READINGS IN:

MOTIVATION

ACCOUNTING

MANAGEMENT . . . . .

RECOPILADORES:

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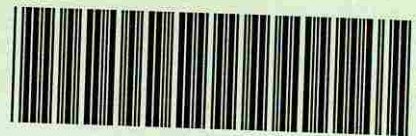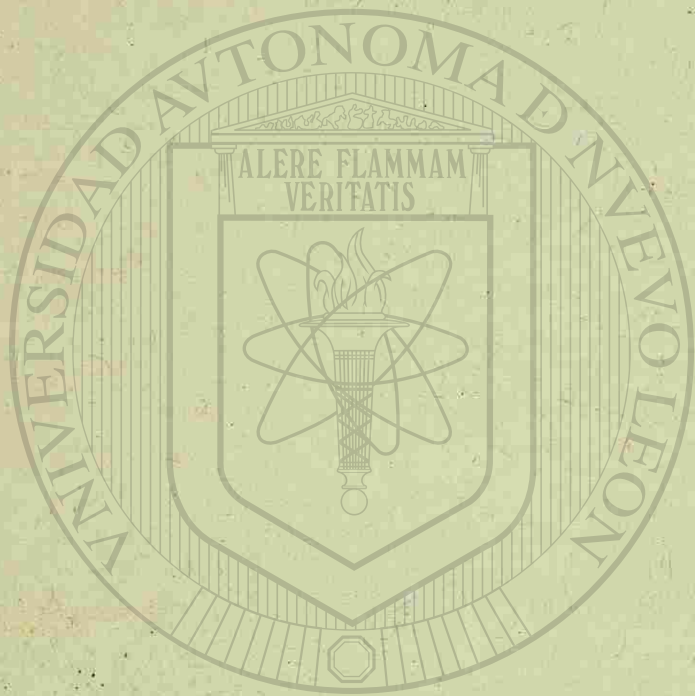CECILIO ALCOCER ILANAS

PROLOGO

Los objetivos principales de este libro
son relacionar al alumno con la terminología
utilizada en las distintas carreras de esta
facultad, y proporcionarle una noción intro-
ductoria de diversas materias impartidas en
semestres posteriores.

El alumno tendrá una oportunidad de
aplicar la técnica de traducción adquirida
en la secundaria y preparatoria y al hacerlo,
aprenderá también conceptos administrativos,
contables y otros más.

El material de este libro fue
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parte del personal técnico que hizo pos
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P R O L O G O

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El material de este libro fue recopilado por los maestros de Inglés de esta Facultad. Se tomó de diversos libros, seleccionando los temas más actuales y adecuados para cubrir las necesidades del alumno.

La elaboración de este libro está dedicada a la materia de Inglés Aplicado I y II.

Agradecemos la cooperación y apoyo por parte de la Dirección de esta Facultad y por parte del personal técnico que hizo posible la reproducción de este nuevo libro.

CHAPTER I

INNER MOTIVATION, INDIVIDUAL GOALS, AND TEAM-WORK

To a given job incumbent, work can be -
meaningful and satisfying only when it eli- -
cits and stimulates his inner motivation.
Then his experience on the job can be an inte_
gral element in a total life experience du-
ring which he moves toward his full potential
as a person. This hypothesis is a long way -
from the assumptions and practices of tradi-
tional management by Theory X (or System I).
But there is convincing evidence to support -
the statement that when a manager helps to re_
lease and develop hitherto neglected human ta_
lents by offering opportunities for psycholo-
gical growth on the job, he can increase an -
employee's productivity and thus contribute -
to organizational effectiveness.

If, then, a manager is interested in try_
ing to stimulate and reinforce the motivation
of his employees, what are some of the basic
propositions that he should consider? In --
offering an answer to that question. We be-
gin with Maslow.

Theory of Motivation:

Some General Propositions

Motivation Comes from Inside Each Individual
Fundamental human needs-such as air, food, -
and shelter; belonging, "ego" satisfactions
(including self-esteem, recognition from --
others, opportunities for achievement, self-
development, and self-actualization)--act as
powerful, though often unconscious, motiva-
tors of behavior. Inner motivation can be -
more decisive for behavior than any external
influence.

**The Whole Individual is Motivated, Not Just
Part of Him** A person's basic needs determi-
ne to a great extent what he will try to do
at any given time. All these needs are inte
rrelated because each "individual is an inte
grated, organized whole.... It is John -
Smith who wants food, not just Smith's sto-
mach. (Moreover, because) man is a wanting
animal," when John gets what he has wanted,
he soon feels the need for something more.

**While a Need is Satisfied, it is Relatively
Quiescent** During the time when a basic need
is adequately met (for a given individual),
it loses power as a motivator. In other -
words, when a need is no longer a felt need
(even in a man's subconscious mind), it does

2

not determine his current behavior.

Frustration of Basic Needs Makes a Man"Sick"
When anyone is blocked in trying to meet a -
need which he feels is essential for him, he
becomes to some extent mentally ill. However,
one of the difficulties in dealing intelli-
gently, and even in communicating, with - -
other people is that not everyone can say-
even if he is asked-what needs are currently
important for him. And some "sick" men turn
themselves into "half-men" by being unable -
to live up to their own central interests.

**Basic Needs Take Effect as Motivators on Di-
fferent Levels** In every individual, basic -
needs take effect as though they were arran-
ged in a hierarchy. This hierarchy is not -
rigid. Lower-level needs do not have to be
completely satisfied before higher-level --
needs can emerge as determinants for beha-
vior. Nevertheless, everyone can recognize
that different needs have priority at diffe-
rent times. For example, because man is par
tly an animal, he cannot exist without mini-
mum satisfaction of physiologial needs, such
as those for air, water, food, and shelter.
But because man is more than an animal, he -
has social, psychological, and spiritual --
needs which must also be met. Otherwise, he
cannot develop his characteristically human
potential. At levels higher than mere - -

3

physical existence, every human being needs opportunities to belong, to give and receive affection and loyalty, to use and develop his powers, and to spend his energies in the service of something he believes in.

Psychologists agree that deep and lasting satisfaction can be achieved only to the extent that high-level needs are met. The higher the level of the need, the greater its power to give enduring satisfaction. Moreover, frequent opportunities to satisfy a high-level need do not blunt a person's appetite. As Francis Bacon said of knowledge, it provides a kind of satisfaction "whereof there is no satiety".

Some high-level needs seem to be almost universal. But everyone's motivational pattern is somewhat different from that of any one else.

Motivational Patterns Are Unique Recognizing that John Smith is motivated as an integral and unique organism, a practical question becomes: How is anyone to know who John is (as an individual), still less what he might become (as an organization resource) if he could truly satisfy his deepest human needs? For this reason alone it is essential that every first-level supervisor try

4

to understand each of his subordinates-as an individual.

The Self-concept as a Unifying Force According to Gellerman, unifying forces run through each individual's motivational history. One of the most powerful is the drive to actualize his own image of himself. "The outlines of a person's self-image are fairly well etched in early childhood; thereafter.. they do not ordinarily change radically... The individual remains true to his symbolic self". For example, a child who early sees himself as a leader will, if possible, try to behave that way in later life. Therefore, anyone who wishes to interact productively with another person should seriously try to answer the questions: How does he see himself? Who does he think he is? What is he trying to do?

Two things that each individual is always trying to do, consciously or otherwise, are: to act like the person he thinks he is, and to get what he thinks he can (and should) have. In short, everyone "is always following a strategy (which seems to him) sensible for getting along in the world he thinks he lives in".

Effect of the Environment as Perceived How-

5

ever, a person's ideas of what he most needs and how he can get it are the product of his experience in a given environment. Here a second unifying force makes itself felt. It should be noted that a person's interpretation of what his environment can do for him, and to him, is not a direct response to objective facts. As emphasized by Carl Rogers, what counts, for psychological development, is that part of the phenomenal field which "is experienced (consciously and unconsciousley and unconsciously) by the organism".

Sometimes the experiences of an individual's adult life fail to confirm the lessons he learned as a child about how best to handle the events and persons that make up his perceived environment. When adult experiences differ drastically from those in which a person's self-image was formed, that individual is likely to be in serious trouble. For example, if a person continues to assert himself aggressively, although his assigned role is that of a subordinate in a system of authoritarian management, he will almost certainly get into trouble with his organizational superiors. On the other hand, if, in order to avoid having trouble with other people, an employee changes his behavior on the job so much that it no longer matches his own motivational pattern, he is in deep trouble within himself. For instance, a person who is naturally self-reliant

and highly motivated may give in to environmental pressure. In so conforming, his response in words and action becomes that of a yes-man. But now that he no longer responds to his inner motivation, his productivity tends to be reduced to the point where he does just enough to get by. Such giving in and giving up is, in effect, "mental retirement".

At the organizational level of lower and middle management, this environmentally conditioned response has been characterized by Blake and Mouton as the 1,1, managerial style.... (A manager with this orientation) has learned to be 'out of it' (doing just enough to avoid being dismissed). Little is expected of him and little is given by him.. The 1,1 approach is unnatural. It comes to those who have accepted defeat.... This kind of accommodation amounts to "being present, yet absent".

All Behavior is Determined, but Not All of It is Motivated To some extent, every intelligent and flexible person responds to environmental pressures. As Maslow has pointed out, "There are many determinants of behavior other than motives". Those which make themselves felt in childhood are normally most important. Some are exerted by national culture, geographical location, and the

historical period in which a person happens
to live. Still other determinants of beha--
vior originate in the situation itself. He-
re is where ways of managing make a differen
ce-for people at work. Managers, at all or-
ganizational levels exert influences that --
affect the behavior of other employees. Eve
ry manager who sees this fact as a responsi-
bility for him will ask himself what kind of
influence his way of managing exerts on tho-
se with whom he works. He will want to know
what he can do to increase organization - -
effectiveness by helping to reinforce, in em
ployees, the drive toward satisfying high-le
vel needs which is potentially a powerful mo
tivating factor. He will want to find out -
whether newcomers who are members of minori-
ty groups have brought with them a feeling -
that "everyone is down on me anyway, so I -
could never get anywhere even if I did try".
If so, the manager should ask himself: "How
can I demonstrate that in this organization
people are recognized as individuals, not --
stereotypes? Promotion is open to everyone
who qualifies for it". In seeking answers -
to such questions, a manager wish to consider
other theories of motivation developed by --
behavioral psychologists with specific refe-
rence to job satisfaction.

A Controversial Theory:

The Duality of Man's Nature

8

Herzberg started from the premise that man's
nature has two entirely separate parts: the
animal nature and the uniquely human nature.
From there, Herzberg developed a theory of -
motivation whose salient points are as follo-
ws:

° Everyone has needs that derive from na-
ture as a human animal (corresponding rough-
ly to a Maslow's lower-level needs).

° Insofar as a man responds to his animal
nature, he is negatively oriented. He tries
to avoid pain and unpleasantness by adjusti-
ng to his environment. Maximum success in -
this effort can lead to the absence of dis-
content with a job. As a dominant orienta-
tion, it is conductive to mental ill health.

° The other part of man's nature is uni-
quely human. Behavior motivated by this set
of (high-level) needs consists in adjusting
to one's self. In this process, achievement
leads to the feeling that one is becoming mo
re of a person by growing in the direction -
of self-actualization. This type of inner-
directed adjustment contributes to strong --
and lasting satisfaction, to greater produc-
tivity, and to mental equilibrium.

9

° According to Herzberg, both sets of needs are "unidimensional". Each relates to only one side of man's nature. It would therefore follow that environmental factors which affect a man's attitude toward his job must also be divided into mutually exclusive categories. This view is in marked contrast to the traditional one-factor theory of job attitudes in which any job-related factor may be a source of both satisfaction and/or dissatisfaction.

In seeking empirical data to test these postulates, Herzberg and his associates developed an interview method by which they could gain insight into individual motivational patterns. They undertook to study as a unit the "factors-attitudes-effects" (FAE) complex.

"Satisfiers" and "Dissatisfiers" Findings of Herzberg's first major study are pictured in Figure 6-1, in which the length of each block shows the frequency with which first-level factor appeared in the sequence of events reported as satisfying or dissatisfying. The width of each block shows the reported duration of satisfied or dissatisfied feelings.

As hypothesized, the directly job-related factors (at the top and right side of

Figure 6-1) were found to have a more lasting effect than those at the bottom and to the left of figure 6-1, which concern the context or surroundings in which a person does his job.

