

WORKPLACE MOTIVATION

a review of the literature

Roderic Gray

2000

www.rodericgray.com

Abstract

Work is performed by people, and for each of those individual people there is a complex interaction of reasons for them to do the work, to do it in particular ways, to particular standards and with particular levels of energy and enthusiasm. This complex interaction is often summed up in one word: motivation. In this review a variety of perspectives on this essential force is examined and the implications for organisational practice are considered.

Introduction

Motivation concerns those psychological processes that cause the arousal, direction and persistence of behaviour (Ilgen and Klein, 1988). Whilst there is general agreement in the literature about these three components of motivation (eg, Korman 1974, or Kanfer, 1990), the nature and place of motivation in a work-related context has been the subject of a long and developing study. Theories have been propounded, tested and superseded at a pace which has left organisational practice often several steps behind the researchers. The following pages will attempt to document the main themes and the most widely-recognised theories.

The word *motivate* is frequently used in the context of management as a transitive verb: motivation is by implication something done by one person or group to another. A further implication of this usage is that the *motivated* parties need to be induced to perform some action or expend a degree of effort which they would not otherwise wish to do. That this is an issue of vital importance to the prosperity of commercial organisations is emphasised by Lawler (1973): those individual behaviors that are crucial in determining the effectiveness of organizations are, almost without exception, voluntary motivated behaviors. Other factors also have a bearing:

Consideration of questions such as; why do people go to work, why do people work hard? clearly shows that effort and performance at work are determined by ability, temperament and motivation. Despite the often complex interactions between these factors it is possible to develop theories and practical guidelines that focus specifically on motivation without losing sight of the influence of other factors. (Robertson, Smith and Cooper, 1992).

Kanfer (1994) takes this somewhat further by listing a number of inter-related factors which she believes to lead to behaviour:

On the broadest level, an individual's motivation for a specific task or job is determined by environment,

heredity, and their interactions [such as learning]. These factors influence individual characteristics such as personality, motives, affect, attitudes, beliefs, knowledge, skills, and abilities. In turn, the intensity and character of effort, and the endurance of goal-directed behaviour over time.

However, according to Kanfer, most motivational theories are not intended to predict performance but rather to predict decision processes and volitional behavior, which implies that managers and organisational theorists will not find easy answers to their practical needs in motivation theory. Campbell and Pritchard (1976) argue that motivation does have a meaning if we take it merely as a summary label that identifies a class of independent variable/dependent variable relationships.

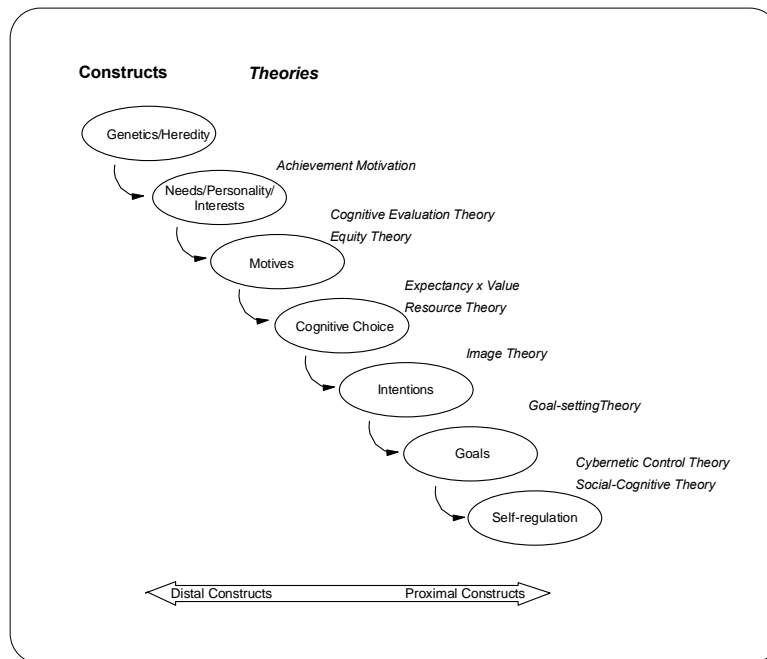
The extent to which motivation can be a product of external manipulation, or of environmental factors, or of a variety of internal mechanisms will be explored through the ideas to be found in the literature.

Theoretical perspectives

Various taxonomies have been proposed for the organisation of motivation theories. Kanfer (1994) classifies theories according to their distal or proximal nature, that is, their immediacy in relation to observable behaviours. Kanfer remarks:

To date, most distal theories of motivation have enjoyed their greatest success in predicting other distal constructs, such as predecision and decision processes and intentions, rather than behavior or performance.

Proximal constructs focus on motivational constructs at the level of purposive action. Analyses of motivational processes in these theories tend to begin with the individual's goals rather than with the factors which have shaped the individual's objectives.



Classification of theories (Kanfer, 1994)

Katzell and Thompson (1990) divide theories into exogenous theories, which focus on motivationally relevant independent variables that can be changed by external agents, and endogenous theories which deal with processes or mediating variables [expectancies, attitudes, etc.] that are amenable to modification only indirectly in response to variation in one or more exogenous variables. Among exogenous theories Katzell and Thompson list motive/need theories, arousal/activation theories, incentive/reward theories, expectancy/valence theories, reinforcement theory, and goal theory. Within the category of endogenous theories they include equity theory, attribution/self-efficacy theory, intention/goal theories, and other cognitive theories.

Deci (1992) finds it helpful to distinguish between push-theories, in which the person is said to be pushed by a drive and directed by an associative bond or cathexis, and pull-theories, in which the person is said to be pulled towards desired outcomes. Campbell and Pritchard (1976) consider various process theories, which first try to define the major variables which are necessary for explaining choice, effort and persistence. For example, drive, reinforcement and expectancy are major variables appearing in various models, and content theories, which are more concerned with trying to specify the substantive identity of the variables that influence behavior and less so with the process by which they do it. That is, what are the specific rewards people want? What are the basic needs they are trying to satisfy? What incentives are the most powerful?

Jung (1978) is more concerned with questions of locus: is observed behavior caused by intrinsic or extrinsic factors? Kanfer (1990) clarifies terms: intrinsic motivation has often been defined as behavior performed in the absence of any apparent external reward, and remarks that intrinsic motivation may be more aptly conceptualized as episodic and temporally bounded rather than continuous. In this context, Deci (1992) observes that people can experience gratification from doing certain activities independent of any separable consequences that might accrue. The interactions of intrinsic and extrinsic factors have received much attention and will be further discussed below.

As motivation research has developed, increasing emphasis has been placed on cognitive antecedents of observed behaviour. Cognitive theories attribute the causes of behavior to individuals' processing of information. According to these views, behavior results from decisions or action choices (Ilgen and Klein, 1988). These choices are directed toward alternative tasks and effort directed at performance levels within tasks (Campbell and Pritchard, 1976).

Cognition plays an essential role in the analysis of motivation and emotion. The interpretation of the meaning of a situation, the appraisal of alternative responses, and judgements about the possible consequences of responses are all cognitive operations that influence our actions, our feelings before, during, and after our responses, and our judgement of and reaction to the behavior of other persons (Jung, 1978).

Jung goes on to argue that debate about whether situational or individual factors are the prime

influences on behaviour is meaningless, since the cognitive appraisal of a given situation depends on the individual and each person, depending on his or her set of personal constructs for perceiving the world, may define alternatives in a given situation in a different way.

Kanfer (1994) notes that cognitive choice theories emphasize two determinants of choice and action: [a] the individual's expectations, and [b] the individual's subjective valuations of expected consequences associated with various alternative actions. Jung (1978) points out that for these factors to influence behaviour the individual must be able not only to determine but also to act in accord with choices that provide the maximum combination of likelihood of occurrence and magnitude of payoff.

Non-cognitive factors are still considered influential, although the emphasis has shifted towards considering these factors as they underpin the cognitive processes rather than as direct antecedents of behaviour. Building on advances in personality psychology, researchers have shown that non-cognitive individual differences influence longer-term patterns of ... information processing and ... self-regulation (Kanfer, 1990). Kanfer identifies five basic personality dimensions, or traits; ... neuroticism; extroversion; openness to experience; agreeableness; and conscientiousness ... also called will to achieve, the latter of which she believes represents the trait dimension most closely associated with motivation or volitional processes. Kanfer argues that noncognitive individual differences as diverse as impulsivity ... work orientation ... and dependability exert systematic effects on patterns of behavior and, ultimately, productivity.

Individual differences are less important in motive-based work motivation theories, which place more emphasis on the conditions which activate the motive (Kanfer, 1990), and focus on the influence of a small set of universal and psychologically-based motives, such as mastery, control, competence, and the desire to reduce psychological tension, created by perceptions of imbalance in social exchange (Kanfer, 1990).

The taxonomies mentioned above differ mainly in the emphasis they place on different aspects of the study of motivation, rather than in proposing mutually incompatible explanations of behaviour. The expedient is adopted in this review of discussing the various theories and approaches in approximately chronological order.

Early theories

Plato, Aristotle, and other Greek philosophers believed that behaviour was determined by

knowledge and the will, which was developed through practice and experience (Korman, 1974; Bolles, 1975). These ideas were developed by early Christian thinkers such as St Augustine and St Thomas Aquinas into a dualist model: animal behaviour was determined by instinct and the physical senses, whilst human behaviour was determined by these and by rational application of the will. Descartes enhanced this model by proposing physiological determinants of the emotions, and thus of the will (Korman, 1974). Darwin effectively put an end to the dualist model by showing that the basic human and animal processes were fundamentally the same (Korman, 1974).

Hedonism

Lawler (1973) suggests that the origins of most contemporary conceptions of motivation can be traced to the principle of hedonism, proposed by a group of early 19th century English philosophers, notably Jeremy Bentham, James Mill, and John Stuart Mill. Hedonism attributes all behaviour to a desire to achieve the greatest pleasure. Korman (1974) comments that the idea that responsibility for the motivation of behaviour can be attributed to both the desire for pleasure and the knowledge of what will bring pleasure finds representation in contemporary theorizing. However, Vroom (1964) and Lawler (1973) remark that there is virtually no empirical content in the assumptions of hedonism and the proposition is therefore untestable. Korman's simple restatement (above) of the basic tenet of hedonism is, perhaps, no more than a truism; the questions for research revolve around the nature and origins of pleasure in the context of the individual, and the behavioural effects of its pursuit.

Instincts

Many of the early psychologists attempted to pursue the concept of instinct that had formed an essential element of dualist philosophical constructs. Bolles (1975), commenting that the concept of instinct is introduced to account for the apparent intelligence of behavior when it does not seem reasonable to attribute intelligence to the organism, reviews the development of theorising on this subject from William James (1890), via William McDougall (1914) to Tolman (1923). Tolman thought that a new, empirically well-founded, teleological interpretation could meet all of the objections that had been raised against the older instinct doctrines. ... Tolman's basic assumption was that the ends of behavior must be found in the organism that behaves (Bolles, 1975).

Korman (1974) records that James and McDougall, and others, made lists of instincts that

were seen as mainsprings of all kinds of behaviors, simple and complex, necessary and unnecessary, for biological survival+but turns his attention to the effort to utilize the innate mechanisms of biological survival significance as a base on which to build frameworks and themes designed to explain human motivation of a complex, nonbiological nature+. Prominent among those attempting to explain aspects of human behaviour by this means was Sigmund Freud: Freud's answer as to the determinants of behavioral arousal, direction, and vigor lies, at least partially, in the assumption of the existence of innate needs, which may also be called instincts in a psychological sense+ (Korman, 1974).

Freud described four characteristics of each instinct:

1. A source: internal body stimulation. This differs from an external stimulation by coming from the body itself rather than from the environment, by being constant and recurring rather than episodic, and by being inescapable.
2. Impetus: force or energy, which is a function of the intensity of the need.
3. An aim to end the stimulation which gave rise to it. This is satisfying. Intermediary steps towards ending the stimulation may be sought if they are perceived as leading to the desired end state.
4. An object: anything that will abolish the stimulation. This assumes that there is no innate link between any instinct and any given object.

From Korman (1974)

Bolles (1975) summarises the Freudian view as follows: Instinctual drives are characterised by their energy or impulse to action. Men learn to attain certain objects, or goals that make possible the discharge of this energy+.

Perhaps the main criticism that can be levelled at instinct theories as explanations of motivation is that they add little to simple descriptions of behaviour: To say that ... an individual takes a job because he has an instinct to work is merely to give a redundant description of the observed behavior that adds nothing to our understanding of why the behavior took place+ (Lawler, 1973).

Drives

During the first half of the twentieth century, much attention was devoted to the concept of *drive* as an explanation of behaviour. The drive concept, as it is formulated by Freud, Lewin, or Murray, always operates homeostatically; the individual is constantly seeking to rid himself of tension that threatens his well-being+ (Bolles, 1975). Drive in this context represents the underlying forces that

make [behaviour] happen+ (Bolles, 1975). For Freud, behavior ultimately depends upon one drive, sex; for Murray, there are a large number of social as well as biological drives; and for Lewin, there is nearly an infinite number of possible tension systems that could stir an individual to action+ (Bolles, 1975).

