABILITY

- Absolute Size
- Survival
- Growth
- Service
- Employee Satisfaction
- Public Image
- Owner Satisfaction

MARKETING PROFICIENCY

- Mkt. Share
- Sales; Total Mix
- Marketing Proficiency

ATTITUDE

- Brand Image
- False Impression
- "Family" Image

AWARENESS

- Product Benefits
- Confidence

CORP. IMAGE

- Dependability
- Leadership

SERVICE

- Product
- Brand

PROGRESSIVENESS

- Service
- Public Service

TRADITION

- Trade Information
- Channel Support
- Philanthropic

PUBLIC IMAGE

- No. of Outlets
- Sales Message
- Attitude
- Awareness
- Corp. Image

PRIVATE USES

- Reminder
- Impulse
- News
- Salesmen Aids

PRESS

- New Uses
- More Frequent Uses
- Tie In
- Special Terms
- Deals
- New Policy

MARKET

- Salesman
- Dependability
- Package
- Trademark
FIGURE III

NATURE OF COMMUNICATION GOALS

COMMUNICATION GOALS
SET IN TERMS OF

Perception
- Initial attention

Comprehension
- Interest, continued favorable attention
- feelings & emotions

Motivation
- Belief
- Decision
- Intention

Imagery
- Association
- Recall
- Recognition
# Figure IV

**List of the More Relevant Factors Which Constrain Decisions on Objectives**

<table>
<thead>
<tr>
<th>Constraints Upon Corporate Objectives</th>
<th>Constraints Upon Marketing Objectives</th>
<th>Constraints Upon Advertising Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Anti-trust Legislation</td>
<td>2. Over-all objectives</td>
<td>2. Legal</td>
</tr>
<tr>
<td>5. Competition</td>
<td>5. Money available</td>
<td>5. Creative talent and resources available</td>
</tr>
<tr>
<td>8. Capital requirements and availability</td>
<td>8. Managerial capabilities</td>
<td>8. Present attitude levels</td>
</tr>
<tr>
<td>10. Potential of the industry</td>
<td>10. Dealer and/or salesman aggressiveness</td>
<td>10. Correct information</td>
</tr>
<tr>
<td>13. Consumer's taste, attitude, need</td>
<td>13. Product differentiation</td>
<td></td>
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<tr>
<td>15. Product differentiation</td>
<td>15. Local</td>
<td></td>
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<tr>
<td>16. Market</td>
<td></td>
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<tr>
<td>17. Local</td>
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</tbody>
</table>
Thus far in the goal-setting procedure the over-all hierarchy of objectives has been examined. Also translations of the objectives of the company and the objectives of the marketing department into goals has been seen. Further, some of the more important advertising objectives have been presented. The nature of the interrelationships among these advertising objectives and the objectives of the marketing department are summarized in Figure II. It is in the goal-setting process, however, that these interconnections become especially important.

There are basically two sets of relationships between the objectives of the advertising department and those of the firm. The first charts a course through the objectives of the marketing department and then on to the objectives of the firm. The second set of relationships is directly tied to the objectives of the company.
The Function of Advertising

In order to see clearly what relationships exist among the objectives of the advertising department and the objectives of the firm, it is necessary to determine what is the function of advertising. Once the function of advertising is defined, the translation of these advertising objectives into advertising goals can be achieved. Eldridge presents a statement of the function of advertising in the following quotation.

First, there is advertising whose primary - if not sole - purpose is to induce immediate action. The desired action may be the purchase of the advertised product, the acceptance of an idea, etc. . . .

A second category of advertising is that whose primary, but not necessarily sole purpose, is to create awareness on the part of the reader or listener - awareness, possibly in contrast to the action that is the primary objective of the first category. . . .

Then there is a third category - a very important one - for it embraces much, if not all of what we consider "franchise-building" advertising. The third category consists of advertising whose purpose is to create or to change, in the minds of those to whom it is directed. An image of a product or idea: to create or to change or to intensify the attitudes of those people toward the product or idea; and thereby to move those people - possibly immediately, but more frequently gradually, toward an acceptance and a use of the advertised product or idea.
It is obvious that there is a certain amount of overlapping among these three broad categories of advertising. All of them have as their ultimate objectives the stimulation to action of those whom the advertising seeks to influence.¹

There are many—Colley included—who seem to feel that the advertising function can only be to communicate; therefore, it should not be judged by the action which it stimulated or fails to stimulate. Quoting Mr. Robert Britton, senior vice-president in charge of media, research, and marketing at MacManus, John and Adams, an Advertising Age article stated:

Mr. Britton said the only way industrial advertising can be held accountable for achieving its objective is by measuring advertising's effectiveness as a communication vehicle. . . . The objectives are strictly communication factors such as how much awareness can be established, or how attitudes toward styling, performance, engineering, etc., can be improved. Ads also are measured to the extent they bring the prospect to the dealer's door, he continued.

"There at the dealer's door," he said, "our responsibility ends. We cannot

be held accountable for what happens after that point."^2

This debate of whether the function of advertising is to sell or communicate cannot be easily resolved. A detailed discussion is beyond the scope of this paper. However, it does seem that the communication arguments are often based upon the fact that with today's knowledge, we cannot know precisely how advertising affects sales, and that communication is substituted for a sales measure. The assumption is, that if communications are increased so are sales. This argument resolves down to the statement that technology is not now available to measure the exact effect of advertising on sales, so a substitution of communication effects will be made since this is a measurable event. A second statement is often added that this communication must be sales directed.

It might seem, however, that just because the advertising-sales relationship is not now known, the action objectives should not be removed. To say that advertising has achieved its purpose if it communicates is to say that a salesman has achieved his purpose if he communicates. The arguments are much the same. It is

doubtful, indeed, that a company would retain a salesman who is a good communicator but rarely gets the customer's signature on an order pad. On the other hand, the salesman who gains many orders for the firm, but does not increase awareness or obtain a higher attitude rating in the customer might be given high honors in the firm.

The same reasoning can be used to evaluate ads. The company may, for example, face a decision as to which of two alternative ads to use. The first ad has been shown to be the superior communicator while the second ad is a better seller. Few companies would choose the good communicator over the good seller. Even Colley recognizes this fact. "Advertising's job is to increase propensity to buy - to move the prospect, inch-by-inch, closer to a purchase." ³ Colley further states:

All commercial communications that aim at the ultimate objective of a sale must carry a prospect through four levels of understanding:

1. Awareness - The prospect must first be aware of the existence of a brand or company.
2. Comprehension - He must have a comprehension of what the product is and what it will do for him.
3. Conviction - He must arrive at a mental disposition or conviction to buy the product.

³Colley, DAGMAR, p. 52.
4. Action - Finally, he must stir himself to action.  

It seems to be agreed that whether or not advertising can be measured directly in action results, the aim of most advertising should be directed toward this end. Thus, the consistency with higher-order objectives seems indicated. It will be recalled that it is through the goal-setting procedure that an attempt is made to achieve this consistency.

**Advertising, Marketing, and the Firm**

The objectives set for advertising must be coordinated with the overall objectives for marketing and the goals for each of the elements of the marketing program. . . . Always the advertising objectives should coordinate closely with goals for each of the other components of marketing and all elements of the marketing program should be coordinated toward a master marketing objective.5

Frey states further:

Advertising objectives should relate closely to and be a component of the total marketing program. The marketing program itself should delineate rather clearly the role advertising is expected to take in the promotion picture and the role of promotion in the overall marketing mix. . . . All facets of the

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4Ibid.

marketing program - including advertising - should be coordinated toward the same marketing goals. . . .

A goal such as "to convince potential customers that we offer the best designed product at the lowest price consistent with good quality" may suggest a long-term corporate goal. "To increase sales by 20% over last year" suggests a marketing goal that can be achieved only through the coordination of all elements of the marketing program. "To increase awareness of our product brand by 39% among married women who are not now users of the product" suggests a communication goal appropriate to advertising that may be required to achieve the marketing goal related to sales.

The relationship between the advertising department and the marketing department is one which hinges upon the sales goal. This might suggest that additional advertising, so long as it increases sales, is good. Over the expenditure range in which advertising has an effect on sales, additional advertising dollars will increase sales, until the point of negative returns sets in. It should be noted that incremental profits start declining after the point of diminishing returns is

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6Ibid., pp. 14,19. Many of the ideas contained in this quotation are also made in Albert W. Frey's first edition of Advertising (New York: The Ronald Press Company, 1947). In this regard Frey anticipated Colley on many concepts. However, Colley's DAGMAR study crystallized much of the existing goal-setting thinking.
reached even though absolute sales continue to increase. At the point of negative returns, however, additional expenditures on advertising will reduce absolutely both sales and profits. This points up the important distinction between maximizing sales and maximizing profits. If the decision criterion were to maximize sales, then the advertising expenditure would be made up to the point that negative returns set in, for by definition, additional expenditures in this range, would increase sales. If, on the other hand, the decision criterion were to maximize profits, then the point of diminishing returns might be used as a cutoff. If the most significant decision criterion is to maximize sales, the question becomes, what is the optimum expenditure for advertising? This is the question which the goal-setters attempt to answer.

In the previous chapter a hypothetical example was presented to show the relationship between the goals of the firm and the goals of the marketing department. In this chapter the goals of the advertising department have also been tied to the goals of the marketing department. Let us now view the over-all relationship among these three levels of goals by a continuation of the hypothetical example.
For the sake of simplicity in explanation let us make some assumption. First, it is assumed that advertising is the only significant element of the marketing mix. Second, it is assumed that the most significant measure of communication is level of awareness.

In the example a return on investment goal has been established of ten million dollars. This corporate goal is then translated into a sales goal of 40 million dollars by the marketing manager. To see if this goal is consistent, the following process may be undertaken. The marketing manager may estimate that the advertising task will cost about five million dollars. The "margin" on the sales in this case must be 15 million dollars. ("Margin" is defined as sales minus all costs except the direct advertising costs). The marketing manager reasons that 40 million dollars in sales will provide the 15 million dollars of "margin" necessary to cover the advertising costs (five million dollars) and the return on investment (ten million dollars).

The marketing manager then may go to the advertising manager and ask what level of awareness is necessary to achieve the sales goal of 40 million dollars. Based upon intuition or knowledge, the advertising manager may feel that a 60% level of awareness is needed to generate this sales goal.
This 60% level of awareness in the relevant market then becomes an advertising goal. The advertising manager must then decide how many impressions it will take to achieve the 60% awareness goal. Again, based upon either intuition or specific knowledge of the inter-workings of these two factors, the advertising manager may decide that it will take 100 million impression to achieve a 60% awareness in the relevant market.

The last step in this step-down goal-setting process is to translate this 100 million impression goal into dollar terms. In order to generate the impression goal, the advertising manager may feel that it is necessary to spend five million dollars.

The advertising manager's estimate of the five million dollars indicates that these goals are fairly consistent since this figure is what the marketing manager estimated the marketing task would cost. In summary then:

1. To gain the return on investment goal of ten million dollars, a sales goal of 40 million dollars is set.
2. To achieve this sales goal, the level of awareness is set at 60%.
3. It is felt that it will take 100 million impressions to obtain this level of awareness.
4. The cost of 100 million impressions will be five million dollars. This is the advertising budget.