Herzberg's interview data (and subsequent studies made by other researchers using the same method) also confirmed the hypothesis that factors of job content (the satisfiers) can stimulate high motivation and increased productivity. The factors classified as dissatisfiers were reported more often as part of a negative job attitude. Moreover, according to Herzberg, even when they are adequately provided for and occasion no dissatisfaction, they cannot raise employee morale above a neutral level. Among these "Hygiene" or "Maintenance" factors, Herzberg found that "company policy and administration" was the most important in "determining bad feelings about a job, "and that salary "has more potency as a job dissatisfier than as a job satisfier".

Critics of Herzberg's motivator-hygiene duality question the validity of classifying money as a hygiene factor. But the feature that has aroused widespread criticism is the idea that satisfiers and dissatisfiers are unidimensional; namely, that a factor such as achievement, which can be strongly motiva

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ting, cannot also be demotivating (demoralizing) when there is no opportunity to satisfy this need.

Interviews which we have held with managers and supervisors during management development seminars have led us to disagree - - with Herzberg's classification of interpersonal relationships as a dissatisfier and also with his statement that a motivator cannot - operate in reverse-as a demoralizing factor. First, there were frequent indications that an interpersonal relationship had been a - - strong motivator for many people when support that could have been withheld-was offered by an organizational superior or an associate. Second, our interview material clearly showed that interpersonal relationships can also be a powerfully demotivating factor. Many - persons reported that their will to work had been undermined by evidence that an organizational superior lacked integrity and failed to follow through on promised support. This lack of confidence in certain superiors was frequently cited as a primary reason for - - having requested a transfer or for having -- quit.

Nevertheless, these interviews have also convinced us that Herzberg's contrast between job content and job context is significant for the understanding of inner motiva-

tion. Intrinsic interest of the work itself, opportunity to develop one's potential and -- growth on the job, were uniformly regarded as more important than the physical surroundings in which such meaningful work was done.

Convincing support for Herzberg's theory of satisfiers (responsibility, achievement, - recognition, and career development) has been given by controlled experiments in the Bell - Telephone System. The results convinced members of top management that reshaping jobs to provide maximum satisfaction in the work itself is worth far more than it costs-not only because there is a dramatic reduction in employees turnover, and therefore also greatly reduced training costs, but also in higher productivity and in career development for employees. The large proportion of employees who were able to meet gradually increasing opportunities for responsibility demonstrated - - their promotion caliber.

Consequently, we find ourselves in complete agreement with Ford that Herzberg has - (1) made a great contribution in emphasizing the significance of "work itself" (job content) as potentially motivational; (2) provided a simple and stimulating framework for -- further research; but (3) overstated the case for disregarding "hygiene or maintenance factors". Unless pay and benefits are high, - --

even a satisfied employee may quit.

Hackman's Multidimensional Concept of the Motivation to Work

Hackman (working independently) agrees with Maslow and Herzberg that there is a hierar-chy of basic needs. However, he strongly emphasizes the significance of differences between individuals and notes that there pro bably are no pure types of motivational pa tterns. Using a structured questionnaire as part of an attitude survey, Hackman found that the words a person uses to describe his motivational feelings(for example, feelings of recognition, confidence, and accomplish-ment) indicate his degree of independence. Hackman agrees with Herzberg in differentia ting between work itself and the conditions surrounding work. He finds that some people are primarily "task-oriented", while others are "situation-oriented". Both types of res ponses are classified as "work-activity-orie nted". His motivational theory is based on responses to the total work situation, inclu ding interpersonal relations especially su pervision—as a potentially positive factor in the work situation that can reinforce mo tivation. Moreover, he is convinced that his system of describing work motivation applies to men and women, salaried or hourly rated, and regardless of length of employ-ment.

14

According to Hackman, a work-motivated adult can be described by considering seven basic dimensions: (1) His characteristic le vel of physical energy, and (2) the extent to which his energy-high or low-is work di rected. Highly motivated people "are iden-tified with work in a social context that yields closure experiences". e.g. opportu-nities to complete a given task. Such an adult regards work (3) as a medium through which to exercise skills, or (4) as a means to attain and exercise responsibility over other people and their activities, or (5) as a means to some end extrinsic to work it self (such as wealth, security, or prestige). To some individuales, ordinary pressures of work and of the "conditions which surround it" (6) feel threatening and arose anxiety, or (7) seem irritating and arouse aggressive reactions.

In summary, Hackman sets up the follo-wing classification of motivational patterns: (a) "closure seekers," (b) "responsibility seekers," (c) "instrumentalists" means-to-end seekers, and (d) "emotional types, "who feel threatened or irritated by normal work press-ures.

Other Motivational Studies

Patchen's research, which was conducted in se lected units of the Tennessee Valley Authori-ty, took account of the following indicators

15

of motivation: "General job interest, inte-
rest in innovation, and attendance, as well
as pride in work and symptoms of stress".
"Aroused motivation" was found to be a func-
tion of three variables (one in the employee
himself and two in the work situation): (1)
an employee's inner need for achievement; --
(2) the degree of achievement possible in -
his job; and (3) the probability that incre-
ased effort on his part will lead to greater
achievement. However, research showed that
one cannot expect an employee to be strongly
motivated unless all three conditions exist
simultaneously. For example, if an employee
sees his job as one in which genuine achie--
vement is impossible or thinks that greater
effort on his part would not result in grea-
ter achievement, what incentive is there for
him to exert himself-even if he has an inner
drive to achieve?

According to the above findings, the le
vel of performance by an employee who has --
inner motivation for achievement can be rai-
sed by the following features in the work --
situation: (1) a degree of difficulty in his
job that is great enough to constitute a cha
llenge to him but not so great as to induce
stress; (2) a considerable degree of control
over his own methods; (3) the existence of -
appropriate standards for measuring perfor--
mance; and (4) feedback-that he regards as -
relevant and reliable-as to his degree of su
ccess.

16

Patchen also emphasizes the importance -
of individual differences in regard to rewar-
ds that people value. For example, some em-
ployees value an extrinsic reward, such as --
money, more than an intrinsic reward, such as
opportunity for psychological growth on the -
job. He also notes that when these four si-
tuational variables (a match of individual di
fferences and situational factors) appear in
combination, their effect on motivation is --
multiplicative rather than merely additive.

Porter and Lawer start by recognizing --
that behavioral research has long since expo-
sed as a myth the notion that a happy emplo-
yee is necessarily more productive than if he
were dissatisfied. However, they make three
significant qualifying statements. studies --
have shown that (1) job satisfaction is often
associated with high performance, (2) high sa
tisfaction is associated with low employee --
turnover and low absenteeism, and (3) it may
be more fruitful to think about job satisfac-
tions as a result rather than as a cause of -
high job performance.

In addition to the significant motivatio
nal differences noted by Patchen-those betwe-
en extrinsic and intrinsic rewards and indivi
dual differences in value attitudes by emplo-
yees to a given reward-Porter and Lawler - -
speak of an employee's "expectation" that --

17

greater effort on his part will enable him -
to obtain the kind of reward that he values
most. For example, if a rank-and-file emplo
yee puts a high value on money but works in
an organization where pay raises are given -
only according to length of service, why - -
should he be expected to exert himself bey-
ond the point where he meets minimum require
ments? Conversely, if another employee has
strong drives toward achievement and for con
trol over his own work methods (intrinsic re
wards), then satisfying these high-level - -
needs tends to result in high performance by
him.

M. Scott Myers agrees with major findin
gs summarized in the previous paragraphs. In
addition, he draws on experience at Texas -
Instruments in Dallas, Texas, with reference
to the following hypotheses:

°   A job becomes meaningful when the incum
bent (1) can see that his task relates to a
"meaningful chunk" of his personal goals and
(2) can plan and measure his achievement --
according to an effective "do-and-control -
system".

°   To have maximum effect on inner motiva-
tion, a goal must be (1) influenced by the -
employee as a goal setter; (2) visible-that
is, by direct feedback; (3) desirable; (4) -

challenging; and (5) attainable. Such a --
goal satisfies needs for growth, achievement,
responsibility, recognition, affiliation-the
need to belong and security.

°   Management systems must satisfy human -
needs that are both high-level and maintenan
ce-oriented. Participation by lower-level -
employees in planning and implementing such
systems is a form of job enrichment that can
give meaning to work experience of an emplo-
yee whose daily task would not, in itself, -
appeal to an achievement-motivated individual.

What Might All These Hypotheses Mean for a -
Manager?
After considering such research findings on
motivation, a manager might select those --
which seem to him most significant, and most
practicable, for his organization:

1 Motivation needs to be thought of -
both in relation to individual differences -
and in the context of the total work situa--
tion.

2 Inner motivation to satisfy high-le-
vel needs can result in high performance on
the job if these currently felt needs are sa
tisfied.

3 Intrinsic rewards, such as recogni--
tion from within and outside the group for -
attainment of goals, derived from job content,
can greatly stimulate inner motivation and --
therefore high performance. But extrinsic re
wards, such as increased pay or promotion, --
may be seen as appeasers and annoyers if they
seem unrelated to high performance.

4 "Hygiene seekers" should not be appo-
inted to managerial positions, chiefly becau-
se (a) they are to some extent mentally ill;
(b) they do not naturally plan and organize -
work for their subordinates so that intrinsic
rewards can be attained, and (c) their junio-
rs are likely to imitate them.

5 For purposes of placement and selec--
tion, (a) "closure seekers" should not be gi-
ven top-management positions because work re-
quirements at that organizational level do --
not characteristically permit this kind of -
experience; (b) "responsibility seekers" shou
ld be placed in managerial and supervisory po
sitions because human relationships are extre
mely important to them; (c) instrumentalists"
--who regard work as means to their own ends-
can be useful in hourly rated positions; but
(d) those who become anxious and irritable, -
even under normal work pressures, are poor em
ployment risks.

20

6 Supervisors can stimulate and rein--
force inner motivation when they give every
employee (their subordinates) the highest --
practicable degree of responsibility and con
trol in regard to the methods by which they
work.

7 Goal setting for each employee shou-
ld be both career-oriented and task oriented.
Progress toward each goal should be challen-
ging for him, as well as visible and attain-
able. Even for rank-and-file workers, task-
oriented goals can thus satisfy high-level -
as well as low-level needs.

Any manager interested in testing possi
ble connections between job attitudes, inter
personal relationships, and high performance
needs to clarify the meanings of key terms -
such as "team-work," "team spirit." "partner
ship," and "cooperative relationships".
These terms have a core of generally accep-
ted meanings, but they also have special --
connotations for every individual. Here is
what the following terms connote to us.

TEAM RELATIONSHIPS
By teamwork we mean well-coordinated and --
effectively synchronized interaction to achie
ve a shared objective.

21

3 Intrinsic rewards, such as recogni-- tion from within and outside the group for - attainment of goals, derived from job content, can greatly stimulate inner motivation and -- therefore high performance. But extrinsic re wards, such as increased pay or promotion, -- may be seen as appeasers and annoyers if they seem unrelated to high performance.

4 "Hygiene seekers" should not be appo- inted to managerial positions, chiefly becau- se (a) they are to some extent mentally ill; (b) they do not naturally plan and organize - work for their subordinates so that intrinsic rewards can be attained, and (c) their junio- rs are likely to imitate them.

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Prerequisites for effective teamwork include (1) commitment of all members to shared ob--jectives; (2) a relatively small number of persons-to permit mutual understanding between all teammates; (3) ability of each member to contribute toward the common goal (s); (4) proximity and frequent opportunities for informal face-to-face communication-so that all members can come to know one another well; and (5) constant practice. Only by intensive and continuing practice in interaction --with the same persons can anyone come to --feel sure of what those individuals can and will do as teammates. That assurance makes it possible, in a crisis, for team members to think and act in concert-with few words -or none-effectively meeting shared objectives in a changing situation.

By team spirit we mean (1) readiness to join with others in activity toward a common goal, (2) loyalty to other team members individually and to the team as a social unit, and (3) willingness to pay a high price, in personal effort, to accomplish a team goal.

Pablo Casals, in the orchestra which he founded and conducted in Barcelona, created a situation where team spirit and the prerequisites for effective teamwork enabled him to work with 88 musicians (most of them without previous orchestral experience) and develop an outstanding group of symbolic players.

Two rehearsals a day met several preconditions mentioned above. But the spirit developed by members of the orchestra was probably the most significant factor. Casals inspired them with his own feeling of dedication to music:

I stressed that each musician must learn to play, on the one hand, as if he were a soloist and, on the other, with the constant awareness of being an indispensable part of a team.... Human teamwork (in music is) the sense of being one of a group working together to achieve the ultimate in beauty.... We share the great privilege of bringing masterpieces to life. We also share a sacred responsibility. We are entrusted with the duty of interpreting these masterpieces with utter integrity.