The drive mechanism formulated by Lewin (1926) rests on the assumption that a state of tension is created within an individual by the existence of any psychological need. A tension is a state of a system which tries to change itself in such a way that it becomes equal to the state of surrounding systems. A psychological need may arise from a physiological basis, but for Lewin, needs exist which are not related to bodily functions and survival+ (Weiner, 1992), but Lewin did regard tensions with a physiological or at least a survival-value origin as genuine+ needs, whilst tensions arising from acts of will, and other more or less arbitrary commitments of the individual person+ (Bolles, 1975) were categorised as quasi+ needs+ which are purely psychic needs+ (Lewin, 1926). Both forms of needs were causes of behaviour.

In brief, Lewin asserts that a man's actions are to be explained on the grounds that he perceives particular ways and means of discharging certain tensions. Those activities that an individual perceives as making possible the release of tension will attract him; they will have a positive valence for him, and he will experience a force moving him to engage in those activities. Certain other activities may have the opposite effect; they are seen as increasing tension; they are said to have negative valence and to generate repulsive forces+ (Bolles, 1975).

Not all activity is directed at an original need. In the absence of a suitable goal object the tension to fulfil an intention may be discharged by a substitute action that attains the same end+ (Bolles, 1975). Lewin also observed that a task that is interrupted is likely to be resumed+, but frequently we forget our intentions+.

In evaluating Lewin's work on motivation, Bolles (1975) makes the following observations:

"Lewin went to considerable effort to develop a formal [or what might be called a preexperimental] structure that would be able to encompass the full richness and complexity of human behavior as the facts became known. The terms that constitute the formal language of the theory - that is, terms like 'valence', 'force', and 'tension' - are explicitly related to each other but are only poorly tied to observable events in the empirical world."

"The major inadequacy of Lewin's theory is its uncertain semantics. There is little indication of how one could possibly validate the constructs of the theory. How do we know what the needs of an organism are? How can we tell whether these needs have created tension? How do we know that the

tension is reciprocated in a force or in a valence perceived by the individual? How can we know how the individual perceives his behavioral possibilities? The constructs of the theory are not even provisionally tied to empirical observations".

It is not clear how one might demonstrate a need in the absence of a corresponding tension or a tension without an underlying need. Moreover, in Lewin's writings, need and tension are frequently referred to almost interchangeably.

None of these criticisms is likely to detract from Lewin's overall reputation as one of the leading psychologists of his time, and in the organisational world as the original source of virtually all models of change management (Burns, 1992).

Murray (1938) proposed what Deci (1992) describes as the earliest comprehensive theory of human needs. Murray's needs or drives have two components, an arousal mechanism that activates behaviour and a directional component that differentiates it from other needs (Korman, 1974). Korman remarks that the conditions under which the arousal component actually becomes activated in Murray's theorizing are not at all clear. Needs may arise from physiological causes, but more typically they are aroused by particular events in the environment that offer certain threats or promises to the individual (Bolles, 1975). Murray refers to these stimuli as pressures. The object of behaviour is to achieve some goal:

"Behavior ... generally serves to take the organism from some prior state to some subsequent state - that is what the unitary trend of behavior consists in. These trends are assumed to be due to a hypothetical force [a drive, need, or propensity], which operates homeostatically. That is, a motivating force carries the organism away from the prior or initiating condition into a state like satiation in which the force disappears. Because motivating forces are not directly observable, we have to infer them from observations of and communications with the individual" (Bolles, 1975).

Korman (1974) regards the goal-directed or purposive nature of Murray's theories as being both important and useful. It allows attention to be focused on the variety of ways in which a particular need might be met. Bolles (1975) summarises the sequence of events in Murray's model as follows: [1] A stimulus [desirable/undesirable] from the environment is detected; [2] A drive or need is aroused; [3] The organism is activated to engage in some activity, "motor, verbal, merely ideational, or even unconscious"; [4] The activity causes a trend in overall behavior which tends to restore equilibrium. Achieving a demotivated state may only be possible through attainment of a goal. "Goal objects acquire, through learning, a value, or valence, or cathexis. ... This re-establishment

of equilibrium, dispelling the drive, arouses a pleasurable affect". We can recognise in this simply stated homeostatic scheme the same conception of equilibrium that Freud had proposed and the same sequence of tension-force-release of tension that Lewin had proposed (Bolles, 1975).

Clark Hull is the psychologist principally associated with the concept of *drive*, which he formulated as singular, not plural, general not specific, and motivational not directional (Bolles, 1975). Hull's construct is summarised by Jung (1978) in the following terms:

[Drive] referred essentially to the level of deprivation of some primary biological need. Drive was equated with the sum total of all the sources of energy that activate an organism at a given moment. When the responses of the organism lead to drive reduction, such as the attainment of water by a thirsty rat, Hull viewed the situation as one in which an association had been formed between a stimulus and a response due to reinforcement.

According to Hull (1943), different needs, such as deprivation of food or water, or pain such as electric shock in animal experiments, constitute different sources of drive, but the drive itself is always the same. The various stimuli contribute in varying degree to the single construct. Hence drive cannot direct behavior, it can only energize. All steering of behavior is done associatively by stimuli (Bolles, 1975). Hull argued that behavior was directed according to its survival value to the organism. The most basic property of Hull's drive concept is that it activates behavior - it energizes or augments whatever behavior the animal may be engaged in (Bolles, 1975). Specific behaviors result from the innate characteristics developed through evolution, or from learned behaviors that had previously been associated with survival. Thus, two quite separate processes are involved in producing behaviour:

"For Hull, the newborn organism possesses a set of receptors capable of being stimulated by such sources as external [to the organism] stimuli ... and internal stimuli of the type associated with biological states of a threatening nature. ... These stimuli, both internal and external, may give rise to an internal state marked by two major characteristics. The first of these is a general drive state ... that acts as a general stimulant to the arousal of behavior in that it stimulates activation of whatever behavior tendencies exist in the organism at the time. ... the second characteristic, which is that each of these biological states have associated characteristic sets of physical stimulation unique to each state" (Korman, 1974).

The objective of behaviour in every case is to reduce drive, to the extent that an organism, including man, is motivated to achieve an inert

condition, that is, a condition without stimulation+ (Korman, 1974).

Evaluation of Hull's ideas has mainly pointed to the conclusion that they are too simple to explain complex behaviour. J Jung (1978) points out that a drive concept of motivation based on biological deficits would suggest that once all deficits were removed the organism would be quiescent+. Lawler (1973) comments that "the Hull's theory, outcomes become rewards when they are able to reduce primary drives and thereby reduce homeostatic imbalance and the tension that occurs when organisms are in a state of ecological deprivation+. However, Lawler goes on to point out, animals have not been found to acquire learned drives, and both animals and man seem to be attracted by outcomes that do not seem to be related to primary drives. For example, rats show curiosity and seem to "enjoy+ exploring, monkeys will solve puzzles without extrinsic rewards, and people will work to improve their skills and competences.

J Jung (1978) provides several examples of observations that were difficult to explain using drive theory:

"Harlow and his colleagues ... noted that monkeys would learn to bar press merely to be able to observe the environment [electric train set running] or to manipulate mechanical puzzles. Montgomery ... demonstrated in a series of studies that rats preferred the arm of a T maze that led to a complex rather than a simple path. Berlyne ... reviewed much of the Russian research on the orienting reflex and the conditions under which it occurs. In addition Berlyne ... summarized his own research, as well as that of others, on curiosity. As a result of these and other studies, concepts such as curiosity drive, exploratory drive, and manipulatory drive were developed; furthermore, it was maintained that these drives were analogous to hunger or thirst drives+.

Abstract values and goals were explained as having been "associated at some time with the satisfaction of primary drives+.

Bolles (1975) sums up current attitudes to Hull's work in the following terms:

"the great enthusiasm with which early researchers sought to connect motivated behavior with automatic, physiological adjustments and needs of the organism has been frustrated time and again".

"The idea that an animal's motivation is an automatic adjustment to its state of need is attractive and appealing, but it is not justified by the facts. What the evidence seems to indicate instead is that most of the time an animal's motivation is itself learned and that if we are to explain its behavior, we must do so by using constructs other than drive"

"the worst failure of the drive concept is that it

provides little help in explaining behavior. By the time we have discovered what the associative determinants are for any particular behavior, there is very little left for [drive] to explain" (Bolles, 1975).

Campbell and Pritchard (1976) concur: "the concept of drive has not proven useful in explaining experimental results and the preponderance of opinion is that it should be discarded+.

Behaviourism and Stimulus-Response Theories

The behaviourist school of psychology holds that it is impossible to study the operation of the mind and that the only appropriate subject for psychologists' attention is observable behaviour (Hayes, 1994). Watson (1913) defined behaviourism with his proposition that all behaviour could be explained by identifying associations between environmental stimuli and the organism's learned responses. Watson argued that associations or links between a stimulus and a response would be learned if they were repeated enough times. Pavlov (1927) showed in his classic experiments with dogs that a natural or unlearned response to a basic stimulus, such as salivating when food was presented, could be transferred to a totally different stimulus, eg, ringing a bell, if the two stimuli occurred together, especially if the association were repeated. In due course the response would occur when only the bell ringing stimulus was presented in the complete absence of any food. This form of learned behaviour is known as classical conditioning.

Thorndike (1911) proposed a "law of effect+ which held that "actions which are rewarded [ie, produce a pleasant effect] tend to be repeated+. The "reward+ associated with a specific behaviour is termed reinforcement. Skinner (1938) proposed that the "small actions+ which characterise the behaviour of all living organisms all produce some effect, however minor, on the surrounding environment. If these effects are experienced as pleasant by the organism they will contribute to larger and more complex patterns of behaviour. Skinner experimented with rats, rewarding them [ie, reinforcing the behaviours] with food when they performed certain actions such as pressing a bar. He found that the animals quickly learned how to obtain the rewards. Skinner called the "small actions+ operants, and the behaviour-learning process is known as operant conditioning.

Reinforcement can occur in complex patterns, and cause behaviour to be shaped in a variety of ways. Skinner distinguished between positive reinforcement, which takes the form of a reward, and negative reinforcement, which occurs when an unpleasant condition ceases. Punishment, defined as an unpleasant or aversive consequence of behaviour, is not reinforcing

within Skinner's definition - it suppresses what the person or animal is doing at the time but does not strengthen tendencies towards any alternative behaviours. Skinner argued strongly against the use of punishment in the context of human behaviour and society on the grounds that: "because punishment is ineffective, its use in controlling human behavior is indefensible. He observes that it would be morally indefensible even if it were effective ..., but that it is all the more so because it is not effective, has undesired side effects, and frequently has unpredictable effects". (Bolles, 1975)

Behaviourist researchers into workplace motivation have concentrated on performance improvement and behaviour-shaping. Davis and Luthans (1980) state the behaviourist position:

"There is today a jungle of theories that attempt to explain human behaviour in organizations. Unfortunately, many of the theoretical explanations have seemed to stray from behaviour as the unit of analysis in organizational behaviour. There is a widespread tendency for both scholars and practitioners to treat such hypothetical constructs as motivation, satisfaction and leadership as ends in themselves. We think it is time to re-emphasize the point that behaviours are the empirical reality, not the labels attached to the attempted explanation of the behaviours".

Robertson, Smith and Cooper (1992) refer to the "fundamental principle of behaviourism

that human behaviour is learnt. This does not mean learnt only in the narrow sense of classroom teaching but means that all of our behaviour and behaviour patterns emerge as we grow and mature from early childhood onwards. There are few, if any, innate human patterns of behaviour [instincts]. "[Another] major principle relates to the process by which this learning takes place. Behaviourists argue that specific behaviours are strengthened or weakened as a result of the consequences of that behaviour".

This approach can be applied to the control of workplace behaviour, using Skinner's principles, as summarised by Campbell and Pritchard (1976): "to understand behavior and to control it, what we need to know are the reinforcement contingencies to which an individual or class of individuals has been responsive in the past".

The operation of reinforcement and conditioning has been explored extensively by psychologists of most schools, and the basic principles are not in dispute (see, for example, Dobson et al, 1982; Gross, 1992; Atkinson et al, 1993; or Hayes, 1994). However, the application of reinforcement and stimulus-response mechanisms in human, and workplace, motivation is not clear-cut. Korman (1974) lists a variety of research supporting the conclusion that individuals will perform [behave] in a manner consistent with

previous reinforcement patterns. Dulany (1968) however conducted a series of studies in which subjects first had certain rules explained to them and then received reinforcements for behaviours which were incompatible with the rules. Dulany found that subjects consistently tended to act in accordance with the cognitively-absorbed rules rather than the reinforcement patterns. The influence of cognition must therefore be acknowledged in applying reinforcement theory to the study of motivation. Later attempts to do this centre around social learning theory, which will be discussed below.

Needs Theories

According to Deci (1992) "The need theories, with their growth-oriented view of the person and their emphasis on the 'higher-order' needs, represented an important impetus for the development of the newer management theories". Needs theories postulate underlying human needs which human beings strive to satisfy, resulting in specific behaviours. The origins of the putative needs are explained in a variety of ways, or not at all, by the different theorists. Campbell and Pritchard (1976) observe that: "Much of the history of this class of theory is rooted in theories of instincts which ... fell into disrepute soon after the turn of the century because of the propensity to postulate a specific need for almost every human act. Relative to human behavior, instincts were again made respectable when they were transformed to the concept of needs acquired through learning".