At this point, the goal-setting process usually stops. The goals of the advertising department have been set so that the corporate goals of return on investment can be realized and the marketing manager is confident with these goals since the advertising manager's estimate of cost is in line with his original estimate.

Thus, the place of advertising objectives is as Welsh states:

For advertising objectives, there is a double relationship: advertising objectives should be correlated with the company's marketing objectives, which, in turn, should relate to and support the company's over-all objectives.

Or as Frey puts it:

Marketing goals should harmonize with company goals, and the goals of each component should harmonize with each other and with over-all marketing goals. . . . The advertising goal of stimulating inquiries for an industrial product, in support of the marketing goal of finding new users, which in turn would support the

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company goal of maintaining a good dividend record.

Other Relationships

Although the most common set of relationships seems to be the communication - sales - profitability hierarchy, there are others. In the other relationships the marketing department is often skipped and the connection between the corporate goal and the advertising goal is direct. In general there seems to be two types of advertising which usually fall under this category and one other which may or may not depending upon the philosophy of the firm. First, there is corporate image advertising. This is advertising which is designed to build a brand franchise over the long-run.

A second type of advertising which is tied directly to corporate objectives is public service advertising. This category may be subdivided into enlightened self-interest: as when life insurance companies aim their advertising at helping people live longer; and philanthropic, which cannot be justified in profits but rather is justified in a non-business basis such as business ethics.

\[8\] Frey, Advertising, 1961, p. 63.
Corporate image advertising. Often advertising is classified as product versus non-product advertising. The product advertising is typically sales related and would fall in the communication - sales - profitability hierarchy. Non-product advertising is often either corporate image or public service oriented. The corporate image advertising may be related to any one or combination of several corporate objectives. For example, the image building may be designed to make the employees feel that the company is "a good place to work", or the image building may be designed to attract potential stockholders. The corporate image advertising seems to be more directly associated with the objectives relating to service, employee satisfaction, public image, and owner satisfaction than to profit, at least in the short-run. It may be true that in the long-run, the investment in corporate image advertising may be reflected in higher profits. It is often difficult, however, to justify these expenditures on an increased profit basis. Therefore, it might be better to relate expenditures on corporate image advertising to one or more of these collateral objectives.

9 The term product is used in a very broad sense. It may refer to a physical item or a service rendered or even an idea. It is typically sold in some way or other.
Public service advertising. Public service advertising rarely can be justified on a profit or even potential profit basis. Any advertising of this type is usually rationalized by the idea that it will make the world a better place. Some advertising of this type is considered enlightened self-interest. The promotion of better health by the life insurance companies is the best example of this and even here, the justification in extra profits seems thin.

Trade information advertising. One final relationship involves trade advertising. This category may or may not fit under the profitability framework. It may in a short-run analysis fall more logically under one of the collateral objectives such as service. On the other hand, it may be directly tied to profits. The location in a hierarchy will therefore vary from firm to firm, depending upon the purpose intended.

Goal setting and the other Frameworks

While these frameworks seem to fit together logically in terms of objectives (general statements of intent), they are often not suitable for the establishment of a hierarchy of goals. The reason for this seems to be that in translating an objective into a goal it is necessary to base this transformation upon some higher number. Naturally,
in this process an original number must be established. In the goal-setting example of this chapter the initial figure was set at a 10% return on invested capital. From this number the lower-order goals were derived.

In the case of the non-economic relationships it is virtually impossible to establish a quantitative statement upon which lower statements can be based. The only type of quantitative statements for these objectives might be some type of allocation figure. That is, "this year we have decided to spend $100,000 in philanthropic pursuits; how much of this should we spend for public service advertising?" This type of statement is not goal-setting. It is budget-setting. There is typically no underlying thought of maximizing as there is in goal-setting. The allocation is often made on the basis of tradition (this is the amount spent in the past). While this is not necessarily bad, it is not goal-setting as has been defined in this dissertation.

**Summary and Conclusions**

Today there is much debate as to whether the function of advertising is to sell or to communicate. The advocates of the communication school argue that all the elements of the marketing mix must work together to make a sale. They reason that good advertising cannot sell a
bad product and there may be much truth to this statement. On the other hand, the advocates of the sales school feel that advertising is an economic activity and must be evaluated in economic terms. This implies that some type of a sales and profit measure is necessary.

Goal-setting is really based upon this economic justification premise, even though many of the followers of this process argue against it. If the sales goal of the marketing department is to be translated into advertising goals, this connection is implied. The actual statements of the advertising goals may, however, reflect these communication terms.

The goal-setting process translates the corporate goal of profitability into a sales goal. This sales figure is then translated into communication terms. These levels of communication goals can then be translated into cost estimated and the consistency of the process can be checked.

The goal-setting process is typically used in the establishment of a hierarchy of communication - sales - profitability goals. There are, however, other relationships. These include, for example, interconnections between corporate image advertising and non-economic corporate objectives such as service, public image, employee satisfaction and owner satisfaction. Also public service
advertising may be directly related to philanthropic objectives. While these non-economic hierarchies do not lend themselves to the goal-setting procedure, they are still important considerations in an over-all hierarchy of objectives. These relationships do not lend themselves to goal-setting because of the difficulty in establishing the first figure (upon which subsequent figures will be based). The translations which are made from objectives or non-quantitative statements of intent to quantitative statements take the form of budget statement. There is generally no underlying assumption of maximization as there is in goal-setting. These non-economic hierarchies are usually based upon non-quantifiable factors such as business ethics.
CHAPTER V

ASSUMPTIONS AND FALLACIES OF THE GOAL-SETTERS

The goal-setting process which has been outlined in the last several chapters can provide a powerful tool to aid management in making decisions. The technique sounds so beautifully simple that it seems strange that no one thought of it earlier. Even since its inception, relatively few companies have attempted to engage in goal-setting as a routine procedure. Why is it that so few companies have attempted the goal-setting process? The answer to this question is buried in two assumptions; i.e., the assumption of a model of the system, and the generation of the first number. It is the purpose of this chapter to examine these assumptions.

Model of the System

If meaningful goals can be set, there must be a model of the system. This model may be explicit or it may be implicit (as a feeling about the relationships). A goal, it will be recalled, is a quantitative statement established for the express purpose of basing other quantitative statements upon it.
It has been stated that Colley never developed a hierarchy of goals, however, the following statement illustrates that he was thinking along these lines.

The advertising man says, "for a million dollars, I expect to get this message through to an additional one million logical prospects at a cost of $1 each." This goal is a calculated risk. It provides a basis for business judgment. Perhaps, in the final analysis, the message can be delivered for 25¢ or $2.50. In the early stages, wide latitude should be permitted for errors in judgment. In setting the goal, it is often better to err on the conservative side—for example, that the cost will be $2.50 per delivered message. Perhaps the cheapest alternate method of delivering the message (such as personal sales calls) would cost several times as much.¹

The intuitive feeling that one million dollars is sufficient to buy one million impressions implies that there is some kind of a model of the relationship between cost and impressions.

If Colley did not consider the entire hierarchy, then many of the other followers of the goal-setting procedure did. The following quotation by Frey is typical of many of these statements:

To illustrate, a manufacturer of home air conditioners may wish to increase

¹Colley, DAGMAR, p. 32.
sales during the coming 6 months by 1500 units. Additional analysis may show which market segment shows greatest promise for generating these purchases and a marketing goal is drawn up which states: "to increase sales by 1500 units among newly married couples living in the Southwest." In this hypothetical example, the manufacturer may discover that of every 200 persons who know his product by name in unaided recall tests, five of those persons will enter a retail store asking about his brand of product, and one will buy. If he finds that a correlation exists - that one customer is generated for each 200 who are aware of the brand name - the communication role of advertising is suggested: 200 prospects must be made aware of the brand for each sale that is expected. . . .

Thus, step by step the advertiser can develop a specific goal for his advertising program. The advertising objective should define with precision the task for advertising within the total marketing program and specify what message must be conveyed in a given period to a market in order to aid in achieving the overall marketing sales objective. . . .

The (advertising) objectives may relate to brand awareness, changes in consumer attitudes, association of major themes with products, knowledge of product attributes, or similar communication goals that management believe must be accomplished in order to achieve the stated marketing objectives.

An emphasis on the communication function of advertising in no way diminishes the need to relate the advertising effort rather directly to overall sales and
profit goals; ultimately most advertising must be designed to bring about sales.²

What are the implications of this statement by Frey? First there is a very clear statement of a model; for every two hundred people aware of the product name, five will enter a store and ask for the product and of these one will buy the product. Thus, level of awareness is related to sales. In order to increase sales by fifteen hundred units then it is necessary to make an additional three hundred thousand people aware of the product.

The next step, which Frey only suggests but does not demonstrate, is to discover the cost of increasing awareness by three hundred thousand in the relevant market. This "task approach" to the determination of an advertising budget, is a by-product of the goal-setting procedure. The marketing manager must determine if the cost of awareness of these additional three hundred thousand people can be justified by profits. If the profit margin on these additional fifteen hundred units is more than the expenditure required, then this, presumably, is a good investment. This assumption, however, is not necessarily true. Theoretically, the firm should

advertise up to the point that one incremental dollar of expenditure will yield just exactly one dollar of net profit. In practice this precise point is virtually impossible to determine. An approximation, however, may be possible. This is especially true once the model of the system has been stated in terms of a workable relationship. What is the nature of this workable relationship?

Let us return to the hypothetical example of the previous chapters. The goals were:

1. To gain the return on investment goal of ten million dollars, a sales goal of 40 million dollars is set. The cost of the advertising was estimated in advance to be five million dollars. Therefore the forty million dollars in sales must generate a profit "margin" (defined as sales minus all costs except the direct advertising costs) of fifteen million dollars (Figure V).

2. To achieve this sales goal, the level of awareness goal is set at 60 percent (Figure VI).

3. It is felt that it will take one hundred million impressions to obtain this level of awareness goal (Figure VII).
4. The cost of 100 million impressions will be five million dollars (Figure VIII). This is the advertising budget.

In graphic form this can be shown:
FIGURE V
"MARGIN" — SALES RELATIONSHIP

"Margin"
(in millions)

Sales
(in millions)
FIGURE VI
SALES-AWARENESS RELATIONSHIP

Level of Awareness (As a percent)

Sales (Sales in millions)
FIGURE VII

AWARENESS – IMPRESSIONS RELATIONSHIP

Impressions (in millions)

Level of Awareness (as a percent)
FIGURE VIII

IMPRESSIONS — EXPENDITURE RELATIONSHIP

Expenditure (in millions)

Impressions (in millions)
Problem of the First Number

Closely tied to the assumption of a model of the system is the problem of where to get the first number upon which all lower-order goals are based. It might appear that often this initial goal is either pulled out of the air or is based upon some tradition (a payout of dividends, for example). This is not always a wise choice, however, since it may sacrifice potential profits.

Since the entire goal-setting process is dependent upon this one number, it would seem that some method should be available whereby a systematic adjustment might be made to make this starting number more profit oriented. A method which might be suggested is to discover the nature of the model of the relationships used in the goal-setting process. This model can, then, be used to generate all the numbers at a near optimum level.