Prerequisites for team spirit and for partnership are so similar that we have combined them below.

Partnership, according to Webster, is "the state of being a partner; participation". This state of being may be further clarified by describing the feelings which are characteristic of a partner. They are similar to

those of a teammate. But what is distinctive about a partner is his recognition that he - can contribute to shared objectives by exercising managerial functions. If he is a junior or working partner, he does not expect to participate on equal terms in making all major - decisions. But he can count on the following: (1) having a share in planning, organizing, _ directing, and controlling all activities for which he assumes responsibility; (2) being invited to express his ideas in regard to all - decisions whose consequences will seriously - affect him; (3) having his constructive suggestions judiciously considered (though not necessarily adopted); (4) receiving reasonable explanations as to why any of his suggestions are modified or rejected; and (5) being treated with courtesy and consideration by - his other partner(s).

Prerequisites for team spirit and for a spirit of partnership are provided in a situation where individuals have opportunities to participate (1) with their minds and at the - level of ego involvement, as well as with mere physical strength or technical skill, (2) in small action groups, where effort is meshed, and (3) in achieving goals which all members see as important.

It is contrary to human nature to expect team spirit to develop before each individual

has learned by experience what teamwork can - do for him. Moreover, highly competitive relationships between peers (traditionally referred to as "healthy competition") and emphasis on superior-subordinate relationships are incompatible with what motivates a person who feels and functions like a teammate or a partner.

By cooperative relationships we mean -- those characterized by (1) willingness to engage in teamwork, (2) community of purpose -- with regard to long-term aims, and (3) commitment to a larger whole. Between members of a large organization who have no regular contact with each other, a cooperative relationship is the nearest thing to a team relationship which can prevail. Using the words - "teamwork" and "team" for activities which -- have any tinge of cooperativeness obscures - the highly effective interaction (team play) which can be achieved only in relatively - - small groups.

Prerequisites for a cooperative relationship among all members of a large organization include (1) A style of managing which -- fosters cooperation and free communication regardless of organization status or specialized function, (2) An organization structure which permits communication as needed between cross-functional work groups, and (3) Corporate po-

licies and goals which encourage feelings of membership and enlistment in the organization as a whole.

Where cooperative relationships exist, a considerable degree of teamwork can rapidly be developed when members of different work teams temporarily join forces on a common project, e.g., to cope with an emergency. Outstanding instances of such temporary teamwork have been given by employees in public utilities. After a hurricane, out-of-state line crews often pour into a disaster area, working with local teams around the clock to restore power. Cooperative relations may also develop into a team relationship when employees are recruited to work together on some special project. Whether or not this happens depends in large measure on the leadership exercised by the project manager.

Implementing These Ideas

Most managers know that they need good teamwork and strong team spirit but that both -- can be disadvantageous unless directed toward organizational goals. Having reached this point, an executive may usefully ask himself: Where does teamwork exist in this organization Toward what goals is it directed? What might I do to facilitate teamwork which could help to advance our major organizational goals?

26

Taking a Systems Approach

At this stage he might consider, and even -- consider doing something about, ideas presen ted in the previous chapters. As a starter, he might think of the entire organization as an integral whole, a total man-machine sys-- tem, in which relationships between the component parts are as important as the parts themselves. Then, in thinking about "The -- human organization," he could direct his -- attention to the smallest social units, work groups. Each of these can be regarded as a fundamental building block for a productive organization. Then, recognizing the relationship between individual behavior and environment, a systems-minded manager would -- not ask: How can we change the behavior of these individuals, so that instead of loafing on the job and resisting managerial controls, they will go all out for management objectives? Instead, his inquiry will be -- guided by the insight that behavior is a fun ction of interaction between a person and his environment.

Taking the total organizational situation as the environment, the executive might then reexamine the components of organization structure, the communication system, -- and corporate policies. Questions to be -- asked here include these:

1 Is our organization structure such -

27

that planning, decision making, and controlling are sufficiently decentralized to facilitate teamwork at various organizational levels?

2 Is our communication system such that ideas and information flow freely in all directions?

3 Do our policies provide adequate guidance for decision making by management representatives without imposing undue limitations on their initiative and judgment?

4 Are policy statements accessible to all who need to know about them and to use them?

5 How are our policies shaped up? Is all policy thinking done at the top level? Or do policy suggestions and evaluations and evaluations come from all segments of the organization?

Practicing Consultative Management

After making some such general review, the next step for a chief executive might be to discuss with his immediate work associates the managerial style which they believe in and try to practice. Does he, and do his associates, think that his way of managing is one which evokes a high level of participation from other employees? If so, how -- about their way of managing?

A chief executive who invites group appraisal of managing as practiced in the organization is using the consultative approach. In this way he demonstrates a feeling which is appropriate for problem solving as well as for appraising. By encouraging constructive criticisms and a "yes-but" response to his own statements he is practicing participative management.

Studying a Work Situation

An executive's next step toward fostering better team-work in his own organization may be intensive study of some work situation in which teamwork has demonstrably increased productivity. Such a situation may be observed wherever a management and a local union cooperate on increasing productivity.

In writing about such an experience, Lesieur has emphasized participation and teamwork as keys to its success. This

...doesn't mean giving people a "sense of participation," workers don't want

that. This plan means giving them
real participation...(It has enable)
Management and labor to get together
and mutually solve problems that --
will help them be more competitive..
(For a rank-and-file worker) it me-
ans working with your brains instead
of (merely) with your back.

Some executives have found it difficult -
to analyze objectively any way of managing --
which entails close cooperation with a union.-
Thus there may be advantages in observing how
participation and teamwork have been achieved
in a hospital before unions entered the picture.

Teamwork and Individual Goals in Nursing
During and after the Second World War, the nur
sing shortage became acute. To alleviate it,
nursing administrators (taking a leaf from the
book of scientific management) introduced the
so called "functional method" of nursing.
Strictly professional duties, such as giving -
medication and making rounds with attending --
physicians, were reserved for professional nur
ses. Nonprofessionals took over most of the -
less skilled work. For example, licensed prac
tical nurses (LPN s) were assigned such duties
as taking blood pressures and temperatures or
giving baths and back rubs. Auxiliary workers,
nurse's aides, and orderlies were assigned to
such tasks as making beds, carrying trays, and

escorting patients to other departments.

Professional nurses now had more time --
for highly skilled services. But because of
the effect on nonprofessional personnel, this
technically efficient system did not work out
as planned. Resentment and bickering develo-
ped between persons assigned to perform a num
ber of strictly limited tasks for many patie-
nts. Nonprofessionals found their work dull.
Many quit for better-paying jobs. And no one
had enough contact with any one patient to -
permit understanding him as an individual.
Thus, in the late 1940s, many nursing admini-
strators become convinced that the current me
thod of nursing care was not good enough-ei-
ther for the patient or for job satisfaction
and individual development by nursing perso-
nnel.

At this point, forward-looking nursing -
administrators saw the need and posibility of
developing genuine teamwork and team spirit -
based on concepts of "leadership, organiza-
tion, partnership, group response to goals, -
integrated action, and in-service training of
supervision." Nursing administrators in New
York and Boston launched independent experi--
ments in team nursing at almost exactly the -
same time. The following hypotheses were the
basic for specific plans to reorganize work -
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basic for specific plans to reorganize work -
and work relationships so that nursing perso-
nnel (from professionals to aides) could deri

ve direct rewards in job satisfaction while - also becoming more productive:

° Participation in nursing care by nonprofessionals needs to be guided and supplemented by professionals. But supervision by professionals need not restrict development of - nonprofessional personnel.

° A high level of participation by employees can be expected only when each can function up to the limit of his ability, contributing his experience and insight as well as his technical skill and physical effort.

° When employees have opportunities to participate in making plans they are expected to implement, a high degree of understanding and acceptance tends to motivate them toward superior performance.

° Participation at the level of ego involvement is prerequisite for the full development of each individual and for a kind of evaluation (of planning and performance) which - can continuously raise the level of group -- achievement.

° When participation is a strongly motivated response by "the whole man," there is no

need for an authoritarian type of inspection and control. Group supervision, group controls, self-control, and self-evaluation can effectively be supplemented by a leader who also functions as a working partner and is - thus in a position to understand the individuals with whom he daily works and communicates.

Plans and Assignments
Two kinds of interlinking plans and assignments help to weld members of each nursing - team into a well-knit action group. The medical care plan (formulated by the attending physician) provides a framework within which a plan of nursing care for each patient is - developed. This nursing plan is designed to meet the needs (psychological as well as - - physical of each patient. Thus every team - member can feel committed to a unified project and understand how his part contributes to the whole team effort.

However, before a nursing plan is even formulated, the first kind of assignment is made. The head nurse on each unit (ward) -- assigns specific patients to each nursing - team. Then, each team leader tentatively develops nursing-care plans for all patients - assigned to her team. On any given day, some part of her own work assignment may highlight the job-centered approach which charac-

terizes team action and disregards status.
For example, a team leader may decide to ma-
ke a patient's bed or to carry in a tray.
Such an apparently unimportant (nonprofessio
nal) task is an appropriate assignment for a
leader if by performing it she can create a
favorable condition for overcoming a communi
cation block which has prevented other team
members from reaching a patient.

Another way in which team nursing diff-
ers from traditional nursing practice in --
that a team leader no longer regards any in-
dividuals as "my patients". Instead, she --
keeps herself free to circulate among her -
teammates, all of whom are helping to care -
for "our patients".

Participation and Evaluation
Each team's long-range objective is continuo
usly to raise the level of care given to each
patient. Part of every team member's asign-
ment is to observe the response of each pa--
tient and to jot down suggestions for impro-
ving the plan for his care. These suggestio
ns are discussed at the daily team conferen-
ce.

Communication: In Team Conferences and betwe-
en Individuals
A daily conference, conducted informally by
the team leader, has the following multiple

purpose: (1) to make sure that each member -
clearly understands the what, how, and why of
her work assignment for the day; (2) to dis-
cuss and, if possible, solve problems encoun-
tered by team members either earlier in the -
tour of duty or the day before; and (3) to --
consider suggestions for improving some plan
for a patient's care.

Supervision and Inspection
The team leader's daily work assignment enab-
les her constantly to supervise and inspect-
what other team members do. However, her su-
pervision is not resented because her work --
associates can see that her professional know
ledge and up-to date understanding can be --
helpful to them.

When a team leader finds that something
has been done incorrectly or inadequately, --
she is expected to ask: What is accountable?
Is the plan for nursing care faulty in some -
respect? Was the work assignment unwise (per-
haps because the person was insufficiently -
prepared) Were the instructions unclear? In
correcting the performance of teammates, a le
ader is expected to do so with objectivity --
and friendliness. The focus of attention is
always on the job to be done.

Control
Experience with nursing teams has demonstrated

that control for quality and quantity of output can increasingly come from members of a work group. Members of nursing teams feel responsible for doing their best, in partnership with others who share responsibility for nursing care plans. And each of these plans meshes with a medical care plan, which fits into the whole plan by which each hospital undertakes to meet its major objectives. Thus, team members naturally feel a responsibility toward performance by the hospital as a whole.

Linkage and Cooperation with Other Hospital Personnel
The leader of each nursing team serves as a link to a health team. She works with the physician (the leader of that team) and cooperates, as need arises, with other members of a health team, e.g., a social worker, a dietician, or a clergyman. The head nurse is another link member. She confers with physicians and their associates on health teams. Sometimes, it has been in evaluating action taken in an emergency that the need for this kind of linkage could most clearly be seen as a means for suitable expansion for teamwork.

THE ORGANIZATION

An organization is a group of people brought together to achieve human goals. A human invention to meet human needs, its success depends upon how it is deliberately structured, how it deals with the structure that arises without deliberation, and how it defines and works toward its goals. These basic problems face every organization whether family or church, orchestra or art gallery, football team or bridge club, army or corporation. The primary concern of the industrial psychologist, however, is with the business and industrial organizations in which most people work in our modern society.

Formal Structure
The most obvious need of an organization is for rules and customs to specify how individuals should relate to each other. If people behave randomly toward each other, then chance of accomplishing a specific goal is small. Rules about how to act and react help remove some of the uncertainty from relationships and increase the likelihood of cooperation. If a rule says that the small man shall hold the chisel and the big man shall swing the sledge, they can go immediately to the task. If there is a custom in a council that the oldest man

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CHAPTER II

THE ORGANIZATION

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speaks first, then when the men gather about the council fire no time is wasted in deci-ding who the first speaker is to be. The major difference between an organization and a crowd is the presence of rules which specify how people are to act toward each other.