One attribute of needs theories is their ability to explain both the termination or extinction of behaviour, and its intensification. Jung (1978) points out:

In the case of satisfying biological needs such as food, the restoration of deficits will terminate the motivated behavior at least temporarily. In the case of more socially based motives such as gaining social approval or recognition, the behavior may be persistent and apparently insatiable. As each goal is achieved, the individual may reset his or her target higher so that absolute fulfilment is never achieved and persistent attempts may be made over many years against often difficult obstacles.

The names of the prominent needs theorists are almost household words, and are certainly familiar to students of management and organisation. Four of the most influential are discussed below.

Maslow

Abraham Maslow proposed a hierarchy of, initially, five needs:

- 1 *Physiological needs* such as hunger, thirst or sex

- | | | |
|---|---------------------------------|---|
| 2 | <i>Safety needs</i> | for protection against danger, deprivation or threat. |
| 3 | <i>Love needs</i> | to belong, to be accepted, to give and receive friendship and love. |
| 4 | <i>Esteem needs</i> | [i] for self-esteem, self-confidence, achievement and independence.
[ii] for esteem from others, status, recognition and [deserved] respect. |
| 5 | <i>Self-actualisation needs</i> | to realise one's full potential, for continuous self-development, to be whatever one is capable of being. |

To these five needs Maslow added the needs to *know* and to *understand*. According to Adair (1990):

"Maslow allowed that there are two other sets of needs which found no place in the ... hierarchical order, and he felt it necessary to recognize them while making it clear that at present psychologists had little to say about them. He suggested, however, that the principle of a hierarchy of prepotency might also apply in both cases, albeit in a shadowy form. In contemporary presentations of Maslow's theory of needs in management education, these two scales are usually and unfortunately omitted altogether".

The principle of prepotency argues that each need must be substantially satisfied before the next need assumes the major role in determining behaviour.

For example, once physiological needs are satisfied:

"At once other [and 'higher'] needs emerge and these, rather than physiological hungers, dominate the organism. And when these in turn are satisfied, again new [and 'still 'higher'] needs emerge and so on. This is what we mean by saying that the basic human needs are organized into a hierarchy of relative prepotency. ... One main implication of this phrasing is that gratification becomes as important a concept as deprivation in motivation theory" (Maslow, 1943).

Thus needs only emerge when more prepotent needs have been gratified. Needs "cease to play an active determining or organizing role as soon as they are gratified. ... A satisfied need is not a motivator - it has ceased to exist. ... This point ... has been either overlooked or contradicted in every theory of motivation I know". "Just as a sated man no longer feels hungry, a safe man no longer feels endangered" (Maslow, 1943).

The emergence of a new need after satisfaction of the prepotent need is not a sudden, saltatory phenomenon but rather a gradual emergence by slow degrees from nothingness (Maslow, 1943).

There is also a degree of co-existence of needs from different levels of the hierarchy:

The statement; 'if one need is satisfied, then another emerges' might give the false impression that a need must be satisfied 100% before the next need emerges. In actual fact, most members of our society who are normal are partially satisfied in all their basic needs and partially unsatisfied in all their basic needs at the same time. A more realistic description of the hierarchy would be in terms of decreasing percentages of satisfaction as we go up the hierarchy of prepotency".

"The average member of our society is most often partially satisfied and partially unsatisfied in all of his wants. The hierarchy principle is usually empirically observed in terms of increasing percentages of non-satisfaction as we go up the hierarchy". (Maslow, 1943).

Maslow considered that needs were usually unconscious, although not necessarily so. Also, the order of the hierarchy is not fixed, but actually ... is not nearly so rigid as we may have implied (Maslow, 1943).

Maslow has some comments about individual needs groupings, beginning with physiological needs

"Undoubtedly these physiological needs are the most prepotent of all needs. ... A person who is lacking food, safety, love, and esteem would probably hunger for food more strongly than for anything else. ... If all the needs are unsatisfied, and the organism is then dominated by the physiological needs, all other needs may become simply non-existent or pushed into the background".

"... it has been pointed out that these physiological drives or needs are to be considered unusual rather than typical because they are isolable, and because they are localizable somatically. That is to say, they are relatively independent of each other, of other motivations and of the organism as a whole, and secondly, in many cases, it is possible to demonstrate a localized, underlying somatic base for the drive".

"We cannot identify all physiological needs as homeostatic. That sexual desire, sleepiness, sheer activity and maternal behavior in animals are homeostatic has not yet been demonstrated. Furthermore, this list would not include the various sensory pleasures [tastes, smells, tickling, stroking] which are probably physiological and which may become the goals of motivated behavior".

"It should be pointed out again that any of the physiological needs and the consumatory behavior involved with them serve as channels for all sorts of other needs as well. That is to say, the person who thinks he is hungry may actually be seeking more for comfort, or dependence, than for vitamins or proteins" (Maslow, 1943).

Safety needs are not explored in any depth, but social and belonging needs are accorded some clarification.

"If both the physiological and the safety needs are fairly well gratified, then there will emerge the love and affection and belongingness needs, and the whole cycle already described will repeat itself with this center. ... [the person] will hunger for affectionate relations with people in general, namely, for a place in his group, and he will strive with great intensity to achieve this goal. ... In our society the thwarting of these needs is the most commonly found core in cases of maladjustment and more severe psychopathology. If both the physiological and the safety needs are fairly well gratified, then there will emerge the love and affection and belongingness needs, and the whole cycle already described will repeat itself with this center. ... [the person] will hunger for affectionate relations with people in general, namely, for a place in his group, and he will strive with great intensity to achieve this goal."

"The so-called 'psychopathic personality' is another example of permanent loss of love needs."

"Also not to be overlooked is the fact that the love needs involve both giving and receiving love."

Maslow also expands on the esteem needs, which:

"may be classified into two subsidiary sets. These are, first, the desire for strength, for achievement, for adequacy, for confidence in the face of the world, and for independence and freedom. Secondly we have what we may call the desire for reputation or prestige [defining it as respect or esteem from other people], recognition, attention, importance or appreciation"

"All people in our society [with a few pathological exceptions] have a need or desire for a stable, firmly-based [usually] high evaluation of themselves, for self-respect, or self-esteem, and for the esteem of others. By firmly-based self-esteem we mean that which is soundly based on real capacity, achievement and respect from others."

"Thwarting of [the esteem] needs produces feelings of inferiority, of weakness and of helplessness. These feelings in turn give rise to either basic discouragement or else compensatory or neurotic trends"

Maslow defines self-actualisation in the following terms: "What a man *can* be, he *must* be. Self-actualization refers to the desire to become actualized in what he is potentially. He goes on to comment "Since, in our society, basically satisfied people are the exception, we do not know much about self-actualization, either experimentally or clinically."

The additional needs - the desires to know and to understand, are characterised by Maslow as needs to systematize, to organize, to look for relations and meanings. These desires: are

themselves conative, ie, have a striving character, and are as much personality needs as the basic needs we have already discussed. Maslow acknowledges that

"Reversals of the average order of the hierarchy are sometimes observed. Also it has been observed that an individual may permanently lose the higher wants in the hierarchy under special conditions. ... In certain people the level of aspiration may be permanently deadened or lowered"

"There are some people in whom, for instance, self-esteem seems to be more important than love. ... There are other, apparently innately creative people in whom the drive to creativeness seems to be more important than any other counter-determinant. Their creativeness might appear not as self-actualization released by basic satisfaction, but in spite of lack of basic satisfaction"

"Another cause of reversal of the hierarchy is that when a need has been satisfied for a long time, this need may be underevaluated. People who have never experienced chronic hunger are apt to underestimate its effects and to look upon food as a rather unimportant thing."

"What we have claimed is that the person will want the more basic of two needs when deprived of both. There is no necessary implication here that he will act upon his desires. Let us say again that there are many determinants of behavior other than the needs and desires."

"Perhaps more important than all these exceptions are the ones that involve ideals, high social standards, high values and the like. With such values people become martyrs; they will give up everything for the sake of a particular ideal, or value."

Maslow contended that environmental conditions facilitated or impeded the satisfaction of basic needs. Amongst these immediate prerequisites he included: freedom of speech, freedom of action, freedom of self-defence, justice, fairness, honesty, orderliness of the group, and danger to the cognitive capacities [perceptual, intellectual, learning]. Danger to these is reacted to almost as if it were a direct danger to the basic needs themselves and "any thwarting or possibility of thwarting of these basic human goals, or danger to the defenses which protect them, or to the conditions upon which they rest, is considered to be a psychological threat". So basic to the well-being of the individual does Maslow consider the basic needs to be that he makes the

"bold postulation that a man who is thwarted in any of his basic needs may fairly be envisaged simply as a sick man. This is a fair parallel to our designation as 'sick' of the man who lacks vitamins or minerals. Who is to say that a lack of love is less important than a lack of vitamins?"

"If we were to use the word 'sick' in this way, we should then also have to face squarely the relations

of man to his society. One clear implication of our definition would be that [1] since a man is to be called sick who is basically thwarted, and [2] since such basic thwarting is made possible ultimately only by forces outside the individual, then [3] sickness in the individual must come ultimately from a sickness in the society. The 'good' or healthy society would then be defined as one that permitted man's highest purposes to emerge by satisfying all his prepotent basic needs".

Maslow's ideas have been inspirational for many subsequent theorists, including such prominent behavioural psychologists as Rensis Likert and Chris Argyris (Adair, 1990), and to generations of managers. They have an instinctive appeal, which is all the more surprising since attempts to test them empirically have, overall, met with very little success. Korman (1974) remarks:

"As incredible as it may seem, considering the popularity of his arguments, there is little research support for [the hierarchy of motives] anywhere in the literature with which this author is acquainted. Of four studies that have directly tested his propositions, three found little or no support for them ..., while one found moderate support ... In addition, factor analyses of questionnaires aimed at measuring the Maslow needs have resulted in conflicting findings; some found that the items did not group together in the manner proposed by the theory ... whereas others have found the predicted relationships".

One reason for the difficulty of empirical verification is suggested by Robertson, Smith and Cooper (1992):

"Since Maslow appeared to be more concerned with the conceptual status of his theory and less concerned with its empirical referents, he did not define his needs with precision or practicality in mind. One obstacle to an empirical testing of his theory, therefore, is the difficulty of defining the various needs in operational terms. This means that not only can there be no guarantee of an exact equivalence between the original conception of such needs as esteem and self-actualization and attempts by later researchers to define them operationally, but there is also considerable variation among the definitions used in the empirical research field. "

Robertson et al also mention Maslow's failure to deal with environmental issues despite wide recognition among psychologists that behaviour can only be fully understood as a result of the interaction of individual and environmental characteristics. They go on to say: "One problem in trying to relate the theory to work process lies in the fact that people do not necessarily satisfy their higher-order needs through their jobs or occupation; to test this part of the theory in formal organizations would first of all require information about all the life areas in which people seek to satisfy their higher needs".

Adair (1990) complains of the difficulty in separating the various needs at a practical level, observing that the needs for order, for closure, for completion of the art, for system, and for structure may be indiscriminately assigned either to cognitive, conative, or aesthetic, or even to neurotic needs.

Despite these difficulties, which tend to make the design of empirical tests of the theory problematic, attempts have been made to verify Maslow's postulation. Porter (1964) surveyed some 2000 members of the American Managers Association using a questionnaire asking respondents to assess how strongly each need in the hierarchy was felt, how much of each need there should be, and how important each need was believed to be. Porter found that managerial level had no significant impact at the basic levels [ie, physiological, safety and love needs], but senior managers placed greater importance on the higher levels [defined as autonomy in this context, and self actualisation] than did the more junior managers. The size of the company did not appear to affect the findings. One explanation advanced for these results is that a prepotency mechanism is indeed operating, and lower-order needs are less likely to be satisfied at the junior levels of management than at the top. Campbell and Pritchard (1976), however, suggest two other explanations. First, that self-selection is causing bias: people with certain kinds of needs wind up in certain kinds of jobs, and second, that certain kinds of jobs provide certain kinds of outcomes that both stimulate and satisfy a particular kind of need.

Hall and Nougaim (1968) measured the strengths of felt needs and the degree of need-satisfaction of a group of 49 managers, in the communications company AT and T, annually in a longitudinal study over five years. Their study ignored physiological needs but addressed the other four levels of Maslow's hierarchy. They found no evidence to support the prepotency principle and there were some indications that an opposite effect was occurring in some cases.

Lawler and Suttle (1972) conducted a longitudinal study on 187 [initially] managers in two organisations; one group re-surveyed after six months and another after twelve months. They also ignored physiological needs but inserted a separate category, autonomy, between Maslow's esteem and self-actualisation needs. They formulated several hypotheses based on Maslow's model, of which the following are especially notable:

Hypothesis

"The satisfaction of needs in one category should correlate negatively with the importance of these same needs and positively with the importance of needs in the next higher level of the hierarchy".

"Changes in the satisfaction of needs in one category should correlate negatively with changes in the importance of needs in the same category, and positively with changes in the importance of needs on the next higher level of the hierarchy".