The first step in the development of this model is to find the relationships which exist in the step-down process. The goal-setting procedure usually defines just one point of these relationships. Since few managers know explicitly the nature of the relationships, a starting point might be a type of "black box" approach. That is, the managers might be asked what relationships they feel would be necessary to achieve levels of return.
on investment other than the one chosen in the goal-setting approach. These new points of relationship would define a function which can be used as an approximation of the true function. Later, as the true nature of this function is discovered, this approximation can be modified.

It should be noted that the goal-setters view these relationships in a somewhat backward way. That is, awareness is normally thought of as causing sales, impressions cause awareness, etc. The goal-setters, however, pose the problem backwards. They ask, "What level of awareness is necessary to gain a given level of sales?" This means that, in effect, they reverse the dependency. The level of awareness is determined by the given sales level. This reversal is contained within the entire analysis.\(^3\)

If the step-down relationships shown in Figures \(V-VIII\) can be done meaningfully for the return on investment goal of ten million dollars, then it can be set meaningfully for other returns on investment levels. Let us make some assumptions. The first assumption is that this hypothetical firm has a capacity limitation of fifty-two million dollars of sales per year. Further, it might be assumed that the "margin" per unit over the relevant

\(^3\)See technical appendix at end of chapter.
production range is fixed. This "margin," it will be re-called, is defined as sales minus all costs except direct advertising expenditures. For purposes of illustration the break-even "margin" of this firm will be set at thirty million dollars of sales. These points may then be tested by the same process as goal-setting. In Figures IX-XV, the points derived from the break-even point are labeled "A," the goal-setting points derived in Figures V-VIII are labeled "B," and the points derived at the capacity limitation are labeled "C." It is finally assumed that "margin" at capacity, is thirty-three million dollars. Thus the points A equals O "margin," B equals fifteen million dollars of "margin," and C equals thirty-three million dollars of "margin" may be tested.

The relationship between these test points of "margin" and sales (felt necessary to achieve this level) are shown in Figure IX.

The next step is to discover what level of awareness is considered necessary to achieve each of these sales levels. This relationship is shown in Figure X.

4In this analysis the level of awareness variable has been chosen as the communication measure which is most closely related to sales. Using this variable is in no way critical to the analysis. In fact, any communication measure which is felt to have a relationship to sales may be substituted. Some of the more common measures that might be used are change in attitude or change in propensity to buy. The level of awareness variable is chosen for illustrative purposes only.
The manager feels that a 50% awareness in the relevant market is necessary to achieve thirty million dollars of sales. The manager further reasons that an 80% awareness is necessary to gain the fifty-two million dollars of sales level. He has already determined that the 60% level is needed to achieve the forty million dollars of sales.

The manager must decide how many impressions it will take to achieve the determined levels of awareness. This is shown in Figure XI. Two hundred million impressions are felt necessary to achieve an awareness level of 80% in the relevant market. One hundred million impressions and seventy-five million impressions are the numbers felt necessary to gain the 60% and 50% levels of awareness.

The cost aspect of the problem is brought into Figure XII. The last step in the goal-setting process is to decide how much it will cost to buy the number of impressions at each level. In this hypothetical example, it will take twenty million dollars to buy two hundred million impressions, five million dollars to buy one hundred million impressions, and three million dollars to buy seventy-five million impressions.

The advocates of the goal-setting procedure often make the statement that the profitability of the goal
"Margin" - Sales Relationships

"Margin" is defined as sales minus all costs except direct advertising costs.

Point A - is the break-even "margin" with sales at the 30 million dollar level.

B - shows that sales of 40 million dollars should yield 15 million in margin.

C - capacity of 52 million dollars will yield a "margin" of 33 million dollars.
FIGURE X

SALES - AWARENESS RELATIONSHIPS

Sales
(in millions)

Point A - shows that sales of 30 million dollars will take a level of awareness of 50% of the relevant market.

B - illustrates that a 60% level of awareness is needed to achieve 40 million dollars of sales.

C - indicates that an 80% level of awareness is necessary to gain 52 million dollars of sales.
FIGURE XI

AWARENESS — IMPRESSIONS RELATIONSHIPS

Impressions (in millions)

Level of Awareness (as a percent)

Point A - it will take 75 million impressions to achieve a 50% level of awareness.

B - 100 million impressions are necessary to gain a 60% level of awareness.

C - 200 million impressions are expected to obtain an 80% level of awareness.
Point A - indicates that it will cost about 3 million dollars to buy 75 million impressions.

B - shows the cost of 100 million impressions to be 5 million dollars.

C - illustrates that the cost of 200 million impressions will be 20 million dollars.
should be considered. In most cases they do not demonstrate how this is to be done. The next step in this model approach is to do what has been advocated by these goal-setters.

Return on investment might be defined as "margin" minus advertising expenditure. We may then test each of the given points (A, B, and C) to see what the return on investment is for each. Point A had a "margin" of 0 and an advertising expenditure of 3 million dollars, so the return on investment at point A is a negative 3 million dollars. Point B had a "margin" of fifteen million dollars and an advertising expenditure of five million, so the return on investment is ten million. Finally, Point C had a "margin" of thirty-three million and an expenditure of twenty million for a return on investment of thirteen million dollars.

After testing some intermediate points, it was discovered that optimum was a point at which the "margin" was twenty-five million and the expenditure eight million for a return on investment of seventeen million dollars. This relationship is shown in Figure XIII.

The significant point is that the goal-setters usually test just one number. If the return on investment goal of ten million dollars had been adopted, this might have meant that three million dollars of potential profits
FIGURE XIII

RETURN ON INVESTMENT — EXPENDITURE RELATIONSHIPS

Return on investment is defined as "margin" less direct advertising costs.

Point A - shows that 0 "margin" less 3 million in advertising expenditures yields a negative 3 million dollar return on investment.

B - 15 million in "margin" less 5 million in advertising costs equals 10 million dollars return on investment.

C - 33 million dollars in "margin" less 20 million dollars in advertising costs gives a return on investment of 13 million.
would have been lost. The goal-setting process seems to be based upon the assumption that if the goals seem reasonable and consistent, the relationship is an optimum. This has been shown to be incorrect, for even if all lower-order goals had been achieved, the company would have lost three million dollars in potential profits.

Taking this analysis one step further, the relationships shown in Figures X - XII can be expressed in relation to one another. This is shown in Figure XIV. Three of the four quadrants shown summarize Figures X - XII. These three graphs are then used to trace a curve in the upper right quadrant showing the relationship between expenditures and sales. Again the points A, B, and C refer to the same positions as in the previous Figures.

In addition to this tracing, the upper right quadrant also contains equal return on investment lines. Points on these lines will produce the same amount of return on investment. These equal return on investment lines, once determined, may be thought of as being independent of the traced curve.

The next step is to find the equal return on investment curve which is tangent to the traced curve. In Figure XIV this is done and the equal return on investment line which is tangent to the traced curve shows that

\[\text{See technical appendix.}\]
Figure XIV

Four-Quadrant Analysis of Profit-Expenditure Relationships

Sales (in millions)

Impressions (in millions)

Awareness (as a percent)

Expenditure (in millions)
the maximum return on investment, given these conditions, is 17 million dollars. The point of tangency indicates that in order to reach this maximum return on investment, the optimum advertising expenditure is eight million dollars and the most profitable sales level is about forty-six million dollars. Thus by finding the line which is tangent to the traced curve and the point of tangency, three critical numbers are generated; the optimum return on investment, the optimum sales level, and the optimum advertising expenditure.

This method may be used to generate these critical figures but it should be noted that the numbers obtained are no better than the models used to generate them. If only rough approximations of the relationships were used, the answers would reflect this inaccuracy. However, the real power of this technique lies in its flexibility.

Suppose, for example, that the advertising manager and the marketing manager could agree on all of the rough relationships with the exception of one. The marketing manager may feel that the advertising manager is overstating the cost of 200 million impressions. The marketing manager may feel that rather than costing twenty million dollars, these impressions will cost only twelve million dollars. This appears to be quite a sizeable disagreement. What happens if a new C point is
plotted in the impression-expenditure quadrant? This new point in Figure XV is called C'. The traced curve in the upper right quadrant will reflect this change and a new, tangent, equal return on investment line will have to be found. This new optimum return on investment turns out to be about 19 million dollars. The new point of tangency is found also. This shows that the most profitable sales level has increased from about forty-six million dollars to about forty-eight million dollars. However, surprising as it may seem, the optimum expenditure on advertising is just about the same. It is still eight million dollars.

It can be seen that variations of estimates are relatively easy to build into this approach. The graphic solution will not yield completely accurate answers. What is provided is a more profit-oriented sense of direction. The three generated numbers are gained through an active attempt to relate expenditure to profitability.

Again, this method is not expected to give a high degree of accuracy. It can only produce results that are as accurate as the knowledge of the model of the system. This knowledge may, today, be little more than a vague intuitive feeling of how the system works. However, it is felt that if decisions are to be made, based upon these feelings; why not take a little extra time and
FIGURE XV
FOUR-QUADRANT ANALYSIS OF PROFIT — EXPENDITURE RELATIONSHIPS WITH NEW C POINT

Sales (in millions)

Impressions (in millions)

Awareness (as a percent)

Expenditure (in millions)
find these relationships for other sets of numbers. When the sales-expenditure relationship is found, even in inexact terms, the manager may evaluate this relationship against the decision criterion to maximize potential profits. By so doing he may choose a level of expenditure which is more closely related to optimum profit than a figure which is drawn out of the air.

It may be that a figure drawn out of the air is close to the optimum. If this is the case, then a manager may have more confidence in using it.

Some Managerial Factors to be Considered in Using the Four-Quadrant Technique

The first factor which must be considered in using the four-quadrant technique is that the explanation is greatly oversimplified. All of the problems of generating the relevant data have been assumed away. This technique is intended to provide a way of explicating the intuitive models of the decision-maker and thus enable him to systematically make his goals more profit-oriented. At this point in time, few companies know precisely the nature of the communication-sales relationship. Most marketing and advertising managers make the assumption that the two are related. Some large companies are conducting studies in an attempt to discover this relationship. However, these
experiments are quite expensive and so far, at least, have not provided data which might be universally applied. That is, the results seem to vary with the nature of the product, by the stage in the product life cycle, and over time.

There are several advantages which this model provides. The first benefit of the four-quadrant approach is that it shows the kinds of data needed to implement this type of analysis. This should point the direction for research efforts. The analysis shows further that if these kinds of data were available, these are the kinds of outputs which might be obtained. The four-quadrant approach has the further advantage that even if the true nature of the relationship is not known, an approximation is still possible. This approximation gives a systematic procedure whereby goals may be adjusted in such a way that return on investment may be maximized. It should be noted that as an approximation, this analysis provided conclusions which are no better than the inputs upon which they are based. The outputs, however, seem to provide a more realistic range which is more profit-oriented than outputs obtained by the goal-setting process.

The deductive approach, which has been used, should not be assumed to destroy the goal-setting process. Rather, the four-quadrant analysis is building upon the
goal-setting concept. The goal-setters, it would seem, did not carry their process to its logical conclusion. They suggest that goals must be related to profits but they fail to provide a formalized approach whereby this can be achieved. The four-quadrant technique provides the method whereby the goals of the firm may be adjusted so that they are more likely to generate maximum profits.

If care is taken to generate this first number in the above way, then the goal-setting process seems to make more sense. If the initial figure is drawn from the air with little or no thought of maximizing profits, then the goal-setting process might naturally be looked upon with disfavor. Many questions may arise as to whether there is, in fact, a model of the system. There may not be such relationships. However, many managers act as if there were some underlying relationship. So long as actions are taken based upon this assumption, then this proposed method appears to be operational.