Human organizations have faced the problem of rules from the beginning. The Egyptians building pyramids 6,000 years ago and the Egyptians building dams on the Nile in modern times need to answer the same kinds of questions. How shall the work which -needs to be done be divided among the people who are available to do it? Who shall divide up the work? How shall workers be recruited, selected, and trained? What rules -shall govern them? What should workers receive for their efforts? How can "superior" workers be differentiated from "inferior" -workers? How can the organization survive until the job is done? Though the answers change, the questions remain the same.

The answers vary because of changes in Technology, communication, and the education level of the population. Above all, they are different because research has changed our thinking about what motivates human beings in organizations. In the first decades of this century people were thought to be motivated almost exclusively by economic considerations. Organizations thus sought to con-trol people by manipulating economic incentives. Any activity which did not seem to be an attempt by the worker to maximize his economic return was considered irrational.

Therefore the organization had to use rules which prevented men from working against --their "own best interests". These views of -man and organization were not restricted to -"ignorant robber barons," "evil captains of -industry," or "grasping paternalists." They were the ones accepted by almost every one, -including ministers, professors, and often -the working man himself.

Now in place of "economic man", we speak of "complex man" (Schein, 1965). Man is not motivated exclusively by economic considera-tions. Money is important, but the social -and personal aspects of organizations are also important. Each person brings to the job a different mixture of motivations, skills, -and traits. Since people want more than economic returns from the organizations in which they work and since people vary in how important they consider these other returns to be, organizations need rules of compensation and relation more complex than they were fifty or sixty years ago.

Organizational Charts
Frequently the mention of formal organization brings to mind a chart such as that shown in Figure 1-1. Such charts are a useful shorthand method for presenting the complexity and dynamic quality of human organizations. Behind the shorthand, however, is a network of policies, procedures, precedents, traditions, customs, laws, and rules which relate people to their work, people to each other, and the various functions of the organization to one another.

This total masterplan of the formal orga-
nization tries to specify how several things
should be (Tannenbaum, 1966, Chapter 1). Among
these are the work to be done, the speciali-
zed groups and individuals who will do it, -
the order in which the events of the organiza-
tion will proceed and how all these activiti-
es are to be coordinated. In addition, the -
system of authority as well as the methods --
and kinds of compensation must be made expli-
cit. All of this can be done at an abstract
level and specific people need not be taken -
into account. People, for purposes of esta-
blishing the formal organization, may be con-
sidered interchangeable and replaceable. For
example, in Figure 1-1 the vice-president for
production may be Bill Jones or Mary Jones or
any other person you may think of. In any ca-
se the vice-president will "report" to the --
president, "consult" with other vice-preside-
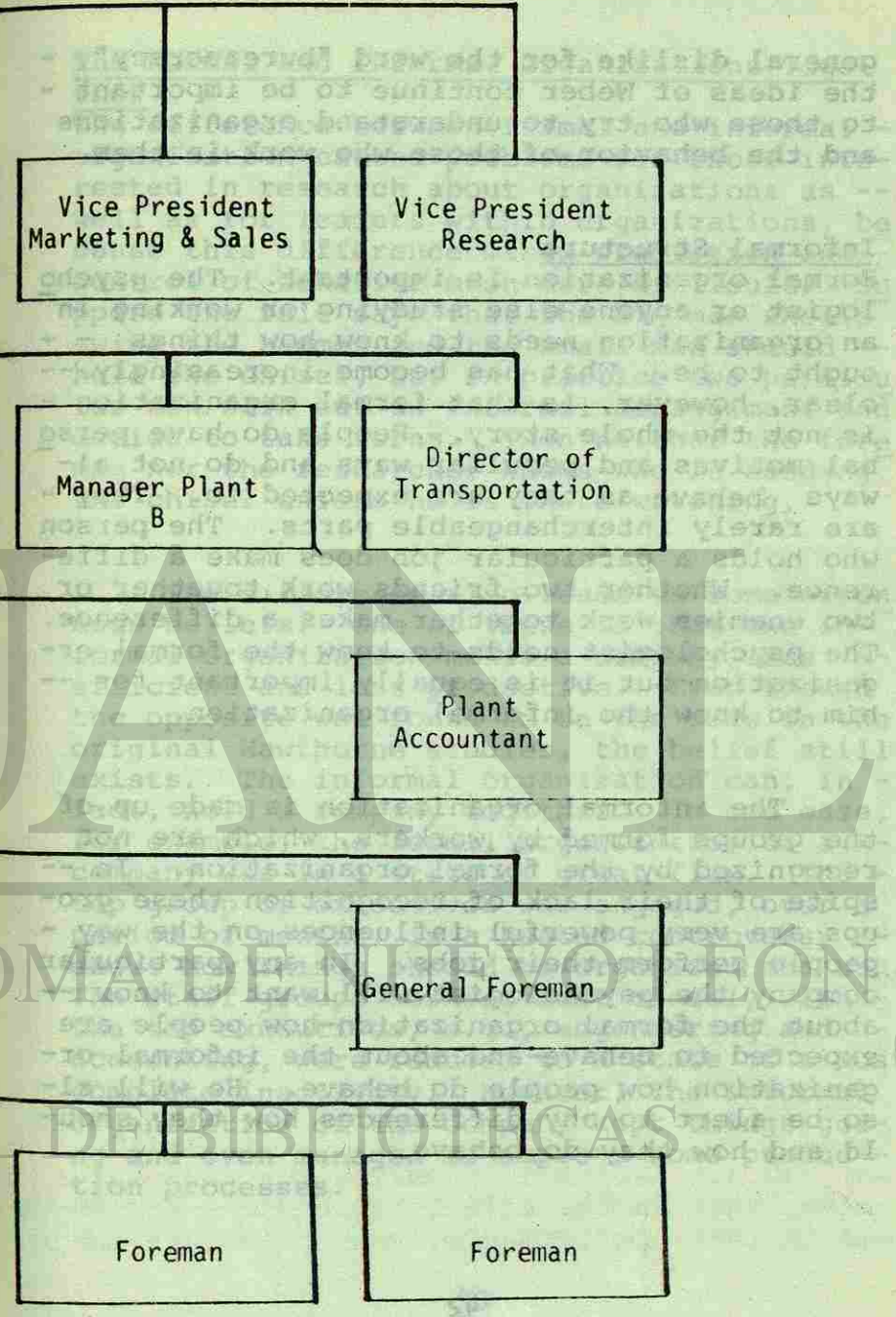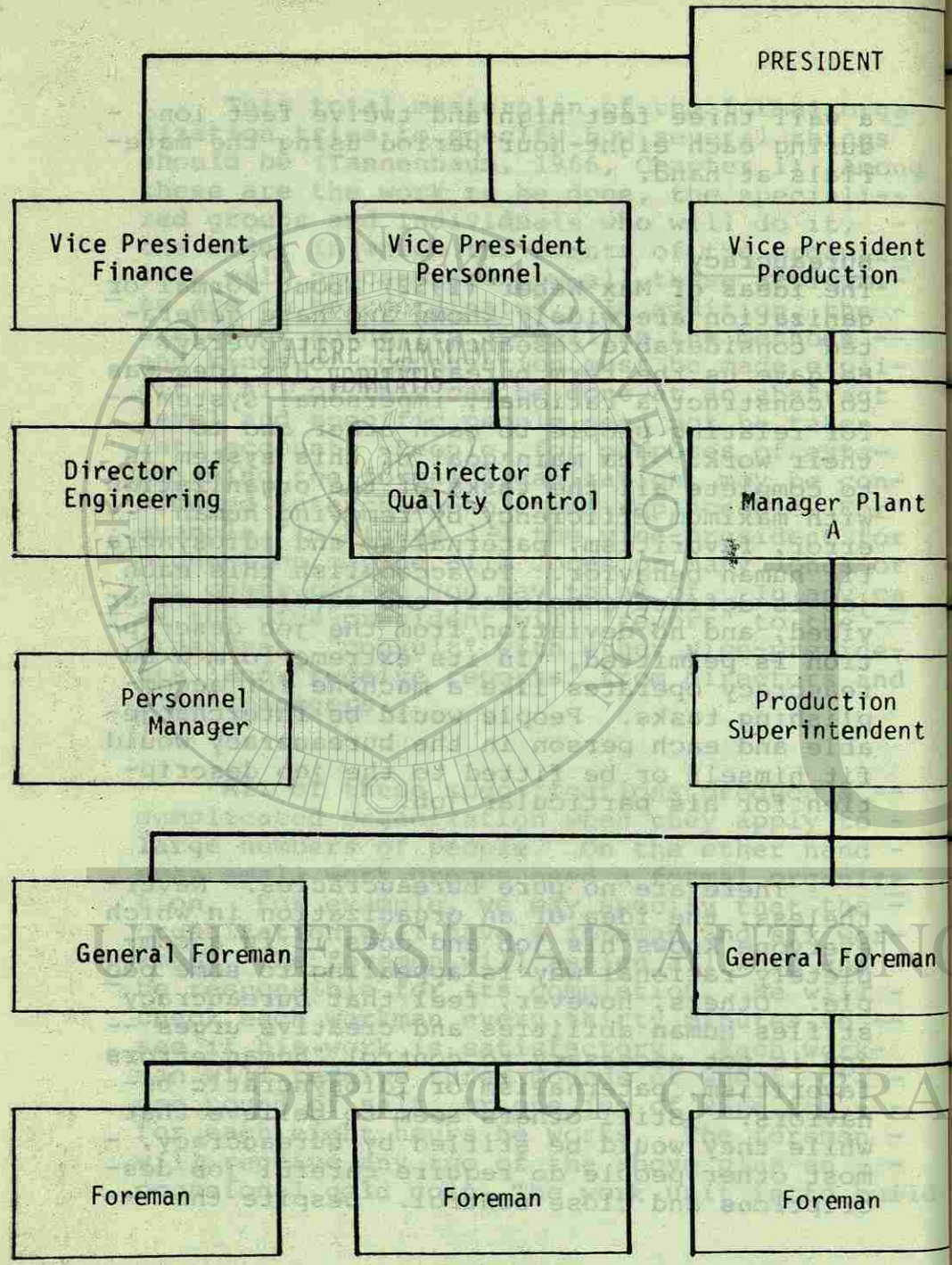nts, and "receive reports" from directors and
plant managers.

All of these specifications produce a --
complicated organization when they apply to -
large numbers of people. On the other hand -
even small work groups need a formal organiza-
tion. For example, we may specify that the -
organization will have a foreman and six wor-
kmen. The foreman will assign all work and -
be responsible for its completion. He will -
check each workman every thirty minutes to --
see if his work is satisfactory. Each work-
man will receive three pounds of wheat, or -
one pound of salt, or one jug of wine for -
for each eight hours he works. The foreman -
will receive any two of the above plus an - -
occasional gold coin. The work unit is to build

40

a wall three feet high and twelve feet long -
during each eight-hour period using the mate-
rials at hand.

Bureaucracy
The ideas of Max Weber (1952) about formal or-
ganization are widely known and have genera-
ted considerable research and controversy.
He gave us the term bureaucracy. His idea was
to construct a rational, impersonal system --
for relating people to each other and to - -
their work. Tha main goal of this system is
to complete all the tasks of the organization
with maximum efficiency by removing human --
error, favoritism, paternalism and idiosyncra-
tic human behavior. To accomplish this each
job is defined completely and carefully super-
vised, and no deviation from the job descrip-
tion is permitted. In its extreme form a bu-
reaucracy operates like a machine for accom-
plishing tasks. People would be interchange-
able and each person in the bureaucracy would
fit himself or be fitted to the job descrip-
tion for his particular job.