"High satisfaction of the needs in one category ... should be associated with low importance of the needs in the same category ... and with high importance of the needs in the next higher category of the hierarchy...".

Lawler and Suttle conclude that "the data from these analyses offered little support for the view set forth by Maslow and others that human needs are arranged in a multilevel hierarchy". However, they qualify this view a little in the following terms: "Research on the effects of starvation and thirst shows that when people are hungry or thirsty they often can think of little else and their social relationships deteriorate. ... This would seem to provide some support for the hierarchical need concept but only for lower-level needs".

Lawler (1973) later developed this idea to suggest that a two-step hierarchy might exist, with existence and security needs at the lower level and all the higher-order needs at the next:

"This line of thinking leads to the prediction that unless these lower-order needs are satisfied, the others will not come into play. However, which higher-order needs come into play after the lower ones are satisfied and in what order cannot be predicted. If anything, it seems that most people are simultaneously motivated by several of the same-level needs. On the other hand, people do not seem to be simultaneously motivated by needs from the two different levels".

Findings

"There are only two significant correlations. ... when security is high its significance is low ... when security satisfaction is high social needs are more important. ... Otherwise the hypothesis is not supported".

"There is a general tendency ... which indicates that increases in the satisfaction of a need are associated with decreases in its importance, but only two of the ten correlations are significant. ... This would indicate that changes in the satisfaction of lower level needs are not associated with changes in the importance of higher level needs".

"Neither table offers any support for the idea that the satisfaction of a need leads to it becoming less important in the future".

Robertson, Smith and Cooper (1992) refer to the two-factor aspect of the theory, which is reflected in the hypothesis that the lower needs decline in strength on satisfaction while higher needs grow in strength on satisfaction.

Campbell and Pritchard (1976) conclude that what data there are suggest that the Maslow hierarchy is not as powerful and robust a notion as some people assume. Adair (1990) is a little kinder: "those academic psychologists and psychiatrists who have read Maslow have received his theory with cautious but unmistakable interest as a stimulating if puzzling contribution to our knowledge of man".

Alderfer

Alderfer (1969) developed a threefold conceptualization of human needs. These three

core needs that [a human being] strives to meet ... include obtaining his material existence needs, maintaining his interpersonal relatedness with significant other people, and seeking opportunities for his unique personal development and growth.

In Alderfer's theory, usually known as E R G theory, lack of satisfaction at one level leads to stronger need at the level below and satisfaction at one level leads to stronger need at the level above. Lawler and Suttle (1972) observe that

"Alderfer differs from Maslow in his hypothesis that the lack of satisfaction of higher order needs can lead to lower order needs becoming more important. He also assumes that all needs are simultaneously active and thus, prepotency does not play as major a role in his theory as it does in Maslow's".

Campbell and Pritchard (1976) provide a useful summary of Alderfer's propositions, together with their own commentary:

"[a] the less a need is satisfied the more it is desired.

[b] the less a 'higher order' need is satisfied, the more lower order needs are desired

[c] the more a need is satisfied the more higher order needs are desired

The term higher order is not used in the Maslow sense but refers to the level of concreteness in the need objects. Existence needs simply have more concrete referents than relatedness needs and relatedness need objects are less ambiguous than growth need objects.

A rationale for [a] above is older than psychology. The explanation for [b] is not quite so self-evident and is based on the notion that if one type of need desire is frustrated the individual will seek to satisfy desires with more concrete referents. The progression up the hierarchy, as in [c], occurs because satisfaction of existence or relatedness desires frees the individual from the effort required

to satisfy and he or she can then turn to relatedness or growth.

Thus, contrary to Maslow's notion of prepotency, the need is always there and consciously recognized. It is the means to pursue it that is at issue here".

In order to test E R G theory against Maslow's ideas, Alderfer conducted a questionnaire study on 10 employees at several job levels from a bank. He found that none of the satisfaction scales, formed by summing the individual items, showed significant correlations ... in the direction predicted by Maslow's theory. The results tended rather to support E R G theory more than Maslow's theory or the simple frustration hypothesis, although Alderfer did acknowledge that he was researching in a single organisation and there is no way of knowing what special conditions in that organization may have favored the particular outcomes observed here. He was also unsure whether he had adequately operationalized Maslow's constructs.

Herzberg

Adair (1990) claims that Frederick Herzberg has the merit of applying Maslow's thought to the industrial situation. Robertson, Smith and Cooper (1992) relate Herzberg's work to that of Alderfer: the differences underlying lower and higher need satisfaction are further elaborated in Herzberg's ... two-factor theory of motivation.

Following a literature review covering 155 books and journal articles, Herzberg concluded that

there was a difference in the primacy of factors, depending on whether the investigator was looking for things the worker liked about his job or things he disliked (Herzberg et al, 1957).

After two pilot studies, Herzberg and colleagues conducted an extensive study in and around Pittsburgh, interviewing 203 engineers and accountants, working in eight companies involved in design and construction of machinery, and one major utility. Their definitions of the job titles are rather broad. In the category engineers, they included all individuals who had any design function whatsoever. ... Many ... did design or technical work only. Some also had supervisory functions (Herzberg, Mausner and Snyderman, 1959). Of accountants, Herzberg et al comment:

Many individuals in industry are called accountants; they may or may not have genuine professional duties. Our solution was to include in the sample all personnel involved in the fiscal activities of the company ... down to the lowest rank at which judgemental functions are exercised.

Herzberg et al adopted self-report as the most appropriate source of raw data:

Since so-called objective measures are subject to so many flaws, it was our feeling that the single best source as to his behavior during a period of good or bad attitudes toward his job would be the worker himself.

We decided to ask people to tell us stories about times when they felt exceptionally good or bad about their jobs.

No attempt was made to measure morale or job attitudes in a more refined way.

This is not a systematic sampling from the experiences of each individual. We could not institute any such system because of the inherent nature of our technique; the respondent had to be given freedom to choose.

(Herzberg et al, 1959).

Herzberg (1993) later referred to this approach as the sequence of events [critical incident] technique. Data were collected using semistructured interviews, in which the interviewer raises previously specified questions but is free to pursue lines of inquiry suggested during the course of the interview (Herzberg et al, 1959). The format was as follows:

"The respondent was told that he could 'start with any kind of story you like - either a time when you felt exceptionally good or a time when you felt exceptionally bad about your job, either a long-range sequence of events or a short-range incident'. After the first sequence was completely explored, the respondent was asked for a second. This time he was given somewhat less freedom to choose the kind of story. If he had given a high, he was then asked for a low; if he had given a long-range sequence, he was asked for a short-range one. Some respondents went on to tell a third story and in some cases even a fourth. The average number of sequences per correspondent was 2.4" (Herzberg et al, 1959).

Criteria were set for accepting a sequence of events as valid data:

1. There must be some objective happening/event.
1. The sequence must be bounded in time - have an identifiable beginning, a middle, and an identifiable ending [unless still going on].
2. The sequence must have taken place during a period in which feelings about the job were exceptionally good/bad [not ambivalent].
3. The respondent's job/position must fit the criteria.
4. The story must be about a situation in which the speaker's feelings were directly involved ... high or low spirits [not] caused by something unrelated to the job.

(Herzberg et al, 1959).

Once the raw data had been collected, analysis began with the breaking-down of the sequences into thought units, defined as a statement about

a single event or condition that led to a feeling, a single characterization of a feeling, or a description of a single event+ (Herzberg et al, 1959). The recorded %thought units+ were then coded. Initially, a sample of 5000 were subjected to a simple affinity analysis: - %put into the same pile the cards that seem to go together+(Herzberg et al, 1959), - then appropriate labels were determined for the various kinds of thought unit identified. Consistency was assured by having the activities carried out independently by different members of the research team, then comparing results until an agreed set of criteria was established.

Herzberg et al identified three primary groupings of thought units, which they called first-level factors, second-level factors, and effects. %Each category included within itself many subcategories+(Herzberg et al, 1959). Effectively, they recorded [a] what happened, [b] what it meant to the individual concerned, and [c] what outcome resulted. The definitions of the factors and effects adopted by the research team are as follows:

- First-level factors: %A description of the objective occurrences during the sequence of events, with special emphasis on those identified by the respondent as being related to his attitudes. eg, a promotion".
- %We define a first-level factor as an objective element of the situation in which the respondent finds a source for his good or bad feelings about the job+.
- Second-level factors: %These categorize the reasons given by respondents for their feelings; they may be used as a basis for inferences about the drives or needs which are met or which fail to be met during the sequence or events; eg ... 'I felt good because the promotion meant I was being recognized' ".
- Effects: %Attitudinal effects beyond the behavioral level involved in productivity, turnover, or interpersonal relations. Specification of mental health effects was also attempted".

A total of 14 first-level factors were identified:

1. Recognition: "Some act of notice, praise or blame was involved.

... Note that we had many sequences in which the central event was some act,

such as a promotion or a wage increase, which was not itself accompanied by verbal recognition but which was perceived by the respondent as a source of feelings of recognition. These sequences were coded under 'recognition second level'

2. Achievement: "Our definition of achievement also included its opposite, failure, and the absence of achievement. Stories involving some specifically mentioned success were put into this category".
3. Possibility of growth: "Changes in his situation involving objective evidences that the possibilities for his growth were now increased or decreased

... included in this category were stories in which a new element in the situation made it possible for the respondent to learn new skills or to acquire a new professional outlook".
4. Advancement: "Used only when there was an actual change in the status or position of the person in the company".
5. Salary: "All sequences of events in which compensation plays a role. Surprisingly enough, virtually all of these involve wage or salary increases, or unfulfilled expectations of salary increase".
6. Interpersonal Relations: "Restricted ... to those stories in which there was some actual verbalisation about the characteristics of the interaction between the person speaking and some other individual. We set this up in terms of three major categories: - superior; - subordinate; - peers.

... A sociotechnical story involves interpersonal relations that arise when people interact in the performance of their jobs. A 'purely social' story would relate interactions that took place within working hours and on the premises of work but independent of the activities of the job ... as it turned out we had virtually no stories of the purely social

- kind".
7. Supervision-technical: %n which the competence or incompetence, fairness or unfairness of the supervisor were the critical characteristics".
8. Responsibility: %ncludes those sequences of events in which the person speaking reported that he derived satisfaction from being given responsibility for his own work or for the work of others or being given new responsibility. It also includes stories in which there was a loss of satisfaction or a negative attitude towards the job stemming from a lack of responsibility. In cases, however, in which the story revolved around a wide gap between a person's authority and the authority he needed to carry out his job responsibilities the factor identified was 'company policy and administration' ".
9. Company policy and administration: "Lines of communication crossing in such a way that he does not really know for whom he is working, in which he has inadequate authority for satisfactory completion of his task, or in which company policy is not carried out because of inadequate organization of the work.
- The second kind of over-all characteristic of the company involved not inadequacy but the harmfulness or beneficial effects of the company's policies. These are primarily personnel policies. These policies, when viewed negatively, are not described as ineffective, but rather as 'malevolent' ".
10. Working Conditions: %he physical conditions of work, the amount of work, or facilities for doing the work".
11. Work itself: %he actual doing of the job or the tasks of the job as a source of good or bad feelings about it".
12. Factors in personal life: %Situations in which some aspect of the job affected personal life in such a way that the effect was a factor in the respondent's feelings about his job".

13. Status: %Only when the respondent actually mentioned some sign or appurtenance of status as being a factor in his feelings about the job" eg, having a secretary, company car, eating facilities
14. Job security: %Objective signs of presence or absence of job security
(Herzberg et al, 1959)

%he material analysed for second-level factors came from a respondent's answer to the question; %what did these events mean to you?%+ (Herzberg et al, 1959). A total of 11 such factors was identified:

1. Feelings of recognition
2. Feelings of achievement
3. Feelings of possible growth, blocks to growth, first-level factors perceived as evidence of actual growth
4. Feelings of responsibility, lack of responsibility, or diminished responsibility
5. Group feelings: feelings of belonging or isolation, socio-technical or purely social
6. Feelings of interest or lack of interest in the performance of the job
7. Feelings of increased or decreased status
8. Feelings of increased or decreased security
9. Feelings of fairness or unfairness
10. Feelings of pride or of inadequacy or guilt
11. Feelings about salary

This factor was included to cover those situations in which the first-level factor was viewed primarily as a source of the things that money can bring. If an answer to the question 'Why did this promotion make you feel good?' was, 'I like the idea of being able to make money,' then the second-level factor was coded 'salary' ".

(Herzberg et al, 1959)

Herzberg once again acknowledges the limitations of self-report in this context: %We were limited by our respondents' capacity for self-insight. As with all our material, we had to work with what people told us; we did not know what they were unable to tell or refused to divulge". (Herzberg et al, 1959)

Herzberg identified four kinds of %major effects+, although one is sub-divided. They are as follows:

Performance:

"Work was either better or poorer than usual [but with] ... no specific illustration of the precise nature of the change. ...

Changes in the rate of work but not in its quality ...