In the beginning, a firm using this four quadrant method may have little more than intuitive judgments upon which to base their model. Later, research can be undertaken to determine more precisely the true nature of the expenditure-action relationship.

The advertising investment cannot be made in a
vacuum. As DeWolf stated in a speech before the Advertising Research Foundation:

You can't separate advertising objectives from cost and you can't set realistic advertising goals without taking into consideration what it will cost to achieve them and deciding whether they are worth it.

I have tremendous faith in advertising. I think, given enough money and enough time, and of course, a satisfactory product you can reach almost any advertising goal you might set. But for most of the goals you could set, they wouldn't be worth the cost. In fact, I strongly suspect that there is only one goal in any set of circumstances that will give you maximum return for your advertising dollar. The problem is to find the right goal.

It will require learning what advertising can accomplish with a given number of dollars. It even may be unimportant, once you know approximately what advertising can do, to measure to see whether you really did accomplish all that you hoped to.6

Summary and Conclusions

There are two basic assumptions upon which the entire goal setting structure rests. These are that a model of the system exists, at least in the mind of the goal-setter; and that the first number, upon which all subsequent goals will be based, is optimum.

The assumption of the model of the system has not been proven or disproven. However, many of the decisions which are being made, illustrate that at least an intuitive feel for some of these relationships does, in fact, exist. The first step in making more scientific decisions is to present these feelings in a manner that can be evaluated against a profit criterion.

This profit criterion eliminates the need for pulling the first figure from the air with little or no justification. Advertising, at the point which will yield highest profits, will then determine the optimum sales goal, rather than the other way around.

"To raise the level of awareness from 20% to 30% in the relevant market" may seem to be a noble goal. However, the question remains, "Why choose 30%? Why not select 35% or 40%? Is there something magical about certain numbers?" When the intuitive models are explicated a start can be made toward the scientific establishment of goals.

The goal-setters had a good start, but it was just a start. The major fault with goal-setting is that it does not go far enough. After looking at some of the stated needs for goal-setting, an attempt to avoid the fallacies of the goal-setting process is made by using a four quadrant graphic approach. This avoids the
necessity of pulling the first number, upon which all
subsequent numbers are based, out of the air. The goal-
setting approach generates all numbers except the first.
The proposed alternative generates all numbers including
the first. Through the four-quadrant approach a system-
atic adjustment of goals can be made whereby the goal-
setting is made more profit oriented.
TECHNICAL APPENDIX

For those who might be interested in mathematical techniques which can be applied to the graphic analysis which has been outlined, the following technical appendix is presented. It should be noted that the graphic analysis is a method whereby the intuitive feelings of the manager are made explicit. The four quadrant analysis is a method by which these intuitive feelings may be expressed in a relationship, and then evaluated against a profit criterion.

In the example used in this chapter, the hypothetical managers were asked to estimate several points of these relationships. These points were then used to approximate the true relationships. The four quadrant analysis, then, in effect, defines three points on the sales-expenditure relationship. However, these three points are based upon a series of intuitive guesses. It should be emphasized that any sophisticated mathematical technique which is used will naturally reflect the imprecise data. As better data becomes available, the quality of the answers will be effected. The power of the four quadrant analysis is that even with a wide range of estimates (as demonstrated in Figure XV) the optimum expenditure does not vary greatly.
Before exploring some of the mathematical techniques which might be applied to this analysis, the nature of the statements which are used in generating the four quadrant analysis is examined.

**Goal-Setting Statements**

The goal-setters typically state relationships in what might be thought of as a backward fashion if viewed from the standpoint of causation. That is, the level of awareness is normally thought of as causing sales; the number of impressions may be the cause of the level of awareness; the level of expenditure determines the number of impressions; and the level of expenditure is usually thought to be a cause of sales. The goal-setters, on the other hand, reverse this order. This is implied from statements such as "What level of awareness is necessary to achieve a given level of sales?" They choose a level of sales and then determine the level of awareness necessary to achieve these sales.

This reversal, however, should pose no limitation in this analysis. The four quadrant technique is concerned with relationships rather than dependency. This is based upon the axiom that if $x$ can be expressed in terms of $y$, then $y$ can be expressed in terms of $x$. For example, if $x = a + 2y$ then this can be expressed as $y = \frac{1}{2}x - \frac{1}{2}a$ or $y = \frac{1}{2}(x - a)$. A relationship, then, can
be expressed in terms of either variable.

**Approximation of the Sales — Expenditure Relationship**

A quadratic approximation might be used as a first attempt to state the sales — expenditure relationship. The three points A, B, and C, of Figure XIV were tested and the mathematical formula was found to be:

\[ S = -8.55 + 12.06E - .45E^2 \]

where

\[ S = \text{SALES (in millions)} \]
\[ E = \text{ADVERTISING EXPENDITURE (in millions)} \]

In like manner the ABC' curve of Figure XV was tested and found to be

\[ S = 14.5 + 14.7E - .76E^2 \]

However, in examining these two curves, it can be seen that they are not consistent with intuitive expectations. For example, if the first derivative were set equal to 0 the maximum sales level might be determined. The ABC curve reaches a maximum at \( E = 13.4 \). At this point \( S = 72.25 \), which is clearly beyond the capacity limitation of the problem. More significant, however, is the fact that this formula would indicate that a higher expenditure than the 13.4 would bring about a lower sales level than the 72.25. For example, an expenditure of 15 would derive only 71.1 in sales. While this point of
negative returns might be expected to occur at some point, intuitively this is not anticipated to occur within the relevant range. Likewise the ABC curve has a maximum expenditure of 9.66 and a sales level of 56.6. Expenditures above the 9.66 level will be expected to derive lower sales levels. For these reasons, a quadratic approximation does not coincide with intuitive expectations of the shape of the curve.

The exponential approximation seems to provide a more intuitively satisfying fit through these three points.

If the $S = 40$, $E = 5$ point in the sales-expenditure relationship is tested, we might determine the exponential formula which passes through the A, B, and C points. Using the general form of the equation:

$$S = A + B \left[ 1 - e^{-CE} \right]$$

we may solve for $C$. After testing several A's and B's, it was determined that the $A = 0$ and $B = 52$ seems to give a reasonably good fit for the ABC curve. While it is possible to gain an exact fit through these three points, the imprecise nature of the data would indicate that a close fit is all that is needed. If more data were available for intermediate points, a goodness of fit test, such as a least squares analysis, might be applied. However, since this analysis is dealing with imprecise data,
this test does not seem warranted.

Testing the $A = 0$ and $B = 52$, we may solve for $C$.

$$40 = 0 + 52 \left[1 - e^{-5c}\right]$$

$$\log \left(1 - \frac{40}{52}\right) = C$$

$$-5 \log e$$

$$\log .23 = C$$

$$-5 \log e$$

$$\frac{9.36173 - 10}{-5(.43429)} = C$$

$$C = .294$$

Testing the other two known relationships is the next step.

If $E = 20$

$$S = 52 \left[1 - e^{-7.88}\right]$$

$$S = 52 \left[1 - .0028\right]$$

$$S = 51.85$$

This seems to be a pretty good fit since a sales level of 52 million dollars is expected with an expenditure of 20 million dollars.

Further, we may test the 3 million dollar expenditure.
\[ E = 3 \]
\[ S = 52 \left[ 1 - e^{-0.294 \cdot 3} \right] \]
\[ S = 52 \left[ 1 - e^{-0.88} \right] \]
\[ S = 52 \left[ 1 - 0.415 \right] \]
\[ S = 52 \left[ 0.585 \right] \]
\[ S = 30.4 \]

Since we expected 30 million dollars, this also seems reasonable. Therefore this formula
\[ S = 52 \left[ 1 - e^{-0.294 \cdot E} \right] \]
seems to provide a good fit of the points ABC.

If we test some intermediate points they appear to be reasonably close to the intuitive expectation. For example:

<table>
<thead>
<tr>
<th>E</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>49.9</td>
</tr>
<tr>
<td>10</td>
<td>49.0</td>
</tr>
<tr>
<td>9</td>
<td>48.0</td>
</tr>
<tr>
<td>8</td>
<td>46.8</td>
</tr>
<tr>
<td>7</td>
<td>44.9</td>
</tr>
<tr>
<td>6</td>
<td>42.0</td>
</tr>
<tr>
<td>5</td>
<td>39.8</td>
</tr>
<tr>
<td>4</td>
<td>35.6</td>
</tr>
<tr>
<td>3</td>
<td>30.4</td>
</tr>
</tbody>
</table>
In a similar manner the formula for the ABC' can be found. This turns out to be:

\[ S = 54 \left[ 1 - e^{-0.27E} \right] \]

From Figure IX it can be determined that:

\[ M = -45 + 1.5S \]

where

\[ M = \text{Margin (in dollars)} \]
\[ S = \text{Sales} \]

Further if:

\[ E = \text{Advertising Expenditure} \]
\[ R = \text{Return on Investment (in dollars)} \]

It can be stated that

\[ R = M - E \]

Therefore

\[ R = -45 + 1.5S - E \]

Or

\[ R = -(45 + E) + 1.5S. \]

If the first derivative of the ABC formula and the ABC' formula are set equal to the slope of the R formula (1.5), the optimum expenditure level, the optimum sales level, and the optimum return on investment can be derived.

In the case of the ABC curve:
\[ S = 52 \left[ 1 - e^{-0.294E} \right] \]
\[ \frac{dS}{dE} = (52)(0.294)e^{-0.294E} = 1.5 \]
\[ e^{-0.294E} = 1.5 \]
\[ e^{-0.294E} = \frac{1.5}{(52)(0.294)} \]
\[ E = \frac{-2.295}{-.294} \]
\[ E = 7.80 \]

Then substituting back in the original formula to find \( S \):
\[ S = 52 \left[ 1 - e^{-0.294(7.8)} \right] \]
\[ S = 52 \left[ 1 - e^{-2.293} \right] \]
\[ S = 52 \left[ 1 - 0.101266 \right] \]
\[ S = 52 \times 0.8988 \]
\[ S = 46.7 \]

Then substituting into the \( R \) formula:
\[ R = -(45 + E) + 1.5S \]
\[ R = -(45 + 7.8) + 1.5 \times (46.7) \]
\[ R = -52.8 + 70.05 \]
\[ R = 17.25 \]

In the same way, the optimum levels can be derived for the \( ABC' \) curve:
\[ S = 54 \left[ 1 - e^{-0.27E} \right] \]
\[ \frac{dS}{dE} = (54)(0.27)e^{-0.27E} = 1.5 \]
\[ e^{-0.27E} = 1.5 \]
\[ e^{-0.27E} = \frac{1.5}{(54)(0.27)} \]
\[ e^{-0.27E} = 0.1029 \]
\[ E = \frac{-2.268}{.27} \]

\[ E = 8.4 \]

\[ S = 54 \left[ 1 - e^{-(.27)(8.4)} \right] \]

\[ S = 54 \left[ 1 - e^{-2.268} \right] \]

\[ S = 54 \left[ 1 -.103312 \right] \]

\[ S = 54 \left[ .8967 \right] \]

\[ S = 48.4 \]

\[ R = -(45 + 8.4) + 1.5 (48.4) \]

\[ R = -53.4 + 72.6 \]

\[ R = 19.2 \]

There are many other approximations which might be used. The exponential approximation seems to fit the intuitive expectations which we have. This approximation indicates that given additional increments of expenditure dollars, sales increase throughout the relevant range. At the lower levels of expenditure, additional dollars will increase sales proportionately more than at higher levels of expenditure.