There are no pure bureaucracies. Never-
theless, the idea of an organization in which
everyone knows his job and does it in a com-
pletely rational way is appealing to some peo-
ple. Others, however, feel that bureaucracy
stifles human abilities and creative urges --
and is not necessary to control "human errors
favoritism, paternalism or idiosyncratic be-
haviors." Still others seem to believe that
while they would be stifled by bureaucracy, -
most other people do require careful job des-
criptions and close control. Despite the --

41

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                                PRESIDENT

Vice President    Vice President    Vice President    Vice President       Vice President
Finance           Personnel         Production        Marketing & Sales    Research

Director of       Director of       Manager Plant     Manager Plant        Director of
Engineering       Quality Control   A                 B                    Transportation

Personnel                           Production                             Plant
Manager                             Superintendent                        Accountant

General Foreman                     General Foreman                        General Foreman

Foreman           Foreman           Foreman           Foreman              Foreman
```

general dislike for the word "bureaucracy", - the ideas of Weber continue to be important - to those who try to understand organizations and the behavior of those who work in them.

Informal Structure

Formal organization is important. The psychologist or anyone else studying or working in an organization needs to know how things - - ought to be. What has become increasingly -- clear, however, is that formal organization - is not the whole story. People do have personal motives and peculiar ways and do not always behave as they are expected to. They - are rarely interchangeable parts. The person who holds a particular job does make a difference. Whether two friends work together or two enemies work together makes a difference. The psychologist needs to know the formal organization but it is equally important for -- him to know the informal organization.

The informal organization is made up of the groups formed by workers, which are not recognized by the formal organization. In -- spite of their lack of recognition these groups are very powerful influences on the way - people perform their jobs. In any particular company the psychologist will want to know -- about the formal organization-how people are expected to behave-and about the informal organization how people do behave. He will also be alert to any differences how they should and how they do behave.

42

The Formal and Informal Organizations Together

The difference between formal and informal - organization causes problems for those interested in research about organizations as -- well as for leaders within organizations, because this difference makes prediction and - control of behavior much more difficult. Suppose the rule says that the big man should swing the hammer and the small man should -- hold the chisel, but in practice two particular men work out an informal arrangement and decide to take turns. Then neither the foreman nor the researcher knows who is holding the chisel unless he is there watching.

The difference also leads to some erroneous beliefs. One of these is that the informal organization makes a company less -- efficient and less productive. Even though the opposite was found to be the case in the original Hawthorne studies, the belief still exists. The informal organization can, in - fact, hold a company together. In one case, for example, the formal organization of a -- company was in a state of great flux. The - top group of executives was engaged, over a period of months, in a heated controversy -- about how things should be organized and run. The staff groups working most closely with - the top executives, e.g., engineering and - accounting, were reduced to a state of almost complete inactivity. However, the informal organization of the company kept things going and even managed to improve some production processes.

43

A second misconception is that informal organization is restricted to the lower levels of the company. Informal organization has to do with how people behave and since vice-presidents as well as machine operators are people, informal organization exists at the top as well as the bottom. A group of vice presidents may agree "informally" that certain information should not be transmitted to the president. A group of supervisors may agree that certain decisions are to be accepted without argument, but see to it that they are implemented very, very slowly.

The psychologist needs to know about the informal organization in the particular company where he may be working and to know some general hypotheses about how informal organizations come about and how they operate.

Some investigators are primarily interested in the formal structure of organizations, i.e., formal organization. These people explore questions of who should report to whom, how many people should report to one boss, what is the relationship between line activities and staff activities. They want to know how the pieces of a company should fit together. Sometimes students and researchers with this type of interest give the impression that people in organizations are at best a nuisance. Other investigators are primarily interested in how people behave in organizations. To them the important questions are why and how informal organizations come into being, what is the effect of people's attitudes on their performance, how do leaders be-

have, and whether people behave differently in work groups than they do in other kinds of groups. These investigators sometimes give the impression that formal structure, rules and policies are a nuisance.

The structural approach and the behavioral approach are complementary, not contradictory (Bass, 1968; Leavitt, 1962; Pugh, 1966). More and more psychologists agree that how people act in organizations depends both on the particular skills, abilities and personalities they have and on the kind of organization in which they work.

Goals of Organizations
What is a goal? This simple question is hard to answer. It is somewhat easier to answer for an individual, but it becomes more and more difficult as we go from the goals of one person to two people to a small group to a large organization.

An individual's goal may be defined as a stating of what he hopes will be true at some time in the future. The student may say, "My goal is to get a bachelor's degree in four years". This can be expressed in a way more consistent with the definition as, "Four years from now I hope that this is a true statement: I have a bachelors degree." This way of thinking about goals raises several problems even at the individual level. Two major ones are: How far into the future do you need to go before the statement is true? How general or how specific is the statement?

A second misconception is that informal organization is restricted to the lower levels of the company. Informal organization has to do with how people behave and since vice-presidents as well as machine operators are people, informal organization exists at the top as well as the bottom. A group of vice presidents may agree "informally" that certain information should not be transmitted to the president. A group of supervisors may agree that certain decisions are to be accepted without argument, but see to it that they are implemented very, very slowly.

The psychologist needs to know about the informal organization in the particular company where he may be working and to know some general hypotheses about how informal organizations come about and how they operate.

Some investigators are primarily interested in the formal structure of organizations, i.e., formal organization. These people explore questions of who should report to whom, how many people should report to one boss, what is the relationship between line activities and staff activities. They want to know how the pieces of a company should fit together. Sometimes students and researchers with this type of interest give the impression that people in organizations are at best a nuisance. Other investigators are primarily interested in how people behave in organizations. To them the important questions are why and how informal organizations come into being, what is the effect of people's attitudes on their performance, how do leaders be-

have, and whether people behave differently in work groups than they do in other kinds of groups. These investigators sometimes give the impression that formal structure, rules and policies are a nuisance.

The structural approach and the behavioral approach are complementary, not contradictory (Bass, 1968; Leavitt, 1962; Pugh, 1966). More and more psychologists agree that how people act in organizations depends both on the particular skills, abilities and personalities they have and on the kind of organization in which they work.

Goals of Organizations
What is a goal? This simple question is hard to answer. It is somewhat easier to answer for an individual, but it becomes more and more difficult as we go from the goals of one person to two people to a small group to a large organization.

An individual's goal may be defined as a stating of what he hopes will be true at some time in the future. The student may say, "My goal is to get a bachelor's degree in four years". This can be expressed in a way more consistent with the definition as, "Four years from now I hope that this is a true statement: I have a bachelors degree." This way of thinking about goals raises several problems even at the individual level. Two major ones are: How far into the future do you need to go before the statement is true? How general or how specific is the statement?

44

45

Right now your goal may be to read the next - sentence within one second. That is a speci- fic and short-range goal. On the other hand, one of yours goals may be to devote your life to productive service to your fellow man. -- That is a very broad and general goal and a - very long range one. A third problem is how to measure progress toward a goal. The more specific and short-range the goal, the easier it is to know if you are making progress; the more general and long-range the goal, the har der.

If we try to define a goal for an organi zation, we still have the three problems of - range, specificity and measurement. We also have an additional problem, for an organiza-- tion is a group of people. "It is difficult to introduce the concept of organizational -- goals without refining the organization-treat ing it as something more than a system of in- teracting individuals". (Simon, 1964, p.2). If the organization is a small one, the goals of one especially powerful person may be the goals of the group or the members may talk un til there is complete consensus about the - - goals. If all the members of the group share a very powerful belief, e.g., there is only - one true God, then the goals of members and - the goals of the organization will quite like ly correspond to a high degree.

How does a group of people go about - -

46

making statements about the future when it - disagrees not only about what the future -- should be but about what the present is? How great a variety of statements, over how gre- at a time span, with how much generality or specificity, can an organization permit and still be an organization? Even if an organi zation can reach consensus or wide agreement on its goals at one time, how can the goals be changed as individuals within the group - change or as the environment in which the -- organization exists changes?

Despite the problems and unanswered -- questions associated with defining goals, - measuring progress toward goals, and finding ways of making statements of goals, organiza tions do have goals. They even try to state them explicitly. Some people leave organiza tions because their personal goals are in- compatible with those of the organization. Others join the organization because they li ke its goals. In the end, whether the orga- nization thrives or dies is based on whether there are enough people who will join and stay with the organization and whether the physi- cal and social environment surrounding the - organization is compatible with its goals?

Categories of Goals
All organizations have three different cate- gories of goals. In one category are the --

47

production goals. Organizations form to do -
something, and that something must be done --
efficiently and effectively. The army must -
win battles, the church must win converts, --
the hospital must provide aid and comfort, -
and the automobile company must produce cars
and trucks.

In a second category are the integration
goals. The organization must stay together -
long enough to get the jobs done and must re-
main intact to accomplish future jobs. Even -
if the rules which define the organization --
change, or particular jobs change, or particu-
lar people leave and others join the organiza-
tion, the chances of continued existence must
remain high. State University is still State
University but the rules which students and
faculty relate to each other have changed   --
greatly in the last thirty years. Chrysler -
Corporation no longer makes 1929 Plymouths --
and does not make DeSoto automobiles at all -
but it is still Chrysler Corporation. The --
United States Army of 1812 and the United Sta-
tes Army of 1972 are recognizeable as the sa-
me organization.

In a third category are the morale goals.
The people in the company must find the jobs
to be done interesting, engaging, stimulating,
or at least worth doing. If the job is not -
or does not seem worth doing, then eventually
it is not done and the production and integra-
tion goals are threatened.

48

Psychologist working with organizations need -
to know the goals of the company. They are --
aware of the three general categories of goals,
but for each company they need to know the spe-
cific goals in each category. From knowledge
of the specific goals psychologists attempt --
to develop criteria for measuring goal perfor-
mance and thereby make their major contribu--
tion to the company.

49

CHAPTER III

MANAGERIAL ECONOMICS

Managerial economics is economics applied in
decision making. It is a special branch of
economics bridging the gap between abstract
theory and managerial practice. Its stress
is on the use of the tools of economic analy
sis in clarifying problems, in organizing --
and evaluating information, and in comparing
alternative courses of action. While manage
rial economics is sometimes known as busine-
ss economics, it encompasses methods and a -
point of view applicable both in business --
and in other institutions faced with optimi-
zation in decision making. Economics is so-
metimes defined as the study of the alloca-
tion of scarce social resources among unlimi
ted ends. It follows that managerial econo-
mics is the study of the allocation of the -
resources available to a firm or other unit
of management among the activities of that -
unit. Such a definition implies that mana-
gerial economics is concerned with choice-
with the selection among alternatives.

Managerial economics is pragmatic: It
is concerned with analytical tools that are
useful, that have proven themselves in prac-
tice, or that promise to improve decision ma
king in the future. In the attempt to be -

50

practical it cuts through many of the refine
ments of theory. While it avoids some of --
the most difficult abstract issues of econo-
mic theory, it inevitably involves complica-
tions that are ignored in theory, for it --
must face up to the total situation in which
decisions are made.

One way to clarify the scope of a field
of study is to discuss its relation to other
subjects. Managerial economics has a close
connection with microeconomic theory, macro-
economic theory, the theory of decision mak-
ing, operations research, and statistics.
The fully trained managerial economist inte-
grates concepts and methods from all of the-
se disciplines, bringing them to bear on ma-
nagerial problems.

Microeconomic theory:
The main source of concepts and analytical -
tools for managerial economics is microecono
mic theory, also known as price theory or --
Marshallian economics.

Macroeconomic theory:
The chief debt of managerial economics to ma
croeconomic theory is in the area of forecas
ting. Post-Keynesian aggregative theory --
(the theory of income and employment) has --
direct implications for forecasting general
business conditions.

51

Since the prospects of an individual firm --
often depend greatly on business in general,
individual firm forecasts depend on general
business forecasts, which make use of models
derived from theory.

The theory of Decision Making