Changes in the quality of work"

Turnover:

"There is a continuum of possible categories under this general heading. At one end, we have situations in which the respondent actually quit his job. At the other, we have situations in which positive feelings were so great that the respondent turned down attractive offers elsewhere"

"In addition to those who actually quit as a result of negative attitudes, many of our respondents reported reactions such as ... they thought about quitting or actually took steps to leave; that is, they read ads or had interviews with other companies or with employment agencies. The impact of such psychological leaving of the company should not be minimized".

Mental health

"There were some positive effects [eg weight gain if underweight, giving up excessive drinking/smoking]+

Three classes of negative effects.

"The first ... and the most serious, although rare, were psychosomatic effects. ... the respondent himself drew a connection between the tensions of the job and the appearance of skin ailments, gastrointestinal ailments ... and cardiac conditions. We were extremely parsimonious in using this category, restricting it to situations in which the respondent reported himself clinically ill and under the care of a physician"

"The second category included stories in which we were told of physiological changes related to tensions; these changes produced real physical symptoms but did not lead to a diagnosis of pathology. Examples are nausea, vomiting, severe headaches, and marked loss of appetite+

"Lastly, we noted the more diffuse symptoms resulting from tension. These included many manifestations of anxiety states. ... we can report on the frequency with which people describe these anxiety states as resulting from the pressures of the job".

On the subject of mental health, Herzberg observes:

"We must not forget that we are dealing, on the whole, with a group of successful men. The casualties of the industrial world did not appear in our sample. ... It is, therefore, impressive to see what a wide range of deleterious effects on adjustment were traced by these people to the events that occurred during periods of low job attitudes".

Interpersonal relationships:

"Improvements or degenerations in interpersonal relationships+

Analysis of the data led to observations which Herzberg developed into the two factor theory+

which has been familiar to business and management students ever since:

"The findings of these studies, along with corroboration from many other investigations using different procedures, suggest that the factors involved in producing job satisfaction [and motivation] are separate and distinct from the factors that lead to job dissatisfaction. Since separate factors need to be considered, depending on whether job satisfaction or job dissatisfaction is being examined, it follows that these two feelings are not opposites of each other".

"The opposite of job satisfaction is not job dissatisfaction, but, rather, no job satisfaction; and similarly, the opposite of job dissatisfaction is not job satisfaction, but no job dissatisfaction+

(Herzberg, 1968).

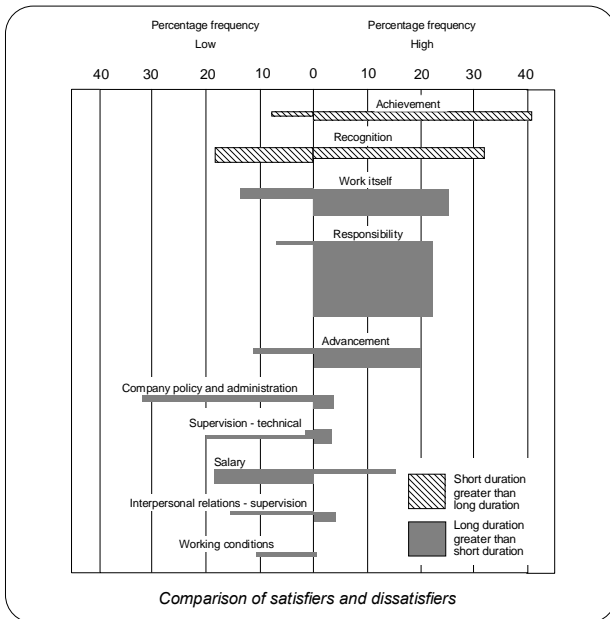
Herzberg noted that:

"When our respondents reported feeling happy with their jobs, they most frequently described factors related to their tasks, to events that indicated to them that they were successful in the performance of their work, and to the possibility of professional growth.... When feelings of unhappiness were reported, they were not associated with the job itself but with conditions that surround the doing of the job. These events suggest to the individual that the context in which he performs his work is unfair or disorganized and as such represents to him an unhealthy psychological work environment. Factors involved in these situations we call factors of hygiene, for they act in a manner analogous to the principles of medical hygiene. Hygiene operates to remove health hazards from the environment of man. It is not a curative, it is, rather, a preventive. Modern garbage disposal, water purification, and air-pollution control do not cure diseases, but without them we should have many more diseases" (Herzberg et al, 1959).

These hygiene factors+are rarely instrumental in bringing about high job attitudes+and

"focus not on the job itself but rather on the characteristics of the context in which the job is done: working conditions, interpersonal relationships, supervision, company policies, administration of these policies, effects on the worker's personal life, job security, and salary. This is a basic distinction. The satisfiers relate to the actual job. Those factors that do not act as satisfiers describe the job situation" (Herzberg et al, 1959).

The breakdown of the factors into Hygiene factors and Motivators is illustrated graphically by Herzberg et al (1959):



Reproduced from Herzberg et al (1959)

In the chart, factors which occurred in stories relating low job-attitudes are shown to the left, and factors which occurred in stories relating high job-attitudes are shown to the right. The length of the bar indicates the frequency with which the factor was mentioned, and the [vertical] thickness of the bar indicates the frequency with which the factor led to **long-range attitude change**. Herzberg draws attention to the factors **Achievement** and **Recognition**, shaded differently in the diagram, which **portray a reversal in the long-range ratio**. The attitudinal effects of both these factors were substantially more short-range+ (Herzberg et al, 1959).

The chart illustrates Herzberg's findings that, with two exceptions, most of the factors are clearly associated either with high or with low feelings about the job. Of recognition, Herzberg explains the extension of this factor into the low feelings area with the comment: **Unless recognition gives accurate feedback on performance, it takes on hygiene dynamics, is seen as interpersonal evaluation, and is frequently a dissatisfier+** (Herzberg et al, 1959). The implication that recognition only acts as a satisfier if the recipient believes it to be deserved is further explained by associating it with achievement: **Achievement can stand independently of recognition as a source of good feelings about the job. Recognition is somewhat more rarely independent of achievement+** (Herzberg et al, 1959).

The factor of **Salary** also had potential to act as a satisfier and as a dissatisfier. Herzberg discusses this in the following terms:

Salary ... appears as frequently in the high sequences as it does in the low sequences. This is true, however, only when we compare totals,

combining short- and long-range attitude changes. If we examine ... duration of attitude change, we find that in the low salary is found almost three times as often in the long-range as in the short-range sequences. For the high job-attitude stories salary is about equal in both directions. It would seem that as an affector of job attitudes salary has more potency as a job dissatisfier than as a job satisfier+

Salary was mentioned in the high stories as something that went along with a person's achievement on the job. It meant more than money; it meant a job well done; it meant that the individual was progressing in his work+

Salary when salary occurred as a factor in the lows, it revolved around the unfairness ... of the wage system within the company, ...[it] almost always referred to increases on salaries rather than absolute levels. It was the system of salary administration that was being described, a system in which wage increases were obtained grudgingly, or given too late, or in which the differentials between newly-hired employees and those with years of experience on the job were too small. Occasionally, it concerned an advancement that was not accompanied by a salary increase+

(Herzberg et al, 1959).

Herzberg found that 81% of the factors contributing to job satisfaction were motivators, that is: Achievement, Recognition for achievement, The work itself, Responsibility, and Growth or advancement whilst 69% of factors contributing to employees' dissatisfaction over their work+ involved hygiene elements: Company policy and administration, supervision, interpersonal relationships, working conditions, salary, status and security (Herzberg, 1968). He interpreted these findings thus:

"... the wants of employees divide into two groups. One group revolves around the need to develop in one's occupation as a source of personal growth. The second group operates as an essential base to the first and is associated with fair treatment in compensation, supervision, working conditions, and administrative practices" (Herzberg et al, 1959).

It follows that there is little or no connection between the two sets of factors. Herzberg positions this as follows:

"Theoretically, given an individual operating from a neutral point, with neither positive nor negative attitudes towards his job, the satisfaction of the factors, which we may call the 'satisfiers,' would increase his job satisfaction beyond the neutral point. The absence of satisfaction to these factors would merely drop him back to this neutral level but would not turn him into a dissatisfied employee. Contrariwise, there should be a group of factors that would act as 'dissatisfiers.' The satisfying of the factors, however, would not create a happy employee" (Herzberg et al, 1959).

and goes on to provide an explanation:

"The factors that lead to positive job attitudes do so because they satisfy the individual's need for self-actualization in his work.

... Man tends to actualize himself in every area of his life, and his job is one of the most important areas. The conditions that surround the doing of the job cannot give him this basic satisfaction; they do not have this potentiality.

... Factors in the job context meet the needs of the individual for avoiding unpleasant situations ... the job factors reward the needs of the individual to reach his aspirations. These effects on the individual can be conceptualized as actuating approach rather than avoidance behavior" (Herzberg et al, 1959, p 114).

"It is clear why the hygiene factors fail to provide for positive satisfactions: they do not possess the characteristics necessary for giving an individual a sense of growth. To feel that one has grown depends on achievement in tasks that have meaning to the individual, and since the hygiene factors do not relate to the task, they are powerless to give such meaning to the individual. Growth is dependent on some achievements, but achievement requires a task. The motivators are task factors and thus are necessary for growth; they provide the psychological stimulation by which the individual can be activated toward his self-realization needs" (Herzberg et al, 1959).

"Two different needs of man are involved here. One set of needs can be thought of as stemming from his animal nature - the built-in drive to avoid pain from the environment, plus all the learned drives which become conditioned to the basic biological needs. For example, hunger, a basic biological drive, makes it necessary to earn money, and then money becomes a specific drive. The other set of needs relates to that unique human characteristic, the ability to achieve and, through achievement, to experience psychological growth" (Herzberg, 1968).

This helps to explain why salary is listed among the hygiene factors, when the popular conception might hold it to be a motivating force. Herzberg argues that, except where it operates as a reinforcement of the motivators of *recognition* and *achievement*, salary meets avoidance needs; first avoidance of the economic deprivation that is felt when actual income is insufficient and second and generally of more significance in the times and for the kind of people covered by our study, ... the need to avoid being treated unfairly (Herzberg et al, 1959).

Herzberg's ideas were received enthusiastically by American industry, and he devoted much of his subsequent career to consultancy work. His theory necessarily involved the concept that improved performance would follow from making jobs intrinsically more stimulating, and that rewards and incentives are not in themselves motivating.

Such incentives, moreover, have to be continually reapplied and increased, otherwise they become simply part of the general hygiene of the job and lose their power to motivate.

"Yet good hygiene cannot be an end in itself; it is merely a beginning. As we have pointed out, an overemphasis on hygiene carries within itself the seeds of trouble. It can lead to a greater and greater focus on the extraneous rewards that reside in the context of jobs. Our emphasis should be on the strengthening of motivators. The slogan could almost be raised, 'Hygiene is not enough' " (Herzberg et al, 1959).

Poor hygiene could have the effect of depressing performance below the notional norm, and improvements to hygiene factors in such a case would be likely to result in some improvement in productivity. This would, though, be misleading, since the norm would then be the maximum level attainable. Only by improving the motivator factors could significant productivity gains be realised. All we can expect from satisfying the needs for hygiene is the prevention of dissatisfaction and poor job performance (Herzberg et al, 1959).

This was understandably popular with managers keen to improve productivity without increasing costs. Herzberg believed that job enrichment, meaning the redesign of jobs and working conditions to maximise the motivating factors, would result in improved productivity. The emphasis on motivators would distract employees' attention from hygiene concerns:

"Implied in The Motivation To Work is the admonition to industry that the lack of 'motivators' in jobs will increase the sensitivity of employees to real or imagined bad job hygiene, and consequently the amount and quality of hygiene given to employees must be constantly improved" (Herzberg, 1966).

There seems to be good evidence that when workers are forced to seek satisfaction only through hygiene, they must either strike or give up their motivators and become addicted to hygiene (Herzberg, 1993).

"I kick my dog [from the front or the back], he will move. And when I want him to move again, what must I do? I must kick him again. Similarly, I can charge a man's battery, and then recharge it, and recharge it again. But it is only when he has his own generator that we can talk about motivation. He then needs no outside stimulation. He wants to do it" (Herzberg, 1968).

Herzberg felt able to make the association between the high job attitudes he identified with the motivator factors, and improved productivity because of observations made during the Pittsburgh research:

"In over 60% of the combined high and low

sequences an effect on performance was reported in the anticipated direction; that is, an improved performance related to improved job attitudes and a decrease in performance related to a change in attitude in a negative direction. The second finding is that the tendency for attitudes to have an effect on performance was greater for favorable attitudes toward the job than for unfavorable ones. An unknown part of the difference between the 73% reported effects of high sequences and the 48% reported effects of low sequences may be attributed to the unwillingness of some interviewees to admit to doing their jobs less well than usual".

"Note that almost three out of four high sequences involved an improvement in performance as a result of an improved attitude on the job+.

(Herzberg et al, 1959).

In this respect Herzberg's findings confirmed his prior belief: "There is frequent evidence for the often suggested opinion that positive job attitudes are favourable to increased productivity. The relationship is not absolute, but there are enough data to justify attention to attitude as a factor in improving the worker's output. However, the correlations obtained in many of the positive studies were low" (Herzberg et al, 1957) which must be read in the context of his acknowledgement that "we have no quantifiable measure of changes in output+ in the Pittsburgh studies. The findings were based on self-report, accompanied, for many, by a fairly precise and circumstantial account of the way in which this effect on productivity was perceived+(Herzberg et al, 1959).