This type of approximation is necessary since the true nature of these relationships is not known. If the true relationship were known for each level in this step-down hierarchy, these relationships might be substituted and used to generate the true expenditure-sales relationship. To take a very simple example of how this might work:
Assume that the awareness-sales relationship and the impressions-awareness relationship are linear. Then if:

\[
\begin{align*}
A & = a + 2S \\
I & = b + 3A \\
E & = c + 4I + I^2
\end{align*}
\]

where

- \( S \) = Sales
- \( A \) = Level of Awareness
- \( I \) = Number of Impressions
- \( E \) = Advertising Expenditure

We may substitute the \( I \) relationship into the \( E \) equation and find that:

\[
E = c + 4(b + 3A) + (b + 3A)^2
\]

In like manner we may substitute the \( A \) relationship into this equation.

\[
E = c + 4[b + 3(a + 2S)] + [b + 3(a + 2S)]^2
\]

or

\[
E = c + 4b + 12a + 24S + b^2 + 6ab + 12bS + 9a^2 + 36aS + 36S^2
\]

or

\[
E = c + 4b + 12a + b^2 + 6ab + 9a^2 + 24S + 12bS + 36aS + 36S^2
\]

If we define two constants as:

\[
\begin{align*}
k & = c + 4b + 12a + b^2 + 6ab + 9a^2 \\
m & = 24 + 12b + 36a
\end{align*}
\]
Then this equation may be written as:

\[ E = k + mS + 4S^2 \]

Even in this very simple example where two of the relationships are linear, the \( E \) equation can become quite complicated. If only the rough intuitive estimates of managers are available, the four quadrant analysis provides a workable approximation. If, however, the true nature of the data is known, it may be used to determine the true sales expenditure relationship as shown above.
CHAPTER VI

WHY GOAL-SETTING?

The advocates of goal-setting claim many benefits from this process. It is questionable, however, if all of these benefits result from the goal-setting process. It is possible that some of these claims result from the confusion stemming from the many meanings of the term "goal". It is the purpose of this chapter to evaluate the reasons for goal-setting and to trace them to their source.

It will be recalled that in Chapter I definitions of terms were presented. These definitions are narrow, but they seem to reflect current usage. They provide meaningful categories into which problems can be classified. Each classification suggests different types of problems which seem to require different techniques for solution. A forecasting problem is different from quota-setting and both of these differ from establishment of a decision criterion. The goal-setting process is essentially different from all three of these. The
techniques involved with each of these areas will be explored in the next chapter. The distinction in terminology, however, plays a key role in the evaluation of the claimed advantages of goal-setting. Thus the following definitions from Chapter I should be kept in mind.

1. Objective—a non-quantitative statement of intent.

2. Goal—a quantitative statement of performance established for the express purpose of basing other quantitative statements upon it.

3. Forecast—a quantitative statement of an expected level of performance, given a set of assumptions, used as an input in planning.

4. Quota or Target—a quantitative statement of some specific level of performance, used primarily for motivational purposes.

5. Decision Criterion and Constraint—a quantitative or non-quantitative statement used to evaluate alternative courses of action or aid in decision making:
   A. Decision criterion—a measure of performance, such as sales or profits, which the decision-maker attempts to optimize subject to certain limitations.
   B. Decision constraint—a statement intended to provide a cutoff.

Need for Lower-Order Decision Variables

One of the biggest needs which goal-setting attempts to fill is to provide lower-order decision variables. That is, in the marketing department or in the
advertising department decisions must be made. If statements are provided in terms of sales or communication, then it may be easier for managers at these levels to evaluate alternatives rather than having to relate every decision to profits. To the extent that maximizing sales or impressions will maximize profits, it is logical to decouple these criteria. However, the maximization of sales does not always provide maximum profits.

Problems of suboptimization. Suboptimization might be described as:

The planner may have to deal with the problem of conflicting goals. . . . The term suboptimization has been used to describe decisions made to achieve a limited set of goals at some organizational level other than the highest.¹

The problems involved with suboptimization often concern trade-offs of one subgoal against another. Lazer and Kelley comment on this problem:

Every business system in trying to achieve common goals operates through subsystems which have their own respective goals. As a result, there are usually conflicts in any business system. Generally, the sum of subsystem goals does not equal the overall goal. The concept of trade off between subsystems to achieve greater efficiency of the overall system becomes important.

¹Alderson and Green, op. cit., p. 143.
A main consideration in a systems approach to marketing becomes, given certain marketing conditions and resources (constraints), determining how they can be programmed to achieve the optimum total marketing position.

It is in the decoupling of the system that potential problems arise. The process of substituting a lower-order, but more exact goal, for a higher, but more generalized one, involves certain assumptions. The most critical assumption is that all other sections of the company over which the manager has no control are being operated as efficiently as possible. To the extent that any of these are less than optimum—less than maximum profits may be achieved. It might well be expected that several of the factors will be at a point which is less than optimum. In order to maximize total profits, then, the trade off's of these elements of products must be seen. For example, if the sales are too high in relation to capacity then the plant may be forced, for a short time, to run overtime. This may be more desirable than curtailing sales. Thus, trade off's, such as overtime cost versus extra profits on additional sales, become important.

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One method for solving, or at least reducing the problems of suboptimization is suggested by Howard:

Goals have two highly significant characteristics: congruency and operationality. Congruency is the extent of the tendency for lower-level goals to serve higher-level goals. If a company is to achieve its goals, congruency of different level goals is necessary. Salesmen, for example, are often assigned the goal of maximizing sales (not profits), but their decisions are limited in such ways that it is hoped that in maximizing sales the salesman's behavior will optimize profits at a higher level. . . . Thus, limiting the scope of his decisions at lower levels is one way of making that behavior consistent with higher goals.3

Howard continues:

By directing him (the manager) to use the allocation model, top management has said implicitly that he should maximize profits, at least, in the allocation decision. Since the sales manager is limited (1) in the particular decisions he can make and (2) the amount of money he can spend, he can only seek a constrained maximum, however, instead of an absolute maximum.4

In a very real sense there is need for lower-order decision criteria. These criteria must be constrained so that the trade offs with other lower-order variables will be kept in check. Thus, an advertising manager may be

3 Howard, op. cit., p. 467.
4 Ibid., p. 469.
given the task of maximizing exposures within the limits of a stated budget.

The goal-setting process advocates claim that the goals generated by this technique form lower-order decision criterion. However, as the terms are being used in this dissertation, these lower-order goals are not decision criteria. They are quotas or targets, i.e., quantitative statements of some specific level of performance, used primarily for motivational purposes. The decision criterion might be to maximize exposures, given an advertising budget. The goal-setting process may aid in the determination of a proper advertising budget (as shown in the previous chapter) but the numbers generated are targets and not decision criteria.

Control and Evaluation

In addition to lower-order decision criteria, goal-setters claim this process fills other needs. It is often suggested that the establishment of goals will aid the manager in control and evaluation of personnel and decisions. Colley, for example, states:

Benchmarks are set up against which accomplishments can be measured. (State of mind - knowledge, attitude and buying
propensity - are appraised before and after the advertising, or among those reached versus those not reached by the advertising.  

It is often suggested that individuals be judged by their ability to meet goals. However, this sometimes seems to be more indicative of a manager's ability to forecast than to obtain goals. A manager who is asked to establish goals which he knows he will later be expected to meet, may use one of several strategies. He may set his goals so low that their attainment will be virtually assured. For example, the advertising manager may feel that his budget will buy 100 million impressions, but states that his goal with the given budget is 75 million impressions. This way, if the 100 million impressions materialize, he will be considered a very good advertising manager. If, for some reason, only 75 million impressions are achieved the manager still has attained his goal.

Another alternative which seems to occur in many companies is that the step-down process is undertaken and consistent goals are established. Once this process is completed, the goals are promptly forgotten until the next year when the same process occurs again. The feeling in these firms seems to be that the goal-setting

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process is valuable only inasmuch as it forces the manager to plan.

A final situation which seems to be the case in several companies is that goals are set according to the goal-setting process, but then they are not used for evaluation. This occurs, in many cases, due to the lack of control over the marketplace. The rationale seems to be that the goals set were not gained because conditions changed. For this reason some firms seem to adopt an attitude which is illustrated by the following example. A representative of a large, multi-divisional company which uses the goal-setting techniques was asked, "What happens if a manager fails to meet his goals?" His succinct reply was, "He sets new and better goals for next year."

It seems that in practice, goals are not used extensively for control and evaluation. The problems of control and evaluation seem to be better solved through the use of a forecast. The techniques for generating these two figures differ. Therefore, it is suggested that if what is needed is a forecast, then it be called this.

The evaluation, then is of the manager's ability to forecast rather than his ability to set and meet goals. The control is provided in that the forecasts of the
various departments can be checked for accuracy and consistency. The sum of the forecasts should equal the whole, while the sum of the goals may not.

**Direction and Efficiency**

Another set of needs which are claimed to be filled by the goal-setting process is direction and efficiency. Colley points out: "Agreed-upon goals, reduce wasted effort. . . . A goal rivets peoples' attention on the important and pertinent. Hence it is a great labor-saving device."

Chiles expresses a somewhat similar thought: "Overall company objectives must be set up in order that there may be a common purpose and a sense of direction for the planning of all division and department heads."

In spite of these claims of the goal-setters, critics point out that goals may not give the proper sense of direction and thus may be a labor and money wasting device.

Smith presents several examples of DAGMAR goals being achieved but the campaign was a failure.

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6Tbid., p. 16.
For example:

Last year, an advertising goal was set of making a high percentage of the business community think of this company as the leader in its industry. A benchmark study showed that a very high percentage, perhaps three-quarters, thought of the company as an industry leader, prior to the start of advertising. At the completion of the campaign, this level had risen to nine-tenths. Was the campaign successful? In DAGMARian terms, yes. In real-life terms, no! It is doubtful that one added dollar's worth of sales was produced, let alone enough sales to pay for a seven-figure campaign.8

Smith further indicates that DAGMAR often leads to goals that are "unnecessary," "impossible," or "incorrect."

In terms of direction and efficiency, it would seem that goal-setting may be lacking. As was true in the previous section, control and evaluation; forecasting seems to be a better alternative than goal-setting. A forecast, which is the best estimate of a future condition, can provide direction and efficiency. Once again, this use of forecast is in the narrow sense. If a figure is to be provided so that all members of a company division, or department can work toward a common point--

thus reducing waste effort—the figure can be a forecast.

**Coordination**

Closely related to the above two categories of control and evaluation, and direction and efficiency is the need for coordination. Lee and Mason point out:

> Goals, once set up, have the effect of getting people to work together. Differences are resolved, attention is focused on the important and pertinent facts, creative effort is released and efficiency evoked.9

Schleh adds:

> Without central goals toward which all achievement should work, objectives tend to be at odds with each other and with the direction the company as a whole wishes to take. Company objectives are the core around which a future objective program must work—a core that in many companies has not been developed.10

It appears that in all areas which involve planning, a forecast provides the needed tool. Lazer describes the uses to which a forecast might be put. It is interesting to note that the needs which goal-setting claims to fill

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are essentially the same as forecasting. The logic of this conclusion has been carried through the entire discussion.