The theory of decision making (closely rela-
ted to and hardly separable from organizati-
on theory) is a relatively new subject that
has a significance for managerial economics.
Much of economic theory is based on the assump
tion of a single goal-maximization of utili-
ty for the individual or maximization of pro
fit for the firm. It also usually rests on
the assumption of certainty of perfect know-
ledge. The theory of decision making, in --
contrast, recognizes the multiplicity of - -
goals and the pervasiveness of uncertainty -
in the real world of management. The theory
of decision making often replaces the notion
of a single optimum solution with the view -
that the objective is to find solutions that
"satisfice" rather than maximize. It proves
into an analysis of motivation, of the rela-
tion of rewards and aspiration levels, of --
patterns of influence and authority.

The theory of decision making is concer
ned with the processes by which expectations
under conditions of uncertainty are formed.-
It recognizes the costs of collecting and --
processing information, the problem of - -

communication, and the need to reconcile the
diverse objectives of individuals and inte--
rests in the organization. It requires the
consideration of the psychological and socio
logical influences on human behavior.

Operations Research
Operations research is concerned with "model
building" --with the construction of theore-
tical models that aid in decision making.
Operations research is frequently concerned
with optimization; economics has long dealt
with the consequences of the maximization of
profits or minimization of costs. The best -
way to describe operations research is to --
identify its recurrent techniques and models.

Statistics
Statistics provides the basis for the empiri
cal testing of theory. Statistics is impor-
tant because it provides the individual firm
with measures of the appropriate functional
relationships involved in decision making.
It is not enough to state that the firm - -
should base its pricing decisions on conside
rations of demand and cost. To take such -
action, the firm could use statistical measu
rements of the shape and position of the de-
mand and cost functions.

CHAPTER IV

(1) ACCOUNTING

Accounting, broadly conceived as the measurement and communication of economic information relevant to decision makers, has undergone dramatic changes during the past decade. Recent advances in quantitative methods, the behavioral sciences, and information technology are influencing current thinking in financial as well as managerial accounting. Leasing, pension plans, the use of convertible - securities and warrants in mergers and acquisitions, inflation, and corporate diversification are but a few of the challenging problems facing the accountant.

Despite the mass of techinical procedures and detailed financial reports, accounting is fundamentally concerned with managerial action - in human organizations. It is therefore encouraging that the accountant's task is increasingly being viewed in terms of the contribution which he can make to the overall management of the enterprise rather than in terms - of the more procedures by which he tries to - achieve his own more limited financial objectives. People are now interested in the means by which the accountant contributes to the long-term direction of the enterprise.

An important aspect of the changing view of -

accounting is that increasing attention is -
being given to its human and social dimensio-
ns. Both accountants and managers are now exp
licitly recognizing that it is impossible to
deal adequately with accounting problems with
out also considering the motivations, values
and behaviors of the human members of the en-
terprise. The accountant contributes to the
success of an enterprise primarily by the way
in which he influences the behavior of other
people and, at least in theory, his procedu-
res should be designed to stimulate managers
and employees to behave in a manner which is
likely to contribute to the effectiveness of
the enterprise as a whole.

Accounting information is designed to serve -
as the basis for many important decisions --
both within and outside the enterprise. It -
is designed to assist in planning, coordina-
ting and controlling complex and interrelated
activities and to motivate people at all le-
vels in the enterprise to make and implement
those decisions which will further organiza--
tional purposes. Not surprisingly, the acco-
unting procedures which are used to satisfy
these and many other important organizational
functions have become highly technical in na-
ture. Economics is increasingly being used to
provide a sound basis for selecting informa--
tion which is relevant for decision making, -
mathematical skills now contribute to our po-
tential for rigorously analyzing complex fi-
nancial problems, and advances in computer -

technology means that information is quickly
available.

Accounting helps Management:

Most businesses that fail lack adequate reco-
rds. Every businessman must keep books in or
der to know at all times his investment, in-
ventory, sales, receipts, expenses, profits,
losses, and net worth.

Business decisions must be based on facts. Ma
nagers of some firms watch their own progress
so closely that they have financial reports -
prepared every hour; these reports tell them
whether their decisions are justified by the
facts. A manufacturer must know his produc--
tion costs in order to set his prices; a reta
iler must watch his sales and inventory clo-
sely or the two will be out of balance. Every
business must constantly watch expenses. The
only way an adequate check can be maintained
is through keeping accounting records.

Financial Statements:

When people speak of financial statements, --
they usually refer to both the Balance Sheet
and the Income Statement.

The Balance Sheet:

A balance sheet shows the financial condition of a business at a given date. It reports - how much a business has, how much it owes, - and what its net worth is. What it has is -- shown on the asset side; what it owes is sho- wn on the liability side; and its net worth is the difference between assets and liabili- ties. The assets are the physical properties of the company, such as cash, buildings, equi- pment, and other property. The liabilities - are the debts of the company, such as amounts owed to firms from which it has bought merchan- dise.

On both sides of the balance sheet there are subdivisions. These are helpful in interpre- ting the statement. Some of the more importa- nt classifications follow.

Current Assets include cash and other items that will ordinarily be converted into cash - in the normal operations of a business. The merchandise inventory is a current asset-beca- use it is converted into cash when it is sold. Accounts receivable-the amount owed by custo- mers are current assets because they will usu- ally be paid in 30 or 60 days.

Prepaid Expenses are payments a company has made for supplies or services that it will -- ordinarily use in its business. For example, the wrapping paper and cardboard boxes a de-- partment store has on hand constitute prepaid expenses. The company may have purchased a - six-month supply, which is a prepaid expense until it is used. When a firm pays its insu- rance or taxes in advance, the amounts are - classified as prepaid expenses until they are expended and are listed with the company's - assets. Each of these items is generally cla- ssified on the balance sheet as a current -- asset since they will be consumed in the next fiscal year.

Fixed Assets are the permanent properties - used for business purposes. Land, buildings, and equipment are of this type and are classi- fied as fixed assets.

Through use and the passage of time, there is a decrease in the value of fixed assets. This decline is referred to as depreciation. De- preciation will continue as long as the asset is in use. In the preparation of a balance -- sheet, the accumulated amount of depreciation on a fixed asset should be deducted from the - original cost. This procedure gives the pre-- sent value of the asset.

<u>Current Liabilities</u> are debts that must be - paid within a year. The suppliers of merchan dise usually require payment in 30 to 60 days after making shipment. Amounts owed to them on open account are referred to as accounts - payable; amounts owed on signed notes are -- called notes payable.

<u>Fixed Liabilities</u> are the debts of a company that will be outstanding for a long period of time. A 20-year mortgage for the purchase of a building and bonds sold to finance a compa- ny are good illustrations of fixed liabilities.

The profit and loss statement

Not all important financial information is re- vealed by the balance sheet. It tells nothing about the income or expense of a business. The report that presents this information is - the profit and loss statement. (Sometimes it is called the income and expense statement, or the income statement.)

All profit and loss statements cover a period of time. The five important items that appear on almost every profit and loss statement are sales, cost of goods sold, gross profit, opera ting expenses, and net profit.

The sales are the major source of income for - most businesses. Because of their importance,

they are placed at the top of the statement. The cost of goods sold is subtracted from the sales in order to secure the gross profit. The gross profit is the margin of profit that a merchant receives on his sales.

After the gross profit (sometimes called gro- ss margin) is determined, the operating expen ses are deducted in order to find the net pro fit or net income. Usually the operating ex- penses will be itemized in some manner in or- der to give greater information on the opera- tions of the company.

Depreciation, or the annual reduction in value of fixed assets, is one of the important ite- ms of operating expenses. The cost of fixed assets should never be included under opera-- ting expenses; only their depreciation should be listed.

The net profit on a profit and loss statement is found by subtracting operating expenses - from the gross margin. It will always appear near the bottom and is the most important fi- gure on the entire report, because it is a - measure of the success or failure of the busi ness.

Journals and Ledgers

Accounting must provide a complete record so that no important financial detail in the -- history of a business is omitted. In order -

to provide this information, the first record of a transaction is made in a journal-sometimes called a book of original entry. This -- Journal provides a permanent explanation of - the day-to-day activities of the business. In a well-kept journal, one should be able to re fer to any period of time, even a time long - past, and find what financial transactions -- took place.

Usually, large businesses will have several - kinds of journals in which to record various transactions. The important kinds are cash- receipts journal, cash-payments journal, sa- les journal, purchases journal, and general - journal.

After the day-to-day entries have been made - in the journals, the amounts are transferred to accounts in the ledger. This process is - called posting. In this book are accounts -- for such classifications as cash, accounts re ceivable, sales, purchases, and dozens of -- other categories that appear on the financial statements. The ledger is a book of final - entry, and it is a permanent record. By look- ing at the sales account in the ledger, for - example, a merchant can tell how his sales - have changed from day to day or from year to year. Whenever financial statements are pre- pared, the final amounts are taken from the - ledger.

The three important ledgers that most busine-

sses keep are general ledger, accounts-recei- vable ledger, and accounts-payable ledger.

The general ledger is a book that includes - all the accounts of the business-assets, lia- bilities, incomes, and expenses. Additions - and reductions are entered in these accounts.

The cash account in the general ledger, is a two-sided form:

CASH	
Received	Paid Out
Jan 1 $ 150	Jan 10 $ 10
12 200	15 40

The amounts received are entered on the left and those paid out on the right. The diffe-- rence between the two sides is the cash on - hand.

Details of accounts receivable (amounts peo-- ple owe us) and accounts payable (amounts -- owed to them) are usually kept in special le dgers that are separated from the general le- dger. The accounts-receivable ledger contai- ns a record of the amount each customer owes.

The accounts-payable ledger is a record of the

amounts owed to others. Although smaller than the accounts-receivable ledger, it is usually large enough to require the work of several -- full-time clerks.

FINANCE

Theory of Financial Management

Finance is not unique from other aspects of - business operations in that it has a role, as do other management functions, in the optimization efforts of the firm. Goals are set, - decisions are made, and models are used to -- help reach optimal decisions in terms of atta ining these goals. In the language of the be havioral theory of the firm, financial management involves goals, choices, and models. A positive statement of the goals of the firm in modern financial literature has been expre ssed in terms of either the maximization of - value (or wealth) or the maximization of expected utility. Consider the following three elements:

1. Alternative policies or decisions are related to alternative streams of earnings over some projected period.

2. An appropriate procedure for handling differences in timing of cash flows must be determined.

3. Investor attitudes toward risk must be de termined, and ways of measuring risk and bringing it into the analysis must be developed.

63

64

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3. Investor attitudes toward risk must be de
    termined, and ways of measuring risk and
    bringing it into the analysis must be de-
    veloped.

We can recognize from this list that goals --
other than wealth or utility maximization -
have been set forth and that goals for diffe-
rent participants-stockholders, labor, custo-
mers, management, and so on-have been emphasi
zed. Our judgment, however, is that the most
relevant theories can be built on the princi-
ple of stockholder wealth maximization, and -
that the other goals should be taken as cons-
traints limiting stockholder wealth maximiza-
tion. In other words, corporate managers ha-
ve their own personal goals as well as stockho
lder wealth maximization in mind when they --
make decisions. The managers of a firm may,
for example, prefer to emphasize risk avoidan
ce, the prestige that is attached to public -
service (as opposed to concentrating on runn-
ing the business), and so on. Recognizing this,
executive compensation plans emphasize incen-
tives-bonuses, stock option plans, and so on-
designed to stimulate management to operate -
in the stockholders' best long-run interests.
At the same time, proxy fights, tender offers,
and the like, present serious threats to a --
management that is not operating in the best
interests of its stockholders. These pressu-
res, we believe, serve to make stockholder -
wealth maximization a realistic, operational
assumption in most situations.

Financial Policy Decision Models

Financial decisions affect both the size of -

65

the earnings stream, or profitability, and --
the riskiness of the firm. Policy decisions
affect risk and profitability, and these two
factors jointly determine the value of the -
firm.

The primary policy decision is that of choo-
sing the industry in which to operate the pro
duct-market mix of the firm. When this choi-
ce has been made, both profitability and risk
are determined by decisions relating to the -
size of the firm, the types of equipment that
are used, the extent to which debt is emplo-
yed, the firm's liquidity position, and so on.

These decisions generally affect both risk -
and profitability. An increase in the cash -
position, for instance, reduces risk; but sin
ce cash is not an earning asset, it also redu
ces profitability. Similarly, the use of --
additional debt will raise the rate of return
or the profitability of the stockholders' net
worth; at the same time, more debt means more
risk. Financial analysis seeks to strike the
particular balance between risk and profitabi
lity that will maximize the wealth of the --
firm's stockholders.

Business decision models have been designed -
to help solve various types of problems, in-
cluding wealth maximization. Models are sym-
bolic representations of some aspects of the
world, and they consist of sets of variables
and the relationships among them. In the --

66

most general terms, a model relates control --
variables and uncontrolled variables to out--
put or performance. The solution to the model