Robertson, Smith and Cooper (1992) observe that "Herzberg's theory has been roughly handled by academic critics+, both on the grounds of inadequate methodology, and for the conclusions Herzberg and his colleagues drew from their findings. They claim that the two-factor nature of the theory is essentially an artefact of the interview technique+. The emphasis on satisfaction/dissatisfaction criteria to the extent of neglecting behavioral criteria such as performance, absenteeism and labour turnover+ is also cited by Robertson et al as a "further methodological shortcoming of Herzberg's approach+.

The identification of job satisfaction with motivation is criticised by Vroom (1966) who observes "he appears to be arguing that the satisfiers are also motivators+, although little evidence is produced for this. ACAS (1992) also cite this assumption as highly suspect.

House and Wigdor (1967) observe that "... no data are presented by Herzberg to indicate a direct relationship between incidents involving intrinsic job characteristics and incidents containing self-reports of increased job performance".

Herzberg himself (1966) acknowledged some "valid criticisms+ of the Pittsburgh study: first, that the sample was restricted to engineers and accountants and the theory could be said to have been overgeneralised. Second, that "because of the unreliability of many of its findings, psychological research is more suspect than research in the hard sciences", due mainly to the large number of variables involved. He also recognised a "further problem with our technique+:

"... the necessity for indicating in some detail to the respondents the kinds of behavior we wanted them to talk about. It would clearly have been more elegant methodologically to leave completely open the question of the effects and their nature. However, we discovered early in our pilot procedure that the respondents themselves wished some guidance as to the kind of material in which we were interested" (Herzberg et al, 1959).

However, he claimed that the study had been successfully replicated, with substantially the same results: "At least 16 other investigations, using a wide variety of populations [including some in the Communist countries], have since been completed, making the original research one of the most replicated studies in the field of job attitudes" (Herzberg, 1968). Later (Herzberg, 1993) he referred to "twelve replications. These studies, along with many others, confirm evidence of the two independent sets of factors+.

Studies reported by other researchers have tended to support Herzberg's theory weakly or not at all. Burke (1966) reports a study of 187 students who were asked to rank the importance of five motivators and five hygiene factors:

"The results clearly indicated the absence of a unidimensional attribute underlying both the motivators and the hygienes and suggests that Herzberg's 2-factor theory may be an oversimplified representation of job satisfaction. A literature review also showed that these 2 factors may not be independent. Nevertheless, the basic distinction between intrinsic job characteristics and environmental job characteristics seems to be a useful one for purposes of research".

In a similar study, Wood and LeBold surveyed "a national sample of over 3,000 engineering graduates+. Each engineer evaluated "an overall job satisfaction index and 34 questionnaire items by the personal importance of each item and the degree to which each characterized his current professional position. Factor analysis suggests that job satisfaction is multidimensional. A general job characteristic factor and a specific factor, Professional Challenge, tend to be most related to overall job satisfaction+(Wood and LeBold, 1970). Burke also lists fourteen other studies attempting to replicate Herzberg's findings. Overall he found qualified support for the underlying premise, but results varied with occupational level, age, sex

and type of job. The same factor could be either a motivator or a hygiene factor. Sometimes "a given factor was found to cause job satisfaction *and* job dissatisfaction in the same sample".

Jung (1978) reports a survey commissioned by the US Department of Labor and conducted by the Survey Research Center of the University of Michigan on a nationwide sample of 1,533 workers in 1969+. In this survey the findings of Herzberg et al were ... confirmed. The factor 'enough pay' was ranked fifth in importance, whereas the highest ranking factor was interesting work".

House and Wigdor (1967) review thirty-one studies attempting to replicate all or part of Herzberg's research using "methods other than the storytelling method". They reach four conclusions:

"A given factor can cause job satisfaction for one person and job dissatisfaction for another person, and vice versa".

"A given factor can cause job satisfaction and dissatisfaction in the same sample".

"Intrinsic job factors are more important to both satisfying and dissatisfying job events".

"These conclusions lead us to agree with the criticism ... that the Two-Factor theory is an oversimplification of the relationships between motivation and satisfaction, and the sources of job satisfaction and dissatisfaction".

House and Wigdor, using Herzberg's own data, found that "achievement [and recognition are] seen by *most respondents* as more of a dissatisfier than relations with supervisors or working conditions". They also question Herzberg's statistical analysis: "Every factor did not appear in every study reported by Herzberg. However, in all studies, each factor had an equal chance of occurring and did not because of failure of respondents to mention incidents relating to all factors".

Wilde (1970) studied 200 female workers+ and found that work itself was the major determinant of both satisfaction and dissatisfaction. He found no evidence of Herzberg's 'principle of duality' +. Supervisors were a source of both support and motivation. In the same job, 30% of subjects were satisfied and 70% dissatisfied, which Wilde considered to point to individual differences as the main determinants of attitudes.

Adair (1990) complains that "Herzberg's general view that 'supervision' ... is a hygiene factor obstinately ignores the fact that in many circumstances human relationships are as much intrinsic to the job as they are extrinsic".

Several reviewers (House and Wigdor, 1967; Jung, 1978; ACAS, 1992) agree that pay can be a

source of both satisfaction and dissatisfaction, largely for the reasons suggested by Herzberg.

Vroom considers that, even if two groups of factors appear to emerge from the studies,

"It is ... possible that obtained differences between stated sources of satisfaction and dissatisfactions stem from defensive processes within the individual respondent. Persons may be more likely to attribute the causes of satisfaction to their own achievements and accomplishments on the job. On the other hand, they may be more likely to attribute their dissatisfaction not to personal inadequacies or deficiencies, but to factors in the work environment; ie, obstacles presented by company policies or supervision" (Vroom, 1964).

"People tend to take the credit when things go well, and enhance their own feelings of self-worth, but protect their self-concept when things go poorly by blaming their failure on the environment" (Vroom, 1966).

Overall, Herzberg's theory is widely regarded as, at best, over-simplistic (Wood and LeBold, 1970; Adair, 1990). Adair refers to the

"danger that Herzberg's dichotomy between 'satisfaction' and 'dissatisfaction', job content and job context, can become a Procrustean bed upon which all experience, suitably lopped and trimmed, must be made to fit".

"Herzberg's dualistic framework has a value as a stimulating and introductory visual sketch-map in teaching, but it becomes an over-simplification if taken beyond a certain point".

McGregor

(All quotations under this heading are from McGregor (1960) unless stated otherwise.)

In 1950 Douglas McGregor had felt able to write of the

"first clear recognition of an inescapable fact: we cannot successfully *force* people to work for management's objectives. The ancient conception that people do the work of the world only if they are forced to do so by threats or intimidation, or by the camouflaged authoritarian methods of paternalism, has been suffering from a lingering fatal illness for a quarter of a century. I venture the guess that it will be dead in another decade" (McGregor, 1950).

By 1957 he had begun to recognise that this ancient conception+ showed little sign of dying from natural causes and that some intervention from himself would be needed to hasten its demise. His conference paper under the title *The Human Side of Enterprise+* (McGregor, 1957) outlined the ideas which were later expanded into the book of the same title.

McGregor was heavily influenced by Maslow:

"McGregor's (1960) formulation of the now famous managerial styles, theory X and theory Y, relied

heavily on the idea that human motives were arranged in a hierarchy of prepotency" (Alderfer, 1969).

McGregor, influenced by views such as Maslow's (1943) proposal of work as a means of achieving self-actualization, was promoting the conception of Theory Y as the appropriate view of work motivation (Jung, 1978).

"McGregor's writings, still ranked as the most influential of their genre in the world of industry, and his persuasive lectures were not the only means by which Maslow's views have been propagated to management audiences" (Adair, 1990).

McGregor ... when initially proposing Theory Y, used Maslow's theory as a foundation (Deci, 1992).

However, McGregor is concerned with the application of Maslow's ideas in an industrial or organisational context. He begins with some oversimplified generalisations:

"Man is a wanting animal - as soon as one of his needs is satisfied, another appears in its place. This process is unending. It continues from birth to death, Man continually puts forth effort - works, if you please - to satisfy his needs.

Human needs are organized in a series of levels - a hierarchy of importance. ...

"A satisfied need is not a motivator of behavior! This is a fact of profound significance ... which is ... ignored in the conventional approach to the management of people"

He observes that for many wage earners *work is perceived as a form of punishment* which is the price to be paid for various kinds of satisfaction away from the job and commented that we would hardly expect them to undergo more of this punishment than is necessary. He further remarked that most of the rewards typically provided the worker for satisfying his needs through his employment can only be used when the worker is not actually at work: wages, for example, cannot be spent at work. Because of this, McGregor argues that incentive schemes violate natural law as a means of controlling behavior at work, because the rewards they offer can only be enjoyed outside the work environment. For example, pay can only be spent when not at work, pensions benefits are enjoyed on retirement, and so on. Behaviour *at work* is influenced mainly by rewards in the workplace, such as the approval of fellow workers. Workers tend to distrust management promises of the integrity of piece-work schemes, often believing that consistent over-performance will lead to higher targets, and in any case become adept at beating the system. Total costs to companies of operating and policing such schemes often exceed the benefits delivered.

Safety needs are also prominent in McGregor's positioning of his ideas: when [someone] feels threatened or dependent, his greatest need is for protection, for security.

"The fact needs little emphasis that since every industrial employee is in at least a partially dependent relationship, safety needs may assume considerable importance. Arbitrary management actions, behavior which arouses uncertainty with respect to continued employment or which reflects favoritism or discrimination, unpredictable administration of policy - these can be powerful motivators of safety needs in the employment relationship at every level from worker to vice president. In addition, the safety needs of managers are often aroused by their dependence downward or laterally.

Echoing Maslow, McGregor suggests that thwarted needs, whether the basic physiological and safety needs, or the higher needs, are the equivalent of physical illness:

"The man whose needs for safety, association, independence, or status are thwarted is sick, just as surely as is he who has rickets. And his sickness will have behavioral consequences".

He argues that work must provide opportunities to satisfy the higher needs:

"Unless there are opportunities at work to satisfy these higher-level needs, people will be deprived; and their behavior will reflect this deprivation. Under such conditions, if management continues to focus its attention on physiological needs, the mere provision of rewards is bound to be ineffective, and reliance on the threat of punishment will be inevitable".

Anarchy, chaos, irreconcilable conflicts of self-interest, lack of responsibility, inability to make decisions, and failure to carry out those that were made. All these consequences, and other worse ones, would be inevitable unless conditions could be created such that the members of the organization perceived that they could achieve their own goals best by directing their efforts toward the success of the enterprise".

McGregor recognises that control in some form is a necessary part of management:

Successful management depends - not alone, but significantly - upon the ability to predict and control human behavior.

We have now discovered that there is no answer in the simple removal of control - that abdication is not a workable alternative to authoritarianism.

His new perspective takes issue with what he identifies as the prevailing view of industrial management about how control can be exercised and maintained:

"If there is a single assumption which pervades conventional organizational theory it is that authority is the central, indispensable means of

managerial control. This is the basic principle of organization in the textbook theory of management".

However, he maintains that this viewpoint has a fundamental flaw, because

There is no superhuman source of authority. There is no sound basis for expecting the individual to sacrifice his personal goals or needs for the organization [except possibly under crisis conditions] and there is no successful way to enforce this expectation if it does exist.

The efforts to exercise control which McGregor saw taking place in American industry were, he believed, often misguided and inevitably destined to fail:

"With respect to physical phenomena, control involves the selection of means which are appropriate to the nature of the phenomena with which we are concerned. In the human field the situation is the same, but we often dig channels to make water flow uphill. Many of our attempts to control behavior, far from representing selective adaptations, are in direct violation of human nature. They consist in trying to make people behave as we wish without concern for natural law. Yet we can no more expect to achieve desired results through inappropriate action in this field than in engineering".

When these attempts fail, McGregor sees the reactions of managers as inimical to any learning process:

"When we fail to achieve the results we desire, we tend to seek the cause everywhere but where it usually lies: in our choice of inappropriate methods of control. The engineer does not blame water for flowing downhill rather than up, nor gases for expanding rather than contracting when heated. However, when people respond to managerial decisions in undesired ways, the normal response is to blame them. It is their stupidity, or their uncooperativeness, or their laziness which is seized on as the explanation of what happened, not management's failure to select appropriate means for control".

McGregor argues that the attitudes of managers towards their workers are inevitably based on theory. In the absence of more formal theory, informal assemblies of assumptions about people and behaviour are used to guide and determine action. These assumptions also place limits on the attitudes that it is possible for an individual to hold:

"Virtually all significant technological developments wait on the formulation of relevant theory. Similarly, in the management of the human resources of industry, the assumptions and theories about human nature at any given time limit innovation. Possibilities are not recognized, innovating efforts are not undertaken, until theoretical conceptions lay a groundwork for them".

Not all such informal theory is necessarily dysfunctional: "it is possible to have more or less adequate theoretical assumptions. However; useful or not, it is inescapable: it is not possible to reach a managerial decision uninfluenced by assumptions, whether adequate or not". The assumptions that are held by managers are vitally important to the health of their organisations:

"Perhaps it is now clear that the all-important climate of the superior-subordinate relationship is determined not by policy and procedure, nor by the personal style of the superior, but by the subtle and frequently quite unconscious manifestations of his underlying conception of management and his assumptions about people in general".