Sales forecasting promotes and facilitates the proper functioning of all the various segments of a firm's total spectrum of activity. It governs almost every other prediction of business action. It affects the budgets which are set, and is used in establishing controls and determining various limiting conditions for management programs. It is a useful tool for coordinating all the varied and integral aspects of business operations. The sales forecast also serves as a basis for evaluating the functioning and productivity of various components of business action.11

As indicated earlier, many times the goal-setting technique is more misleading than it is helpful. Forecasting seems to present fewer problems while it provides most of the benefits of goal-setting. Therefore, it might be concluded that in most cases, forecasting provides a better tool to aid the planner than does goal-setting.

Motivation

The term morale, to the goal-setter, seems to have two meanings. The first meaning of the word is to keep employees happy or content in their jobs.

However, the more important sense of this term is a means which stimulates employees to produce to their fullest potential. It is in this motivational context that goal-setting is presented as the answer to management's problem.

Colley, for example, states:

People do better work when they have a clear idea of what they are driving at. History tells us that this is true in all branches of human endeavor. Things get done better and faster when there is a common sense of purpose. This truth is so obvious that it is often overlooked. . . .12

In order to provide maximum stimulation Schlen suggests the following criteria for goals:

Many executives have had the impression that very stiff and almost unattainable goals will act as a stimulus to work harder. In most cases, this is not true. It is much more likely to take the heart out of good men when they lack the feeling of accomplishment that comes from achieving objectives. In addition they may accept non-accomplishment as normal and lose their sense of personal accountability, the driving force that spurs on an operation.

Goals should be realistic. . . . First, he (the executive) should say to himself, "In light of all the conditions as I know them, what would be reasonable job

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12 Colley, DAGMAR, p. 15.
performance on this particular item?"

... "In the light of all these same conditions, what would I consider to be an outstanding job?" This should be set as the outstanding objective. This sets the normal accomplishment that the man can achieve if he works well and in the right direction - and, in addition, it tells the man what to shoot at in order to be recognized as outstanding.13

Schleh continues, "If properly carried through, a management objective program can be a major stimulus to every management man in the operation".14

It should be apparent that the type of goal (in the general sense) to which the above quotations are referring is that which has been defined in this dissertation as a target or quota. These terms, it will be recalled, refer to quantitative statements of some specific level of performance used primarily for motivational purposes. While a discussion of the techniques of generating these statements is contained in the next chapter, suffice it to state here that the problem of choosing a quantitative statement to be used for motivational purpose is quite different from selecting a forecast.

14 Ibid., p. 33.
Guideposts for Decision

Through the use of goals, it is argued, the decision-making process is made easier. It should be noted that there are two aspects of decision-making. The first is the generation of alternatives. In this most critical aspect, goal-setting provides little help with the exception of forcing a manager to think about the problems. This may be of much value to firms, but in the actual generation of alternatives, the goal-setting process does not provide much help.

In the second aspect of decision-making—that of the evaluation of the alternatives—the advocates of the goal-setting process claim this technique fills a need. Suppose a goal has been set subject to budget constraints, that a product will be advertised on a TV show which has a Nielsen rating of 18. This goal may have been set in the step-down process directly from a goal statement of audience size which in turn was based upon a sales goal. Since the advertiser cannot know what the ratings will be before the show goes on, he must guess. Assuming the Nielsen rating is the sole criteria for selection, the figure of a Nielsen of 18 may help him choose the show in the first place. However, suppose that after 6 weeks the show is drawing a Nielsen of 12; what should the advertising manager do? The manager may look at the alternative
programs which are available at the same price and find that they have Nielsen ratings of 6, 8, and 9 respectively. The manager's choice of staying with his present program with a rating of 12 does not seem to depend upon his goal of 18.

On the other hand, suppose the show does, in fact, have a Nielsen rating of 18, but another program becomes available at equal cost which has a rating of 26; what should the manager do? Clearly, his goal is being fulfilled, but it might be more logical for him to make the switch.

What this would indicate is that the stated goal is not, in fact, a decision variable. If a decision criterion had been established, then the decision-making process might have been improved. A decision criterion is a measure of performance which the decision-maker attempts to optimize, subject to certain limitations. Thus, in this case, if a decision criterion has been established of obtaining the highest Nielsen possible within the limitations of an advertising budget, the choices might have been more clear. The goals generated by the goal-setting process do not seem as helpful as guideposts for decisions as decision criteria which are specifically constructed for the purpose.
The claims made by Colley and others that "It (a goal) enables the manager . . . to detect whether a particular ad or campaign has strayed off its intended course," does not seem to be justified either. If the first situation has occurred—that is, a goal of 18 with a present rating of 12—the goal does not necessarily let the advertiser know that the campaign has gone astray. On the other hand, the second example would indicate that just because the stated goal is reached, the alternatives may indicate that a change would be more advantageous.

Thus, a well established decision criterion seems to fill the need of guideposts for decisions better than a goal.

**Summary and Conclusions**

The advocates of the goal-setting process claim that goals solve almost all problems of management. When goal is used in its very broadest sense, this may be true. However, the goal-setters should not use this term in a general sense since they are actually referring only to a very narrow and restricted use of the word. That is, the step-down generating of numbers. When the

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Colley, *DAGMAR*, p. 16.
aspects of the broad term—goal—are broken apart into meaningful categories, much of the confusion, as well as many of the claimed advantages of goal-setting, disappear.

Without a doubt there is a need for lower-order decision criteria. All decisions cannot be made in terms of profit-making unless all aspects of the operation of the firm are taken into account. Therefore, a certain amount of decoupling is necessary. This involves the assumption that all aspects of the firm over which the manager exercises no control, are operated at an optimum, or at least that the trade offs involved make the operation of the entire company as efficient as possible. Further, the manager must consider the trade offs of the controllable factors. This means that he must make constrained decisions. The manager, given these limitations, must make decisions. These decisions, it would seem, may be based upon a model of the system.

In addition to the need for lower-order decision criteria, the manager needs a means for control and evaluation, direction, efficiency and coordination. These needs are filled, it is suggested, by goal-setting. Frey
summarizes the goal-setting point-of-view:

Precise objectives\(^\text{16}\) can provide management with clear direction for the advertising effort, standards for execution and control, and criteria for advertising evaluation. . . . Careful thought by management about objectives can help to identify problem areas in the advertising program prior to the time when major investments have been made in creative and media activities. Clear statements of objectives can help to eliminate waste both in the preparation of advertisements and in the execution of campaigns.\(^\text{17}\)

However, it appears that goal-setting has some limitations in these areas. The forecast seems to offer a more workable alternative for planning than does goal-setting.

The management problem of motivation seems to be better solved by using quotas and targets, which are set specifically to provide motivation, rather than by goals.

The problem of guideposts for decisions is claimed to be lessened through the use of goals. However, it is indicated that what is actually needed is a decision criterion. The use of goals may not lead to improved decisions inasmuch as alternatives, which may produce

\(^{16}\)Frey uses "objectives" to mean the same thing that is defined by "goal".

more acceptable results, will not even be considered once the stated goal is achieved.
Throughout this dissertation, references have been made to the various aspects of the term "goal". In everyday usage this word has taken on so many meanings that to speak of goals in the general sense may prove to be confusing. In order to reduce much of this confusion, an effort has been made to define, narrowly, the various aspects of this term. These distinctions are somewhat arbitrary and there may be some small overlay in extreme examples, but generally they seem mutually exclusive.

The definitions which are presented are phrased in terms of the use to be made of the statement. That is, if a quantitative statement is used for motivation it is called a target or quota. If the statement is to be used as a means of evaluating alternatives, it is called a decision criterion. If the statement represents the best estimate of the future and is used as an input to planning, it is termed a forecast. General, non-quantitative statements, used to establish over-all direction
are objectives.

Thus, it may be necessary to examine the use to which a statement is intended to determine into which category it falls. However, looking at the problem from the other direction, if a statement is needed for any of these functions then it should be presented in the proper form.

While a lengthy, detailed description of all of the ramifications and aspects of these techniques is beyond the scope of this dissertation, a general examination of each process is necessary.

Forecasting

Forecasts are usually based upon a model of some type. This, however, may vary. At one extreme is that which might be termed an "inertia model" ("next year will be just the same as this year"). At the other extreme lies a whole range of sophisticated econometric models. In between these two extremes are a whole series of models which vary in their degree of sophistication—including intuitive models which represent the "feeling" of forecasters. Based upon one or more of these models, projections of the future are made. These vary in accuracy depending upon how well the model is used to represent the relevant factors.
Once the forecast is made and agreed upon, it can be used for planning purposes. Usually the first forecast to be made is of sales. From this figure springs production schedules, marketing budgets, financial plans of sources and uses of funds, etc. Then other forecasts can be made using this sales forecast as an input into the model. Thus, for planning purposes as well as for control, evaluation, direction, efficiency, and coordination, the forecast can be used.

**Quota-Setting**

Since quotas and targets are used for motivational purposes, it appears that they should be established so that they can provide a maximum motivation. Ideally, quotas and targets should be tailored to each member of the firm. Since this is not practical, groupings are often necessary. One method for quota and target-setting might be to approximate the point of maximum motivation. If quotas or targets are set too low they may be so easily gained that they provide little motivation. Likewise, at the other extreme, they may be so high as to be thought impossible and again provide low motivation. Somewhere in the middle may be the optimum point or range. This can be illustrated by the graph on the next page.
FIGURE XVI

Relationship Between Motivation and Quota (or target)

Motivation

Quota

Low Quota  Optimum Quota Range  High Quota
Decision Criteria

It may be recalled in the first chapter that there are, in effect, two types of decision aids. These are decision criteria and decision constraints. The decision criteria is a maximization statement subject to certain limitations—such as budget. The decision constraint, on the other hand, is intended to provide a cutoff. Some argue, however, that the decision constraint is really of little value. They pose the example of a firm which has a decision constraint of realizing a return on invested capital of 10% and only two alternative uses for the funds. The first alternative will yield 9% and the second alternative would yield 3%. If these funds must be kept in the firm rather than returned to stockholders, the choice should be clear. The decision constraint, however, provides no help in making the decision.

If, however, the decision constraints are thought of as satisfice points (points below which addition units have high utility but above which addition units have low utility), then these decision constraints take on meaning.

Relationship of Objective, Model, Forecast, Quota, Decision Criterion, and Decision Constraint—A Systems Approach

What is a systems approach and how does it differ from goal-setting? Lazer and Kelley present an answer:
There is a basic difference between systems and goal models which is largely a matter of focus and emphasis. . . . The goal model starts with a task to be achieved and focuses directly on the use of company resources to achieve it. The goal model, therefore, may lead to segmental perspectives and may not be the most effective model for the perception of total marketing operations.

The starting point in the systems model is not a goal but the model of a total functioning unit. A system model is a realistic representation of an on-going marketing entity capable of achieving multiple goals. The systems model recognizes the multi-functional and multi-dimensional units involved in reaching marketing goals. This model also emphasizes the fact that some means must be allocated to functions which are involved in maintaining the marketing organization itself, achieving supporting marketing services, extending action which permit the use of effective marketing striking power, but which are not directly goal-oriented functions.