consists of determining the values of controlla
ble variables that maximize performance. --
(including minimizing cost).

When a decision rule is introduced into the -
optimizing value of the control variables, we
have a decision-making model, or decision mo--
del, from which decision rules may be develo--
ped. For example, one decision model we shall
discuss is the slection of the omptimum quan--
tity of inventory to carry. The model is sol-
ved to minimize inventory carrying costs. From
this solution, we derive a decision rule for -
placing order.

PRODUCTION

The Production and Operations Function

Wealth comes only from production. Those who
agree with this position do so after first --
having defined wealth and production in a cer
tain way. To begin with, wealth would be con
sidered to be the aggregate amount of goods -
and services that had been generated during -
some given time period. Goods would include
such things as automobiles, clothing, houses,
food, furniture, roads, ships, books, radios,
television sets, airplanes, schools, dams, --
paintings, sculptures, pencils, and medicines.
Services would be represented by the end re-
sult of activities engaged in by such indivi-
duals as physicians, salespeople, lawyers, -
teachers, barbers, clergymen, entertainers, -
repairmen, computer programmers, reporters, -
economists, waitresses, accountants, adminis-
trators, pilots, truck drivers, cooks, and po
licemen.

The meaning of production follows from the -
foregoing definition of wealth. With referen-
ce to goods, we should say that production is
the fabrication of a physical object through
the use of men, materials, and equipment; --
whereas, with reference to services, we shou-
ld say that production is the discharge of a
function which has some utility. Admittedly,
this interpretation of the production activity

most general terms, a model relates control --
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whereas, with reference to services, we shou-
ld say that production is the discharge of a
function which has some utility. Admittedly,
this interpretation of the production activity

is a very broad one and, as such, does not —
coincide with the fairly common one in which
production is equated with manufacturing.
Instead, the position being maintained is —
that there is no difference in principle be-
tween an action which provides someone with —
a tangible material item and an action which
provides someone with information, advice, —
help, aid or assistance. In either case, so-
mething is being produced which did not exist
earlier.

Unfortunately, many individuals and organiza-
tions continue to apply the term"production"
solely to the manufacturing activity. There-
fore, the task of instilling and understanding
and an acceptance of the more comprehensive —
meaning of the term remains to be completed.
The efforts that have been expended in an —
attempt to accomplish this have manifested —
themselves in many forms. A fairly recent —
one is to substitute the word "operations" —
for "production", with the result that refe-
rences to operations management rather than —
production management are appearing with in-
creasing frequency.

Given our definition of the operations fun-
ction, it follows that every organization is
engaged in the production of either a physical
good or a service.

The organization may be a manufacturing firm,
hospital, educational institution, governmen-

tal agency, department store, warehouse, con-
sulting firm, automobile distributor, or the
like. As this suggests, production is essen-
tial to any organization's continued existen-
ce and, of course, to society's well-being.
But other activities are equally important.
One of these other activities is marketing.
Specifically, most organizations must engage
in market research to determine the nature of
the market for their products or services and,
then, must promote, sell, and distribute these
products or services.

However, production and marketing require the
expenditure of money which, it is hoped, will
be recovered through the revenues these acti-
vities will bring about. But in the meanti-
me, the production and marketing functions —
must be financed, and methods for doing so —
must be developed and exercised.

Finally, successful results in the areas of —
production, marketing, and finance can be —
attained only through the efforts of qualifi-
ed people. Hence, it becomes necessary that
an organization concern itself with personnel
recruitment, selection, training, motivation,
and management.

In brief, the typical manufacturing or servi-
ce organization can be looked upon as repre-
senting a system whose elements are production,
marketing, finance, and personnel relations.
It is a system in the sense that these func-

tions are interrelated and, therefore, must -
be coordinated because what is done in any --
one of these areas will have an effect on the
others. This can be illustrated with referen
ce to the production activity. The character
of the firm's marketing program will affect -
the demand for its products, and this will de-
termine what is to be produced and the quanti-
ties to be produced. Similarly, the firm's fi
nancial position will affect the amount of mo-
ney available for capital expenditures, and --
this may affect the type of facilities which -
can be made available for production purposes.
In the same manner, the firm's personnel poli-
cies will have an influence on the caliber and
morales of the work force, and the consequen-
ces will manifest themselves in the production
area. As all this suggests, operations mana-
gement is not independent of marketing, finan-
cial and personnel management.

Conversely, the consequences of decisions in -
the operations area will be felt in the organi
zation's other functional areas. As examples,
we might note that a firm's production capaci-
ty will affect what and how much can be sold,
that the nature of the production processes -
will influence the level of required expenditu
res for equipment and buildings, and that the
kind of operations performed will determine --
the type of personnel needed.

To say that production is a system is to say -
that the operations activity consists of a --

number of interrelated elements. Some of --
these are performed in sequence, while others
are carried out concurrently. The important
thing, however, is that the manner in which -
one element of the operations activity is con
ducted will most likely have an effect on one
or more of the other elements. This becomes
evident when we consider what is involved in
the management of a firm's operations.

The operations personnel in any organization
can be said to have four basic responsibili-
ties. These are to produce the firm's produc
ts or services in a way such that (1) quanti-
ty requirements will be satisfied, (2) esta-
blished delivery or completion dates will be
met, (3) quality requirements will be fulfi-
lled, and (4) the most economical methods for
accomplishing the foregoing will have been -
selected and applied.

Quantity requirements and established comple-
tion dates will, of course, reflect the dema-
nds of the consumers of the firm's products -
or services. To satisfy these demands, opera
ting personnel, as a rule, will be compelled
to plan the production activity prior to the
point at which the demands actually occur.
This is true for a number of reasons. First,
unless the required factors of production are
on hand at the time an order for a given --
quantity is received, it is unlikely that the
delivery date desired by the customer can be
net, because the time required to procure man

power, materials, equipment, and buildings -
usually far exceeds what is generally accep-
ted as being a reasonable delivery time. And
second, even if this were not the case, the
firm that would procure and utilize factors
of production only at the time at which they
are required to satisfy customer orders would,
more often than not, find that it would be -
producing and purchasing in uneconomic lot si-
zes and experiencing wide fluctuations in the
output capacity required at any single moment,
this would serve to generate excessive costs.

For these reasons, every concern engages in
production planning. This involves forecas-
ting the demand for the firm's products and
services and translating this forecast into
its equivalent demand for various factors of
production. These resultant factor-of pro-
duction demand schedules might be adjusted -
to eliminate wide fluctuations or to permit
producing and purchasing in economic lot si-
zes. In their final form, however, they pro-
vide the operations manager with information
on the kind and amount of materials, manpow-
er, and production facilities which will be
required at various future points in time.
Arrangements can then be made to procure the-
se factors of production prior to the times
at which they will actually be needed. Do-
ing so facilitates the production department's
being able to meet delivery dates on orders it
subsequently receives.

73

However, even if the needed factors of produ
ction are on hand at the time actual orders
are received, quantity requirements and sti-
pulated delivery dates can be satisfied only
if steps are taken to utilize these factors
in an efficient manner. This calls for sche
duling the required work, providing opera-
ting departments with necessary instructio--
ns, checking on production progress, and --
inaugurating corrective action when such ac-
tion is needed. All this is called "produc-
tion control".

But as has been mentioned, in addition to -
being responsible for satisfying quantity re
quirements and meeting stipulated delivery -
dates, the operations manager is also respo-
nsible for the quality of the organization's
output. The quality of goods and services -
can be maintained only if measures are emplo-
yed which will increase the likelihood that
the firm's output will meet specifications.
Such measures are available, and they are re
ferred to as the techniques of "quality con-
trol".

And finally, we have noted that operating   -
personnel are expected to produce the organi-
zation's products and services not only in -
the required quantities, at the required ti-
mes, and with the required quality, but also
in the most economical manner. As a conse-
quence, methods analyses must be made of the

74

alternative ways on which the firm's goods -
and services can be produced with a view to-
ward determining the most efficient of these
alternative work methods. Also, a need is -
created for materials handling analyses and
for plant and office layout analyses whose -
purpose is to develop a handling system and
and arrangement of departments and work sta-
tions which will serve to minimize the cost
to be associated with the movement of perso-
nnel and materials from one location to ano-
ther. To continue, inventory control beco-
mes a necessity, because inventory levels of
supplies, raw materials, component parts, -
and finished goods will affect, among other
things, the cost of carrying inventories and
the risk of shortages and the corresponding
stockout costs. Furthermore, work measure -
ments techniques must be applied to ascert-
ain the amount of time that should be requi-
red to perform a task so that the labor cos-
ts generated by the production activity can
be controlled. And in many cases, the cost
of operations can be reduced still further -
through the use of wage incentives which mo-
tivate operating personnel to maximize their
efficiency by relating their earnings to the
quantity and the quality of their output.

To summarize all this, operations managers -
must concern themselves with a number of inte
rrelated areas. In the order in which we -
have considered them, they are production pla
nning, production control, quality control,

methods analysis, materials handling, plant -
layout, inventory control, work measurement -
and wage incentives. This is not to suggest,
however, that operations managers will not be
come involved in other areas of decision ma-
king. They will, and some of the specific --
ones are plant location, building design, and
product development. Also, because the deci-
sions made in the functional fields of marke-
ting, finance, and personnel will affect the
production activity and vice versa, produc--
tion managers will be expected to contribute
to the solution of marketing, financial, and
personnel problems.

MARKETING

Definition

Marketing is a total system of interacting business activities designed to plan, price, promote, and distribute want-satisfying products and services to present and potential customers.

The Marketing Concept

As business administrators increasingly recognize that marketing is vitally important to the success of a firm as they realize that a business is a marketing organization, an entirely new way of business thinking and business life is evolving. It is called the marketing concept, and it has developed as production- and engineering-oriented firms have changed into market-oriented structures.

The marketing concept is based on two fundamental beliefs. First, all company planning, policies, and operations should be oriented toward the customer; second, profitable sales volume should be the goal of a firm. In its fullest sense, the marketing concept is a philosophy of business which states that the customer's want satisfaction is the economic and social justification of a company's

existence. Consequently, all company activities in production, engineering, and finance, as well as in marketing, must be devoted to, first, determining what the customer's wants are and, then, satisfying these wants while still marking a reasonable profit.

Distinction between the Marketing Concept and Marketing:

Administrators must recognize that there is a significant difference between the marketing concept and marketing itself. The marketing concept is a philosophy, and attitude, or a course of business thinking, while marketing is a process or a course of business action. Naturally the way of thinking determines the course of action.

Marketing Management: The Application of the Marketing Concept

For a business enterprise to realize the full fruits of the marketing concept, the philosophy must be translated intro practice. This means that (1) the marketing activities in a firm must be better organized, coordinated, and managed, and (2) the chief marketing executive must be accorded a more important role in total company planning and policy making than has been generally true in the past. As these two changes take place, we

see emerging in American business the idea - of marketing management. Marketing management is the marketing concept in action.

Evolution of marketing management

Marketing management has been developing in American business since the Industrial Revolution. Roughly, it has gone through three -- stages of development, and a fourth is emerging. However, many small companies are -- still in one of the earlier stages of marketing organization. Only a few firms have -- the most developed form of marketing organization and the outlook and philosophy that - go with it.

Early in the first period of development, - company organization for marketing is simple. Manufacturers have sales departments headed by a sales manager whose major responsibility is to operate the sales force. Other marketing activities, such as market planning, advertising, and marketing research, are generally unknown; product planning and budgeting are the responsibilities of other departments. As markets expand, manufacturers -- are obliged to make more use of middlemen, thus lengthening the channels of distribution and increasing the complexity of marketing problems. A manufacturer then must devote more attention to reaching his final -- customers, and he has to work more closely -

79

with his middlemen.

Market conditions which develop during this - period force manufacturers to expand into specialized marketing activities such as research, advertising, and export sales. These functions are assigned to various executives. The department responsible for selling the -- company's output is called the sales department, and its chief executive typically still has the title "sales manager" or "Director of Sales". Planning the product and scheduling - output are the responsibilities of the production manager. During the second stage, a -- better appreciation and understanding of the broad scope of sales management result in two important changes in the organizational structures of many firms. First, all marketing - activities, such as advertising, marketing research, and sales promotion, are grouped under one marketing executive, although he is - still typically called sales manager or vice-president of sales. Second, activities such as sales training, product servicing, and sales analysis, which were formerly in departments outside of sales or marketing, now are put under the marketing umbrella. While each of the several divisions (advertising, sales analysis, etc.) may have a separate manager, all report to the chief sales executive.