Even when alternative paradigms are offered it may not be easy for managers to accept them if they contradict the working assumptions they already espouse:

"Since it is rare for deep-rooted emotional convictions to be abandoned in favor of conflicting academic theory, at least in the field of the social sciences, some managers simply reject the formal principles [and the 'long-haired' professors who propound them] and retain their own assumptions".

Often, such new perspectives are rejected on the grounds of impracticality. McGregor dismisses such objections: "The insistence on being practical really means 'let's accept my theoretical assumptions without argument or tests'".

The theory which McGregor identified as underlying the prevailing attitudes, assumptions and behaviour of American managers he designated *Theory X*. He was concerned to make it plain that:

"Theory X is not a straw man for purposes of demolition, but is in fact a theory which materially influences managerial strategy in a wide sector of American industry today. Moreover, the principles of organization which comprise the bulk of the literature of management could only have been derived from assumptions such as those of Theory X. Other beliefs about human nature would have led inevitably to quite different organizational principles".

The assumptions of Theory X are as follows:

The average human being has an inherent dislike of work and will avoid it if he can".

Because of this human characteristic of dislike of work, most people must be coerced, controlled, directed, threatened with punishment to get them to put forth adequate effort toward the achievement of organizational objectives".

The average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition, wants security above all".

McGregor associates this theory with certain patterns of behaviour:

"Consider a manager who holds people in relatively low esteem. He sees himself as a member of a small elite endowed with unusual capacities, and the bulk of the human race as rather limited. He believes also that most people are inherently lazy, prefer to be taken care of, desire strong leadership. He sees them as prepared to take advantage of the employment relationship unless they are closely controlled and firmly directed. In short, he holds to Theory X".

Managers who subscribe to Theory X are likely to find their expectations confirmed, because their own behaviour will cause reactions in their subordinates that accord with their assumptions and Theory X will appear to be validated, but only because we have mistaken effects for causes.

"It is obvious that this theoretical orientation ... will reflect itself in a variety of ways in this manager's daily behavior toward his subordinates. It is equally obvious that, perceiving his attitudes, they will have relatively limited expectations concerning the possibilities for achieving their own goals in a relationship where they are dependent on him".

"Management ... often goes to considerable lengths to control and direct human effort in ways that are inimical to the natural 'groupiness' of human beings. When man's social needs ... are thus thwarted, he behaves in ways which tend to defeat organizational objectives. He becomes resistant, antagonistic, uncooperative. But this behavior is a consequence, not a cause".

It is this self-fulfilling nature of the Theory X orientation which has enabled it to dominate management thinking for so long.

McGregor's formulation of the alternative approach was Theory Y:

"The expenditure of physical and mental effort in work is as natural as play or rest. The average human being does not inherently dislike work. Depending upon controllable conditions, work may be a source of satisfaction [and will be voluntarily performed] or a source of punishment [and will be avoided if possible]."

"External control and the threat of punishment are not the only means of bringing about effort toward organizational objectives. Man will exercise self-direction and self-control in the service of objectives to which he is committed".

"Commitment to objectives is a function of the rewards associated with their achievement. The most significant of such rewards, eg, the satisfaction of ego and self-actualization needs, can be direct products of effort directed toward organizational objectives."

"The average human being learns, under proper conditions, not only to accept but to seek responsibility. Avoidance of responsibility, lack of ambition, and emphasis on security are generally consequences of experience, not inherent human characteristics."

"The capacity to exercise a relatively high degree of imagination, ingenuity, and creativity in the solution of organizational problems is widely, not narrowly, distributed in the population".

"Under the conditions of modern industrial life, the intellectual potentialities of the average human being are only partially utilized".

A manager whose underlying assumptions conform to Theory Y will have a contrasting set of attitudes:

"He has a relatively high opinion of the intelligence and capacity of the average human being. He may well be aware that he is endowed with substantial capacity, but he does not perceive himself as a member of a limited elite. He sees most human beings as having real capacity for growth and development, for the acceptance of responsibility, for creative accomplishment. He regards his subordinates as genuine assets in helping him fulfil his own responsibilities, and he is concerned with creating the conditions which enable him to realize these assets. He does not feel that people in general are stupid, lazy, irresponsible, dishonest, or antagonistic. He is aware that there are such individuals, but he expects to encounter them only rarely. In short, he holds to Theory Y.

The climate of the relationship created by such a manager ... will be vastly different. Among other things, he will probably practice effective delegation, thus providing his subordinates with opportunities to develop their own capabilities under his leadership. He will also utilize them as resources in helping him solve departmental problems. His use of participation will demonstrate his confidence in them".

"Theory Y ... leads to a preoccupation with the nature of relationships, with the creation of an environment which will encourage commitment to organizational objectives and which will provide opportunities for the maximum exercise of initiative, ingenuity, and self-direction in achieving them".

McGregor argues that Theory Y leads to a climate of integration, in which conditions are created which mean that members of an organisation can achieve their own goals best by directing their efforts toward the success of the enterprise. Security is downgraded as a predominant goal for members of such an organisation, provided that individuals are able to participate in decisions which affect them:

"In these adult relationships it does not appear that the guarantees implied by the usual meaning of the term security are necessary. In fact, there are successful relationships - characterized by high morale and high productivity - in which security is literally zero. These conditions are found, for example, in certain military units on the battlefield".

McGregor believed that his approach would be ultimately beneficial to organisations in every way:

"If ... we accept assumptions like those of Theory Y,

we will be challenged to innovate, to discover new ways of organizing and directing human effort, even though we recognize that the perfect organization, like the perfect vacuum, is practically out of reach".

He accepted that the assumptions of Theory Y are not finally validated, but maintained that they are far more consistent with existing knowledge in the social sciences than are the assumptions of Theory X.

The implementation of Theory Y as a management style is almost untestable, depending as it does upon a system of attitudes and assumptions on the part of the managers involved which would be practically impossible to operationalise. Maslow himself observed a well-meaning experiment run on its principles in a California electronics factory (Kennedy, 1991) and found that Theory Y did not altogether live up to expectations. Some people did indeed seek the need for certainty and direction which are implied by at least a partial Theory X orientation. McGregor's book is perhaps better regarded as a philosophical work. Nevertheless, the terms he coined; Theory X and Theory Y, have become part of the international vocabulary of management (Haire, 1967) and are as familiar today as they were in the 1960s, when McGregor's ideas were fresh and controversial. Warren Bennis (1985), writing a foreword to the 25th anniversary edition of *The Human Side Of Enterprise*, asserts that:

This book, more than any other book on management, changed an entire concept of organizational man and replaced it with a new paradigm that stressed human potentials, emphasized human growth, and elevated the human role in industrial society".

Expectancy Theory

One of the most influential current theories of motivation (Robertson et al, 1992), expectancy theory is rooted in the cognitive capacity of humans to represent future consequences in thought (Bandura, 1977). Expectancy approaches emphasise information processing and cue utilization rather than reinforcement (Bolles, 1975), and are consistent with earlier findings that an individual could take action directly counter to his reinforcement history if some new influence [eg, new information] led him to assign a higher [value] to it (Campbell and Pritchard, 1976, summarising Lewin's views). William James observes that "as present pleasures are tremendous reinforcers, and present pains tremendous inhibitors of whatever action leads to them, so the thoughts of pleasures and pains take rank amongst the thoughts which have most impulsive and inhibitive power" (James, 1890).

This combination of the principles of hedonism with predictive intelligence is expressed by Vroom, the most prominent of the early expectancy theorists, in the following terms:

"Whenever an individual chooses between alternatives which involve uncertain outcomes, it seems clear that his behavior is affected not only by his preferences among these outcomes but also by the degree to which he believes these outcomes to be probable. Psychologists have referred to these beliefs as expectancies ... or subjective probabilities" (Vroom, 1964).

The basic parameters of Vroom's model are present in virtually all revisions and elaborations (Kanfer, 1990) of expectancy theory. Vroom's construction will therefore form the core of this discussion.

Vroom specifically exclude[s] from the realm of motivated behavior reflexes or tropisms as well as responses mediated by the autonomic nervous system, and views as motivated only the behaviors that are under central or voluntary control (Vroom, 1964).

Vroom describes expectancy as an action-outcome association, which can vary in strength from the subjective certainty that an act will be followed by an outcome ... [to] subjective certainty that an act will not be followed by an outcome. Vroom assigns this association numerical values ranging from zero, indicating no subjective probability that an act will be followed by an outcome, to 1, indicating certainty that the act will be followed by the outcome (Vroom, 1964).

According to Bandura (1977), expectancy has two aspects. "An outcome expectancy is defined as a person's estimate that a given behavior will lead to certain outcomes. An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes".

The attractiveness of an outcome; its psychological value (Deci, 1992), is termed its *valence*. Vroom begins[s] with the simple assumption that, at any given point in time, a person has preferences among outcomes or states of nature. For any pair of outcomes, x and y, a person prefers x to y, prefers y to x, or is indifferent to whether he receives x or y (Vroom, 1964). Valence is defined by Vroom (1964) as the anticipated satisfaction from an outcome, and is distinguished from value, which is the actual satisfaction that it provides.

"we use the term valence ... in referring to affective orientations toward particular outcomes. In our system, an outcome is positively valent when the person prefers attaining it to not attaining it [ie, he prefers x to not x]. An outcome has a valence of zero when the person is indifferent to attaining it or not attaining it [ie, he is indifferent to x or not x], and

it is negatively valent when he prefers not attaining it to attaining it [ie, he prefers *not* x to x]. It is assumed that valence can take a wide range of both positive and negative values". (Vroom, 1964).

In a work context, valence is the perceived positive or negative value ascribed by the individual to the possible outcomes of action on the job" (Campbell and Pritchard, 1976). It may be immediate, such as performance on the job, or consequential, for example, promotion, or recognition. "The most important feature of people's valences concerning work-related outcomes is that they refer to the level of satisfaction the person expects to receive from them, not from the real value the person actually derives from them" (Pinder, 1984).

This emphasis on the abstract cognitive quality of valence allows Vroom (1964) to observe: "we might speak of a person's satisfaction with his present job but not with jobs that he has never performed. No such restriction has been placed on the concept of valence".

The concept of *instrumentality* "hypothesizes that a person's attitude toward an outcome ... depends on his perceptions of relationships [instrumentalities] between that outcome and the attainment of various other consequences toward which he feels differing degrees of liking or disliking [preferences]" (Graen, 1969). Put more simply, "Something is said to be instrumental if it is believed to lead to something else, if it helps achieve or attain something else" (Pinder, 1984).

There are many outcomes which are positively or negatively valent to persons, but are not in themselves anticipated to be satisfying or dissatisfying. The strength of a person's desire or aversion for them is based not on their intrinsic properties but on the anticipated satisfaction or dissatisfaction associated with other outcomes to which they are expected to lead. People may desire to join groups because they believe that membership will enhance their status in the community, and they may desire to perform their jobs effectively because they expect that it will lead to promotion" (Vroom, 1964).

Instrumentality is described by Vroom (1964) as a probability belief, and as an outcome-outcome association, to which a numerical value can be assigned,

ranging from -1, indicating a belief that attainment of the second outcome is certain without the first outcome and impossible with it, to +1, indicating that the first outcome is believed to be a necessary and sufficient condition for the attainment of the second outcome" (Vroom, 1964).

Pinder (1984) adds that these values pass through zero, meaning that there is no likely relationship between the attainment of the first outcome and the attainment of the second. He argues that

each of these components of expectancy theory; valence, instrumentality and expectancy, is, in fact, a belief and goes on to make the point that because beliefs may not be valid or accurate, the person's behavior may not seem appropriate to observers. It also follows that because these three beliefs are merely beliefs [as opposed to intentions] they may not result in any specifically predictable behaviors" (Pinder, 1984).

The above three concepts are all vital to an understanding of expectancy theory, and for this reason it is common to refer to expectancy approaches as VIE theories. There is a fourth concept in such theories; that of *force*, explained by Pinder (1984) as the strength of a person's intention to act in a certain way, and by Graen (1969) as the relative probability that the action will be emitted. Vroom (1964) contends that behavior on the part of a person is assumed to be the result of a field of forces each of which has a direction and a magnitude. This concept of potentially contending forces, interacting to push or pull behaviour towards particular observable manifestations has links with the work of Lewin (eg Lewin, 1958) and from a modern perspective can be seen as systemic in concept (see for example, Checkland, 1981; Checkland and Scholes, 1990; and von Bertalanffy, 1968).

A useful explanation of the distinction between force and valence is provided by Bolles (1975):

"As a general rule, the perception of the possibility of engaging in some activity, the desirability of that activity [its valence], and the tendency to engage in it [the force it exerts] all go together. The conceptual differences emerge principally as a matter of emphasis. Valence helps to account for choice, but force may be more useful if we are concerned with the speed or persistence of behavior. A force makes something happen, whereas a valence is passive; it is an abstract value that is merely correlated with action".