There are two inherent dangers which must be recognized in using a goal model. (1) The danger is always present that management will adopt the perspective of one subgroup in the organization in solving problems. . . . (2) There can be a neglect of directive, facilitating and controlling functions of the marketing system. . . .

A system model is based on the conception of all marketing elements working together on an integrated and coordinated basis for the purpose of achieving the objectives of the overall system and not just for the purpose of achieving a subgoal. The system model which takes into consideration conflicts between subgoals is not as utopian a type of model as the goal model.\(^1\)

It is in this systems approach that the relationships among the management tools will be made clear.

Objectives. What is the place of an objective in the systems approach? An objective can be used as an ultimate decision criterion. That is, since an objective is a non-quantitative statement of purpose or intent, it can be used as the basis for other lower-order statements. The statement of objective should provide the general direction for the firm. It should be noted, however, that statements of objectives are usually not workable in and of themselves. They, typically, must be translated into a workable decision criterion to be used.

The statement of objectives such as "to make a profit," or "to be an industry leader" provides little aid for the decision-maker unless he translates these vague statements into more useable ones. The manager may decide that "to make a profit" means "to maximize profits," in which case he will presumably take all actions necessary to accomplish this aim. However, another manager may view the same statement "to make a profit" as meaning to make last year's level of profit. In this case the number may become a satisifice point. Another manager may regard this statement as meaning "to avoid making a loss." In this instance, even one dollar of profit would be regarded as adequate by the manager.
It can be seen that objectives provide only a small amount of direction to the decision-maker. Nonetheless, it would seem that this small amount is necessary since it provides a sense of direction for the firm. Thus, it is as ultimate decision criteria that objectives serve a needed purpose.

Models. The first real problem comes when the ultimate decision criteria must be translated into intermediate, or lower-order, decision criteria. This seems to be the place in which models serve a much needed purpose.

It has been pointed out, in the goal-setting section, that the goal-setting process makes the assumption that a model of a systems exists. This, it was noted, may be a faulty assumption. However, companies act as though the model exists and since they act in this way it might prove useful to explicate this model so that its validity can be tested. This is the task of the research department.

A procedure may be used such as the one suggested in Figure XIV, of attempting to explicate the model by asking the manager which relationships among variables exist at various levels of return on investment. Although this provides only a rough approximation of the true model, it still may be used to generate lower-order decision criteria. This explicated model expresses the
relevant criteria in relationship to profits. Thus, the promotional activities of the firm may be placed in relationship to sales which in turn may be related to profitability.

The explicated model can also be used to determine an optimum range for the allocation of a marketing budget. In the example presented previously, advertising was assumed to be the only significant element. This, obviously, was a strong assumption. However, using the same type of model, the relationship between expenditure on marketing and sales can be seen. Thus, the optimum expenditure on marketing can be found. Then through the use of some allocation model the amount to be spent upon each element of the marketing mix can be determined.

It should be realized that models such as the ones suggested here, will not provide precise answers. They will, however, point to the direction which might make the optimum uses of the marketing allocation.

The numbers which can be derived from these models may become targets or satisfice points. That is, these points form the kink in the utility curve for the decision-maker. Below the kink, additional units of the commodity measured have high utility or value to the decision-maker. Above this kink, the additional units have low value or utility. Thus, these numbers can provide a decision aid for the manager.
Finally, it should be noted that the process of generating these satisfice points from a model, is, in fact, diametrically opposed to goal-setting. In the goal-setting process, a number is assumed to be optimum and from this number the lower-order goals are formed. The model-building approach, which has been outlined in Figure XIV, generates all the optimum figures based upon the model of the system. In both cases there is an assumption of a model of the system.

Forecasts. Forecasts, as noted earlier in this chapter, are the outputs of some type of model. These vary from intuitive, or feeling models, to highly complex econometric ones. Forecasts, also may be established in such a way that if action A is taken, one forecast can be made, or if action B is taken another forecast can be derived. Used in this way the forecast can be used as an input to the above model of the system. However, it should be noted that once the optimum plan is selected, then the forecast is defined.

Thus, the forecast is closely related to the model of the system. Without a model of the system of some sort the forecast could not exist. This model may be that next year will be an exact duplication of this year, or that there will be some fixed percentage increase in sales--but it must exist. The forecast, then, is closely tied to the models both as an input and as an output.
Quotas and Targets. Quota, it appears, should be an output of a planning model rather than an input. Quotas and targets, as mentioned earlier, should be used solely for motivational purposes. These numbers may be drawn from the model of the system suggested above. If the generated numbers, in fact, become satisifice points, then this means that they are targets under the definition of this dissertation. Quotas and targets, which are used for psychological motivation, are another by-product of the systems approach.

From the systems approach, the model provides relationship statements which can be used to generate numbers. These numbers can be used by the manager since they may provide satisifice points or targets. The model of the system uses forecasts as an input. In order to make the system work and improve, one other element is needed. This is an information system of feedback for control and modification of the system.

Information feedback. The prime ingredient in the systems approach is an information feedback system. This is needed to insure that the system is in control and to point out what changes or improvements which might be indicated. This information feedback, then, is the element that makes the systems approach dynamic—rather than static. It is the continued search for an optimum
that forces the system to improve. This is what Smith terms the rational approach to marketing:

The rational approach to marketing management is one in which the role of marketing and sales research is that of providing management with facts, scientific forecasts, and other basis for charting or planning the future business course; developing checkpoints by means of which sales operations can be controlled; and furnishing the criteria by means of which marketing results can be evaluated at appropriate points in time.²

Lipson also recognizes the need for feedback in the planning process:

It must be stressed that the initial phase of creating plans for marketing activities may be a circular process. The selection of the optimum alternative is based upon the information fed back to the preceding phase. Feasibility, then, becomes the decision criterion by which the desired goal and the approach to achieve the goal are rationally selected.³

Thus, information feedback is the element of the systems approach which ties the entire package together and at the same time provides the dynamic aspects which


are lacking in the goal-setting approach.

Model of the system. The advocates of the goal-setting procedure claim that their process fills many needs of the decision-maker. However, many of these claimed advantages—such as lower-order decision criteria, control, evaluation, direction, efficiency, coordination, morale, and guideposts for decisions—are, in fact, advantages of techniques which are closely related to the term goal, yet are distant from it.

These goal-related terms are tied together in a systems approach. This approach attempts to utilize a model which relates all the tools under the control of the manager. Through the manipulation of the model, changes in the variables can be made and the resulting changes in the other variables can be observed. Through this process one ultimate decision criteria can be maximized, such as profitability. That is, changes in expenditures will change the profitability of the firm. The optimum relation can be found from this model.

It should be noted that the results obtained from such a manipulation of a model are only as good as the relationships built into it. If the model is a poor representation of reality, then the results of the manipulation may be equally poor.

The starting point for a discussion of the model of the system can be at any point in the loop. However,
the most logical point seems to be the statement of objectives. These are broad, generalized statements of intent. These broad statements can be directly translated into decision criteria. These decision criteria statements are in the form of a maximization of some variable—such as profits—subject to certain constraints.

The model which was developed previously from the goal-setting process and other models which seem to have a relevance to the problem at hand, can be used in the following ways. First, the appropriate model or models can generate forecasts. These can be used as inputs into models which generate quotas and targets.

These quotas and targets become decision constraints or satisfice points in the decision-making process. The entire system needs information for control of the models and the system, as well as information, in order that the entire system might be modified. This information feedback gives the entire system a dynamic quality.

Finally, there is one exogenous factor in the system. This is the constraints which are placed upon the system by the non-controllable factors. These factors are outlined in Figure IV of this dissertation.

The model of the system is present in graphic form in Figure XVII.
Figure XVII
A Model of the System

Constraints

Modification Information

Control Information

Decision Criterion

Objectives

Models

Forecasts

Quotas

Targets

Decision Constraints
Advertising Objectives - Proper Setting and Use

It is necessary to relate the model of Figure XVII to the specific problem of setting advertising objectives. As has been noted earlier there are two forms of advertising objectives. The first form is related to sales and then, in turn, to profits. The second classification includes those advertising objectives which are related directly to corporate objectives rather than being tied to the intervening step of marketing objectives. The latter category involves such advertising as public service and corporate image building.

The major concern in this paper has been with the advertising which is directly related to sales. There are several reasons for this. The first is that the great majority of the advertising of today is of the sales oriented type. Also, this type of advertising is more closely tied to profits and therefore, lends itself more readily to an economic analysis of the type presented here.

It is unfortunate that the relationship between communication and sales is not now known. If it were, the model of the system would be much easier to utilize. As it is, these relationships can only be a matter of conjecture. However, it may be that these educated opinions contain a certain amount of truth.
It seems clear that if the expenditure-sales relationship could be measured, there would be little argument that selling is the proper function of advertising. Even though this cannot be directly measured, it can be approximated. Therefore, it appears that the proper ultimate advertising objective is "to make sales".

This objective can be turned into a decision criterion of "given the advertising budget, maximize sales". In Figure XIV a technique is suggested which relates expenditure to sales. From this model, the advertising budget can be derived. Other points, which are generated in the process, would lead to the optimum sales level and might be considered targets or satisfactory points. It may be found later that the model was incorrect, or that external conditions have changed appreciably and therefore the model has changed. Even if conditions have not altered significantly, feedback is still needed for control of the personnel and factors under the manager's command.

In addition, quotas may have been established so that the personnel under the advertising manager might have specific numbers toward which to work. These targets could be set independently of the rest of the
system so that they provide maximum incentive for each individual.

It would seem that under this systems approach, lower-order decision aids are provided. These take the form of targets, decision constraints, satisfice points, and decision criteria. Further, control and evaluation are provided by the feedback system. Direction, efficiency, and coordination are provided by the targets and forecasts. These statements should provide the sense of direction necessary to achieve these qualities. Motivation is gained from quotas and targets which are set specifically for this purpose. The quota or target may be generated outside the system or may be based upon an analysis similar to the one presented in figure XIV.

From the above analysis it appears that the systems approach, which has been described, has all of the advantages claimed for the goal-setting process. In addition, the systems approach eliminates one basic assumption of the goal-setters, i.e., that the first number is optimum or will produce the optimum relationship if translated into lower-order goals. The systems approach, in fact, generates all numbers. The conclusion seems to be that the systems approach provides a workable, superior alternative to goal-setting.
CHAPTER VIII

SUMMARY AND CONCLUSIONS

Advertising and marketing objectives have been much discussed in the current marketing literature. It appears, however, that in this most basic area, there is still a great deal of fuzzy thinking. The purpose of this chapter is to attempt to summarize and clarify the thinking with regard to the setting of "goals". This will be done in the following manner. First, a discussion of the confusion of terminology which exists in the current literature is presented. Then, the method of goal-setting, as expounded in the current literature, is explored. Next, this step-down method is evaluated. Finally, an alternative systems approach is suggested.

What is a Goal?

Typically, the first step in setting goals has been to distinguish between goals and objectives. Usually the term "objective" has been used with a long-run connotation while "goal" is used to indicate a short-run, concrete aim. Colley makes the following distinction:
Objective: A broad aim, desirable end.
Goal: A goal is an objective that has been made specific as to time and degree.¹

It should be noted, however, that there is no unanimity in this distinction. Some authors feel that "goal" is long-term and "objective" is short-run.