In the third stage of the evolutionary process, some companies have adopted the marketing concept and put it into action through -

80

the medium of fully integrated marketing ma-
nagement. The chief marketing executive in
such a company is often called the marketing
manager or has the title "vice-president of
marketing". He is aligned with the top men
in production and finance, and sometimes per
sonnel, to work with the president as the --
company's top planning and policy-making --
group. After studying the changing role of
the marketing function, Bund and Carroll sta
ted that their research "lends substance to
the position that the marketing plan is in-
creasingly accepted as the cornerstone for a
company's total planning effort. This does
not mean that the marketing man need be su-
preme. It signifies only that marketing --
must be accorded a key role in company mana-
gement.

Furthermore, executives in production, finan
ce, and engineering can all adopt the marke-
ting concept in their thinking and yet not -
be involved directly in marketing departmen-
tal activities.

Under the concept of marketing management, -
several activities which traditionally are -
the province of the production manager, fi-
nancial manager, or other executives become
the responsibility of the marketing manager.
For instance, inventory control, transporta-
tion, warehousing, and aspects of product --

planning are often turned over to the marke-
ting manager. Obviously he must coordinate
his efforts with those of the production ma-
nager and engineer and with the top financial
executive, but in the final analysis the mar
keting manager makes the decisions regarding
packaging, labeling, design, color, and --
other product features. The marketing manager
should be introduced at the beginning rather
that at the end of the production cycle so -
that he can integrate marketing into each -
stage of the operations.

Historically, we are now living in this pe-
riod of marketing organization.

Studies show that, to a large extent, the mar
keting concept has been adopted by both large
and medium-sized manufacturing companies. How
well they have actually implemented the con-
cept, however, is still a meet question. Pro-
bably in many cases a company, while using -
the appropriately fashionable titles and --
other external trapping, is still paying li--
ttle more than lip service to the concept. We
know that market orientation can come in many
forms and degrees. Probably only a small --
porcentage of firms, for example, have esta-
blished a formal, written marketing program -
to achieve their marketing goals. The key to
implementing the marketing concept successfu-
lly is a favorable attitude on the part of -

top management. Marketing begins with top -
management. Only top management can provide
the climate, the discipline, and the leader-
ship required for a successful marketing pro
gram. Top management must know the custo--
mers and the prospects; it must set the obje
ctives, establish the policies, develop the
plans, and create the organization.

Some companies are entering a fourth stage -
with respect to their marketing development.
In this stage a company moves from the marke
ting concept to a philosophy in which the -
entire company becomes a marketing organiza-
tion. It is not a development which can be
represented in an organization chart. Rather
this stage is reached when the inner attitu-
des of all company executives change so that
the whole firm functions to develop, manufac
ture, and sell a product from the marketing
point of view. Marketing becomes the basic
motivating force for the entire firm, and -
marketing increasingly conditions all short-
term and long-range company policies.

As a firm enters this fourth era it will be-
come increasingly apparent that the marketing
concept must permeate the entire company, -
starting with the board of directors and the
president. These executives determine the -
nature of the business and are responsible -
for developing an overall program. Major --
marketing policy making should be the   - -

function of the board of directors, and the
president becomes the chief marketing execu-
tive.

CHAPTER VIII

DATA PROCESSING

Data processing is the recording and proce--
ssing of the information necessary to a busi-
ness. A data-processing system consists of -
the methods and equipment used to record and
process such information and should provide -
for urgent and exceptional situations, as --
well as normal ones. Many methods exist from
simple paper-and-pencil methods to complex au
tomatic, electronic, and integrated data-pro-
cessing systems.

Each system collects information and carries
it along to its prescribed destination. In -
general, interest has increased in automatic
data processing. New automatic devices are -
constantly being devised that have wide appli
cation to almost every business operation, --
and executive ingenuity is busy organizing --
management procedures to take advantage of -
the revolutionary techniques and to integrate
them within those organizations that can pro-
fit from data processing.

Computing systems

Basically, there are three different data-pro
cessing systems. They may be classified as -
(1) mechanical-processing systems, (2) pun-
ched-card systems, and (3) electronic systems.

The simplest type is the mechanical-proce-
ssing system. It includes all those machines
that individuals must operate. Adding machi-
nes, calculating machines, billing machines,
and similar equipment fall into this category.
For small businesses and for some large busi-
ness operations these devices are very useful.
At one time, they were the only mechanical-co
mputing devices available.

A second type of data-processing system is the
punched-card system. With this equipment, in-
formation is registered by means of small ho-
les punched on a card. Printed information is
commonly placed in punched-card form by an ope
rator at a semi-automatic machine called a key
punch. When the operator hits a key on the --
keyboard, which resembles that of a typewri-
ter, a positioned hole is punched in the card
instead of a letter or number. Cards can be -
automatically punched when the information co-
mes directly from an electronic computer sys-
tem. Other machines can sort and do arithme-
tic calculations. The results can be printed
on paper or punched into answer cards. The -
"language" of punched holes differs from that
of letters and numbers in appearance, but the
conversion from one to the other by associa-
tion of the position of the holes on the card
and by combinations of holes is quite simple.
A variety of machines has been developed for
sorting, tabulating, computing, and printing
from information recorded on punched cards.

The most advanced type of data-processing sys
tem available to business is the electronic -
system, which is usually referred to as the -
computer. Since electricity moves at almost
the speed of light, these machines are capa-
ble of performing operations at amazing spee-
ds and have revolutionized many business ope-
rations. In the decade since the first mo-
dern electronic computers went into operation,
they have become an integral part of the equi
pment for large business firms and the natu-
ral and social sciences. There is also good
evidence that medium- and small-sized compa-
nies can make profitable use of computers.
Within the last few years, many of these sma-
ller firms have replaced punched-card systems
with transistorized computers.

Programming

Programming is the most difficult part of ru-
nning a computer. After the machine has been
programmed, running it is essentially a sim-
ple operation of pushing buttons. However, no
thing can be done until there is a correct -
program in the machine. As already mentioned,
the instructions must be given to the machi--
nes in complete detail. A program consists -
of a sequence of steps that fully describe --
how a particular operation is to be performed.
Many hours may be spent in developing a pro-
gram and making sure it works properly. Com-
plex problems require programs that cost ---

thousands of dollars to develop. In fact, --
the activity of programming is so specialized
that people may spend many years learning all
the techniques involved.

Data-Processing Centers

Many firms have a need for automatic data-pro
cessing equipment but do not have a large eno
ugh volume of work to justify an installati-
on. To take care of this need, many data-pro
cessing centers have been established throu-
ghout the United States to perform jobs on a
shop basis. Business firms can bring their --
technical problems to the centers and have --
specialists handle the complicated work for -
them.

STATISTICS

The meaning of Statistics:

Statistics is conceived as a mass of figures or a collection of data. The often repeated phrase "Statistics show..." is likely to imply that a given mass of figures contains salient and unalterable characteristics that -- can easily be discerned among the mass by any person of normal intelligence. That the word statistics may apply to certain aggregates of figures is not to be denied, but that important facts contained therein are easily detected is by no means always true.

A second meaning of statistics is simply the plural of statistic, where a statistic is a - certain kind of measure used to evaluate a -- selected property of the collection of items under investigation.

A third meaning of statistics is of prime concern to us, it is the science of assembling - analyzing, characterizing, and interpreting - collections of data. In this sense, statistics is a field of study, a doctrine concerned with mathematical characterizations of aggregate of items.

Statistics, as a science, is fundamentally a branch of applied mathematics, just as - -

mechanics is mathematics applied to problems connected with bodies subjected to forces. In statistics, the applications may be made to almost any aggregate of observation or measurements. For this reason it is useful in business, economics, sociology, biology, psychology, education, physics, chemistry, agriculture, and related fields.

Definition of Population:

A population is a totality of all actual or -- conceivable objects of a certain class under - consideration. More precisely, a population - consists of numerical values connected with - these objects. Such aggregates may be finite or infinite, real or fictitious.

Definition of Sample:

A sample is a finite number of objects selected from the population. If these are chosen in such a manner that one object has as good a chance of being selected as another, we say that we have a random sample.

Random Sampling Numbers

Because of the extreme care that must sometimes be exercised in the selection of a sample that is truly random, statisticians frequently employ a "table of random digits". These --

digits have been produced by a mechanical or electronic process that ensures that each digit obtained is essentially independent of -- the digit previously obtained and is to be - treated as the result of pure chance.

The Nature of Statistics

The field of statistics is extensive and va-- ried, therefore it may be helpful to describe it in terms of certain dichotomies that characterize it.

Statistical investigations may be descriptive or inferential. Generally the former type in volves fairly simple techniques; the latter - demands a somewhat higher order of critical - judgment and mathematical methods.

Suppose that we are confronted with a set of measurements or observations actually obtai-- ned from life. Such a set usually represents a complex of data from which it is possible - to extract an almost unlimited amount of information. The task of the statistician is to select a few procedures and measures by means of which the significant aspects of the given data may be thrown into high relief. These - aspects may be obtained by means of classifi- cation, graphing, and averaging. Because we are concerned only with an effective characte rization of the given data themselves as they

come to us through observation, and not with estimates or conclusions involving theoretica lly related populations, we shall distinguish this type of statiscal analysis by means of - the word descriptive. This analysis, confin- ed exclusively to the data before us, deals - with methods of recording or tabulating the - constituent items, with their visual presenta tion, with the properties of various kinds of measures, with devices for computing them, -- and, in fact, with all means of giving a su-- mmary description of the data themselves.

The second type of statistical investigation is concerned with conclusions about the popu- lation that may be drawn from the data in the sample. If the data are on a large scale -- they may be treated as practically equivalent to the population and the properties of the - sample may be considered to be like those of the population. Sometimes the sample data -- may constitute the population itself. If the data form a small sample drawn from the popu- lation we usually seek to derive the proper- ties of the population from the limited infor mation contained within the sample. It is -- clear that in any case we must make certain - assumptions and interpret our results in the light of them. Theoretical analysis of this type is based upon the mathematical theory of probability. A second dichotomy arises in a consideration of the theoretical and the prac tical aspects of statistics. Mathematical or theoretical statistics seeks to derive the -

laws which various populations of data and - samples derived from them obey, these populations being more or less definitely specified. Applied or methodological statistics uses the theoretical results as models for the solution of practical problems. A third dichotomy occurs in considering the source of the - data to be analyzed. If the data are already gathered and you have had no control over -- them, then you must find out what you can -- from what you have available. On the other - hand, you may consider first the objectives - of your investigation and then plan an appropriate experiment from which you can collect significant data. Here you have some control over the kind and amount of data desired. Problems connected with efficiently planned statistical experiments come under the heading - of The Design of Experiments. Large sample -- methods are most useful when the data are already in; small sample techniques predominate when you gather information from an appropria te experiment.

The data of statistics consist essentially of numerical values derived from measurements, - observations, interviews, experiments, and so on-values that, in a given set, are generally different and unpredictable. Such magnitudes are called random or chance variables, because many chance causes operate to produce them. The theory of probability deals with such variables and is the cornerstone of mathematical statistics. The word variate is often used to

denote a numerical outcome that is the result of chance.

Some Nonmathematical Aspects

Although statistics is fundamentally a mathe matical study, there are certain phases of - it that may be termed nonmathematical, and - that are, in many respects, prerequisite to successful statistical analysis. It is useless to perform elaborate calculations and to derive conclusions from data of questioned reliability and ambiguous meaning. (1) Sources. Data may arise from books, reports, tables, and so forth, or from the results of original investigation, such as interviews, questionnaires, direct observations, actual measurements, and the like. (2) Definitions. The nature of the attributes studied in a -- statistical investigation may profoundly influence the magnitudes involved and the conclusions drawn; for this reason it is essential that basic terms be clearly understood. It is often necessary to make precise definitions, or to describe in detail the method - of measurement. (3) Purposes. The nature and extent of a statistical study are determined largely by the purpose in view. Frequently, the objective is a single concise result dis played in a manner readily understood by -- "the man on the street". In such cases, -- finely drawn distinctions, precise mathemati cal results, and distracting details may be sacrificed to a simple, graphic representa--

tion that catches the eye and impresses the
mind. Other investigations may aim to esta
blish a thesis or to destroy one-by means -
of a comprehensive analysis of all relevant
factors. Such studies often require elabo-
rate technical equipment on the part of the
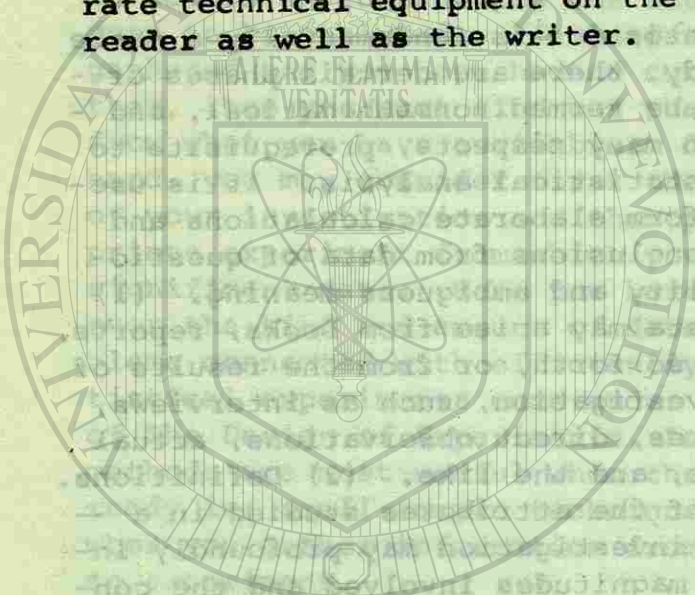reader as well as the writer.

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