Another problem seems to be that the word "goal", itself, has several meanings. The following list presents definitions of the terms most commonly confused with "goal." With each definition there is a statement referring to the definition, but using the word "goal" rather than the proper term. It is from these many confused meanings of the word that one of the major problems of the goal-setting literature arises.

1. **Objective**—A non-quantitative statement of intent. ("Our 'goal' is to achieve market leadership.")

2. **Goal**—A quantitative statement of performance established for the express purpose of basing other quantitative statements upon it. ("If we are to achieve our sales 'goal' of one million dollars, then we must set an advertising 'goal' of 33 percent awareness by the end of the year in the relevant market.")

3. **Forecast**—A quantitative statement of an expected level of performance, given a set of assumptions, used as an input in planning. ("We have been growing at the rate of 10 percent a year and last year our sales were $100,000. This year our sales 'goal' is $110,000.")

¹Colley, DAGMAR, p. 6.
4. **Quota or target**—A quantitative statement of some specific level of performance, used primarily for motivational purposes. ("Our 'goal' is to capture 28 percent of the relevant market.")

5. **Decision criterion and constraint**—A quantitative or non-quantitative statement used to evaluate alternative courses of action or aid in decision making:

   A. **Decision criterion**—A measure of performance, such as sales or profits, which the decision-maker attempts to optimize, subject to certain limitations. ("Our 'goal' is to maximize sales given a marketing budget.")

   C. **Decision constraint**—A statement intended to provide a cutoff. ("Our 'goal' is to realize at least a ten percent after tax return on investment, so reject all alternatives which will not yield this percentage.")

Even though the word "goal" is used in all of the above ways, it is suggested that for consistency in this paper its meaning be limited to definition number 2 and that the other words be substituted wherever appropriate.

The emphasis in these definitions is upon the use made of the statement. If a general statement of the intent of the corporation is needed, then this should be in the form of an objective. A statement—such as the ones generated in the goal-setting process—wherein a quantitative statement is established for the express purpose of basing other quantitative statements upon it.

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2 These definitions were originally set forth on page 23.
is called a goal. It is only in this narrow sense that this word is used in this study.

Inasmuch as the definitions of forecast, quota, target, decision criterion, and decision constraint are so often confused with "goal" they have been defined here to eliminate much of this overlap.

Does it really make a difference if a forecast, for example, is called a goal? It would seem that if we call grass, greenery, that this might be correct. But greenery has a less specific meaning than grass. In the case of greenery and grass it may make little difference to the average person which term is used. However, to the horticulturist the distinction becomes quite important. So, too, the business decision-maker should be concerned which term is used. Each word is suggestive of different techniques and different uses.

Forecasts, quotas, or decision criteria are completely different concepts. The forecast represents the best estimate, given a set of assumptions, of a level of performance for some time in the future. A quota, on the other hand, is a tool to be used for motivational purposes. A decision criterion is a statement which is intended to help the decision-maker in his choice of alternatives. They are all related, but represent different problems. Just as grass can be called greenery, it is not interchangeable in specific usage.
Hierarchy of Goals

Throughout much of the literature, the reader finds a plea to establish lower-order goals that are consistent with higher-order goals. The goals of the marketing department should be consistent with those of the firm. Likewise, the goals of the advertising department should be consistent with the goals of the marketing department as well as those of the company. This process of establishing these goals is referred to as goal-setting.

Typically, the writing dealing with advertising goals states, or implies, that there is a communication-sales-profitability hierarchy. That is, communication goals should be set within the framework of the sales goal. Sales likewise, should be directed in some way toward profitability. It is also suggested that there may be other hierarchies, such as communication to build corporate image or public service advertising to make the community a better place in which to live. Generally, the hierarchies which are based upon an economic relationship—that is, those stated in terms of profitability—seem to lend themselves to the goal-setting process more readily.
Assumptions of the Goal-Setting Process

There are two critical assumptions in the goal-setting process. The first basic assumption in the setting of consistent lower-order goals is that a model of the system exists. This model may be implicit or explicit; that is, the advertising manager may have a "feeling" of how the system works, or he may have expressed this feeling in mathematical form. Nonetheless, if the advertising manager is supposed to set communication goals which are consistent with sales and profitability goals, he must have some knowledge of how his decisions will affect these areas.

The second assumption of the goal-setting procedure is that the initial number, upon which all lower-order figures are based, will result in an optimum when translated by the process. A corporate goal of a 10% return on investment may be set. From this number the step-down process may develop lower-order goals, which would be necessary to generate the 10% return. However, the question remains, "Why set a goal of 10% return? Why not set one of 15% return?" Herein lies the weak link of the goal-setting process. Many company executives seem willing to assume that a model of some type exists. They may not know exactly the nature of the relationships, but they are willing to concede that rough guesses are
better than no guesses. However, the assumption that the initial number will yield optimum results seems less realistic. For this reason many companies have been reluctant to use the goal-setting process.

What is the answer to this dilemma? Is it possible to develop an alternative approach which will eliminate the second assumption of the goal-setters? If a model of the relationship does exist, it can be used to generate all numbers. This is demonstrated in Figure XIV.

**Systems Approach**

Through the systems approach, which has been outlined in this dissertation, one may distinguish among the concepts of forecasts, quotas, targets, decision constraints, and decision criteria. How does this approach work for advertising? The first step is to find the relationships among corporate objectives, marketing objectives, and advertising objectives. These objectives are non-quantitative statements of the aims of the company at each given level. An example of this type of relationship is found in Figure II. Here the relationship of each advertising objective can be traced through the intermediate levels into the appropriate ultimate corporate objective.

The next step in the systems approach is to translate one or more of these objectives into decision
criteria for each level. In the case of the advertising department, this may be, for example, to maximize exposure per dollar of expenditure.

Another step in this process is to explicate the model of the system. This can be done in graphic form as shown in Figures IX-XII. The method that is described here is that relationships between the two variables be determined for several levels. For example, the level of awareness thought to be necessary to gain various sales levels can be plotted and an awareness-sales curve can be drawn. Once the relevant relationships are explicated, they may be presented on a single, four-quadrant chart, as seen in Figure XIV. In this way the relationship between expenditure and sales can be seen. Then if equal return of investment lines are added, the one which is tangent to the sales expenditure curve will show the maximum expected profit, the expected sales level, and the optimum expenditure for advertising. These numbers then become the targets toward which effort is directed. These target figures may also be considered satisfice points or points below which additional units of the item have high utility, but above which, additions have low utility. These satisfice points enable the decision-maker to determine the expected value of alternatives and thus aid in the decision-making process.
The next step is to develop models which seem appropriate in order to forecast future conditions. Also, models can be established to form a quota system which is intended to provide the maximum output from the individuals working in the system.

The final step in the systems approach is to provide for a feedback of information for control and to modify --where needed--the models. The entire system, it should be noted, must operate within the constraints of the business world. Some of the more common constraints are shown in Figure IV.

Advantages of the Systems Approach

The systems approach does not eliminate all problems of the decision-making process. It is intended to place the various aspects of decision-making in proper perspective. The major advantage which the systems approach has over the goal-setting process is that the initial number is generated in a manner which is more likely to produce an optimum relationship. The systems approach generates all figures from models. The goal-setting process generates all but the first figure. This is the great distinction.

Also the systems approach has a dynamic quality which is lacking in the goal-setting technique. It is from the feedback, which is built into the system, that
this feature can be achieved.

The systems approach alternative has all the claimed advantages of the goal-setting process. These include:

1. Control and evaluation
2. Direction and efficiency
3. Coordination
4. Motivation
5. Guideposts for decisions

The advocates of the goal-setting process, it would seem, believe these factors to be the advantages of their procedure. However, most of these can be traced to other concepts—such as, forecasts, quotas, decision criteria, etc.—which are often confused with the term "goal".

The systems approach, on the other hand, clearly recognizes these differences. Numbers which are to be used for planning and direction are called forecasts. These numbers are generated in such a way that they represent the best estimate of some future level of performance. Motivation seems best gained by numerical statements which are established with this aim in mind. These are termed quotas and targets. Both of these types of statement may be translated by the individual into satisfice points. Decisions may then be based upon these satisfice points. These statements provide a frame of reference whereby alternatives can be effectively and efficiently evaluated.
Summary of the Criticism of Goal-Setting

1. The goal-setting process makes two critical assumptions; that a model of the system exists and that the initial figure upon which all subsequent numbers are based, will yield an optimum relationship.

2. If the first assumption is valid, the second is not needed since the starting figure may be generated through a manipulation of the model in order to maximize some decision variable—such as profits.

3. This manipulation provides a systematic procedure whereby goals may be made more profit oriented.

4. It can be concluded, therefore, that the goal-setting process will not necessarily generate the optimum relationship.

5. Further, many of the advantages claimed for the goal-setting process result, in fact, from forecasts, quotas, targets, decision criteria, and decision constraints.

6. What seems to be needed is an over-all systems approach bringing into proper relationship the firm's objectives, forecasts, quotas, targets, decision criteria, and decision constraints.
Model of the System: A Summary

What then is the proper relationship among objectives, forecasts, quotas, and decision criteria within the decision-making framework? Corporate objectives should be confined to use as statements of ultimate corporate intent. They should not be used as intermediate decision criteria in that a better alternative is available; i.e. targets or satisfice numbers based upon models of relationships which reflect these ultimate corporate aims. These models seem to generate more realistic statements than goal-setting. Models, however, are subject to the same limitations as goals in the step-down sense, in that if no relationship exists, neither goals nor models can be used intelligently. Forecasts are the end product of certain models and the inputs to others. Since forecasts are, by definition, the best estimates of conditions at the end of the period, given a set of assumptions, it seems rational to use them as inputs to models rather than using step-down goals. Quotas should be used to help solve problems of motivation. The quota should be the output of a model which is constructed specifically to deal with these motivational problems. Finally, an information system must be established by the firm to provide the raw data and the feedback necessary for improvement. This information is the coordinating
link in the decision-making process.

Conclusions

What has been suggested in this dissertation is that a systems approach be adopted as a workable alternative to goal-setting. The systems approach attempts to build a model which represents elements of the decision-making process. The systems approach has the further advantage that the initial number, upon which all lower figures are based, is so set that it will provide the optimum relationship according to some decision criterion—such as profits. In goal-setting, the starting number is critical, even though the process provides no way of determination other than guess. The systems approach is not dependent upon this number. It is, in fact, a by-product of the technique.

It is to be realized that both goal-setting and the systems alternative are dependent upon a model of the system. To the extent that the model accurately reflects the interrelationships, the techniques are workable. These relationships may vary from product to product as well as from time period to time period, hence no generalization is possible. What is suggested is that as a first approximation of this model the managers be asked relevant questions such as those used to derive Figures IX - XII. After these intuitive
models have been explicaded, the research department can verify their validity and make recommendations for their modification and improvement.

The explicaded intuitive models may not provide exact answers to management problems. They will, however, make decision-making oriented toward some specific decision criterion. At first, they may only point direction rather than provide exact answers, but as the models become better so, too, will the answers.
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PROCEEDINGS


REPORTS


UNPUBLISHED MATERIAL