The underlying premise of Vroom's theory is that the choices made by a person among alternative course of action are lawfully related to psychological events occurring contemporaneously with the behavior" (Vroom, 1964). "In other words, people's behavior results from choices among alternatives, and these choices [behaviors] are systematically related to psychological processes, particularly perceptions and the formation of beliefs and attitudes" (Pinder, 1984).

The theory itself is presented in the form of two algebraic expressions, as follow:

$$F_i = f \sum_{j=1}^n (E_{ij} V_j) \quad \text{and} \quad V_j = f \left[\sum_{k=1}^n I_{jk} V_k \right]$$

Where:

F_i = the psychological force to perform an act [i]
[such as strive for a particular level of performance]

E_{ij} = the strength of the expectancy that the act will be followed by the outcome j

V_j = the valence for the individual of outcome j

I_{jk} = instrumentality of outcome j for attaining second-level outcome k

V_k = valence of second-level outcome k

(Vroom, 1964, p 18)

Vroom puts this in the form of two propositions:

Proposition 1: The valence of an outcome to a person is a monotonically increasing function of the algebraic sum of the products of the valences of all other outcomes and his conceptions of its instrumentality for the attainment of these other outcomes.

Proposition 2: The force on a person to perform an act is a monotonically increasing function of the algebraic sum of the products of the valences of all outcomes and the strength of his expectancies that the act will be followed by the attainment of these outcomes.

(Vroom, 1964).

This means that there will be little force to perform an act if one or more of the following conditions obtains:

[a] the specified outcome[s] do not have positive valence for the person;

[b] the person does not believe, or doubts in some degree, that he can perform that act successfully;

[c] the person does not believe, or doubts in some degree, that successfully performing the act is likely to lead to the specified outcome[s]:

An outcome with high positive or negative valence will have no effect on the generation of a force unless there is some expectancy [ie, some subjective probability greater than zero] that the outcome will be attained by some act (Vroom, 1964).

Vroom's model is one of extrinsic motivation (Shapira, 1976). Behaviour is caused by its association with outcomes, either in a simple relationship where the outcome is itself desirable for hedonistic reasons, or in an indirect relationship where an intermediate outcome is desirable because it is believed to have the potential to lead to a self-valent outcome [ie, is instrumental]. This is because the expenditure of effort is basically abhorrent; there must be some reward to justify activity: the effect, we are

suggesting that means acquire valence as a consequence of their expected relationship to ends (Vroom, 1964). However, Vroom acknowledges that this view is not universally accepted:

"Virtually all general theories of behavior postulate that dissatisfaction results from energy expenditure. ... This principle of 'least effort', as it has frequently been called, has received considerable support, primarily in research using animals as subjects. ... Some writers, however, have suggested exactly the opposite notion. They propose that the expenditure of effort is basically satisfying rather than dissatisfying" (Vroom, 1964)

and accepts the possibility that some activity might be intrinsically rewarding:

"We do not mean to imply that all the variance in the valence of outcomes can be explained by their expected consequences. We must assume that some things are desired and abhorred 'for their own sake'" (Vroom, 1964).

The incidence of activity which is rewarded *purely* intrinsically may be low. It would be difficult to demonstrate convincingly that no outcome valence of any kind was involved, such as a sense of achievement on completion of a puzzle, or a feeling of well-being or self-mastery on completion of a physical activity. However, Vroom's mathematical model does not seem to preclude contribution to the sum of valences of hedonistic intrinsic elements, although this is not explicitly mentioned by Vroom. In this way, activity which was unpleasant would have a negative influence on the sum of valences and might, if stronger than the positive valence of the outcome[s], deter the subject from performing the activity. Conversely, an activity which was intrinsically pleasurable might be performed even though the outcome valence[s] were very weakly positive or even negative.

There is evidence (Deci, 1971, 1972) of a relationship between outcome-related rewards and intrinsic rewards:

"Typically, subjects ... work on interesting puzzle games ... The experimental treatment had to do with whether or not external rewards [eg, money, verbal reinforcement, punishment] were also provided and whether or not they were contingent on performance.

The general conclusion ... is that extrinsic rewards which are contingent on performance decrease the valence of intrinsic rewards. ... extrinsically rewarded subjects tended to spend less time working on the puzzles during their free time ... no actual performance data are reported". (Campbell and Pritchard, 1976)

Kanfer (1990), whilst remarking that the undermining effects of extrinsic rewards on task interest and free-choice behavior have been

shown in numerous studies; argues that findings over the past decade ... clearly indicate that the presence of rewards does not automatically decrease intrinsic motivation.

Deci (1972, summarised by Korman, 1974) found that "the more we obtain an extrinsic type of reinforcement [eg money] for performing a task, the more likely we are to lose our intrinsic motivation to perform that task. On the other hand, the more we receive verbal reinforcements, the more we come to develop intrinsic motivations to perform the task". Deci (1992) cites a study by McGraw (1978) which found that "rewards facilitate performance of overlearned [algorithmic] tasks but impair performance of heuristic tasks, such as problem solving". Kohn (1993), reviewing financial incentive schemes, reports various studies in support of his arguments. He found that 16 out of 28 studies reviewed showed evidence of improved performance where incentive schemes were in operation, but all these referred only to quantity; quality was not analysed. Five studies did assess quality of performance and none of these showed any benefit from use of incentives. Kohn also cites a meta-analysis [by R A Guzzo] of 98 studies showing by statistical analysis that financial incentives produced no significant effect overall. Financial incentives were unrelated to absenteeism or turnover. Training and goal-setting programmes did, however, have a positive impact on productivity. "The recipient of the reward assumes, 'if they have to bribe me to do it, it must be something I wouldn't want to do'. In fact, a series of studies published in 1992 by psychology professor Jonathan L Freedman and his colleagues at the University of Toronto, confirmed that the larger the incentive we are offered, the more negatively we will view the activity for which the bonus was received" (Kohn, 1993).

Gray (2000) found evidence that outcome-linked additional rewards, such as bonus payments, came to be regarded as part of the anticipated reward package. The possibility of such additional payments being withheld if performance did not reach the required standard was then perceived as a threatened penalty rather than an incentive. In Gray's study, threats of various kinds were strongly correlated with reduced levels of performance.

Kohn reports that in Freedman's study the actual nature of activity involved seemed to be irrelevant. Kohn concludes that "research suggests that, by and large, rewards succeed at securing one thing only: temporary compliance". This view is supported by Block (1993): "Even though we know that pay is not a 'motivator', we still believe that we can barter for behavior and that managers can evoke the actions they desire

by manipulating pay to subordinates. ... Why is it so hard to accept that pay and productivity are strangers to each other?".

Whilst the studies of reward systems do not exclude non-financial outcome valences [praise, selection for training, and other forms of recognition are clearly outcomes and therefore extrinsic rather than intrinsic rewards], they do focus attention on the content of the activity as being a significant contributor to motivation.

Expectancy theory is not regarded as a very effective means of predicting performance, although it has been more successful in predicting choices, such as job selection (Kanfer, 1994). Vroom's own research, and his conclusions from reviewing the research of others, such as Rosenberg (1957) and Walster (1963), suggested that the relationship between the valence of a job or occupation to an individual before entering into that occupation and the valences of outcomes once embarked upon that occupation is complex and iterative. "Choice of an occupation reduces the valence of outcomes not provided by the occupation and ... choice of an occupation tends to change ratings of its valence" (Vroom, 1964).

The relationship of expectancy theory to standards of job performance or productivity is summed up by Campbell and Pritchard (1976):

1. The greater an individual's expectancy that effort will accomplish task goals, the greater the effort expended, other things being equal.
2. The greater the instrumentality, or the perceived probability that reward is contingent on performance, the greater the effort expended, other things being equal.
3. The greater the valence of a performance contingent outcome, the greater the effort expended, other things being equal.
4. If expectancy, instrumentality, or valence is zero, then effort in the direction of performance is zero.
5. ... if we think of job satisfaction as the extent to which important needs are satisfied by rewards, then satisfaction is a resultant of performance [that leads to rewards], but not vice versa. There will exist a correlation between performance and satisfaction if and only if the relevant instrumentalities are not zero, other things being equal.

Korman (1974) remarks that

"the acceptance of the expectancy-value approach to achievement motivation is so embedded within us that to a great extent it provides the theoretical basis upon which most of the administrative practices commonly found in our formal organizations have traditionally rested. ... the administration controls and increases achievement by making the attainment of ... rewards contingent upon effective performance. Thus, it is believed, the

promise of such value attainment will result in increased performance, ie, these possible outcomes will serve as incentives for better performance provided the individual involved believes the rewards actually are attainable on the basis of his efforts. If he believes that such rewards are not contingent on his performance, he will not react to them as incentives"

and suggests that the commonly found lack of responsiveness to incentives offered by today's large work organizations can be explained by the expectancy-value framework. The large size, complexity, and pyramidal structure of these organisations seems to encourage lower expectancies of success, the lower one goes in the organization.

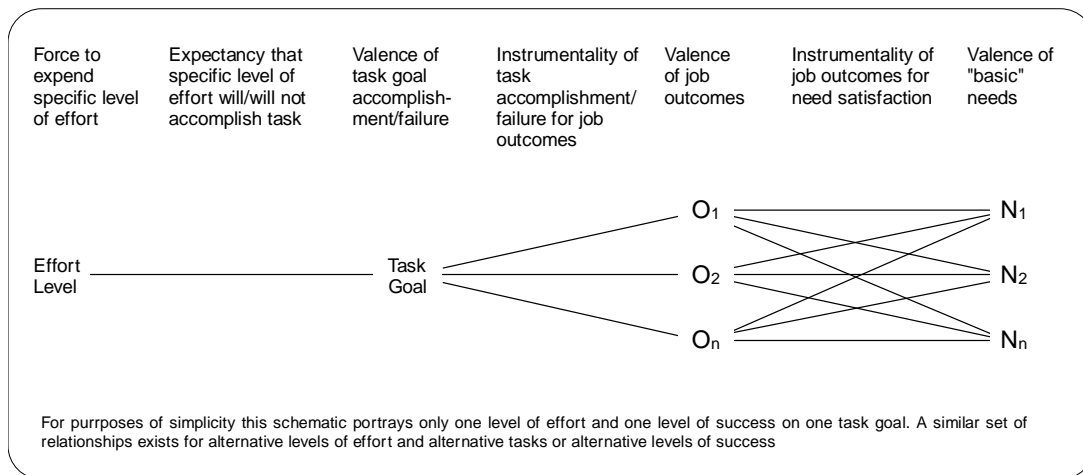
Campbell and Pritchard point out that performance has a number of other determinants besides effort. Pinder (1984) refers to the work of Porter and Lawler (1968), which he summarises as follows:

Effort may or may not result in job performance, which [Porter and Lawler] defined as the accomplishment of those tasks that comprise a person's job. The reason? The level of ability the person has to do his job, and his role clarity, the degree of clarity of understanding the person has concerning just what his job consists of. Thus, a person may be highly motivated [putting out a lot of effort], but that effort will not necessarily result in what can be considered performance, unless he has

both the ability to perform the job as well as a clear understanding of the ways in which it is appropriate to direct that effort.

Vroom (1964) acknowledges that work roles do more than merely provide financial remuneration. Amongst other aspects he mentions that they permit or require social interaction and that they affect the social status of the worker. He goes on to say that we have no basis for judging the relative influence of these different properties of work roles on the strength of preference for working. Elsewhere he accepts that "Difficulties in measuring amount of motivation with any degree of precision make any very accurate determination of the nature of the functional relationship between amount of motivation and level of performance impossible. At best we can measure or manipulate motivation on an ordinal scale, ie, we can specify that one level is higher than another but not how much higher it is" (Vroom, 1964).

Extensions and developments of Vroom's original model have been devised to include additional variables. Examples are Porter and Lawler (1968), who attempt to incorporate intrinsic rewards; Graen (1969), whose model includes attitudes, roles and interpersonal influences; and Campbell and Pritchard (1976), who present a composite model based on all the earlier representations:



Reproduced from Campbell and Pritchard (1976).

Attempts to test Vroom's theory, and other presentations of essentially the same basic ideas, have had mixed success. Campbell and Pritchard (1976) remark that "... Vroom's theory was originally designed to make *within* individual not *between* individual predictions ... almost all the research designed to test VIE theory has used *between* individuals comparisons".

Graen (1969) studied 169 young women taken on for part-time temporary jobs. He reports that:

"Results of this experiment, conducted in a realistic but carefully controlled work setting, show that instrumentality theory predictions of particular levels of job satisfaction and/or job performance are confirmed under only a few rather narrowly specified conditions".

Lawler and Porter (1967) compared the performance of a group of managers in industrial and government organizations who felt that pay was a probable outcome of performance with

another group who felt that there was little relation between performance and pay. They found the rated performance of the former group to be significantly higher than that of the latter.

Goldthorpe et al (1968) conducted a study of 229 manual workers in Luton, initially to test Maslow's theory. They found that the workers' efforts were largely instrumental; their work provided few intrinsic rewards and was performed almost exclusively in order to gain financial rewards.

Heneman and Schwab (1972) reviewed the literature and found:

"nine published studies ... that investigated one or more hypotheses of expectancy theory using various measures of employee performance as the dependant variable.... Generally, valence, instrumentality, and role perceptions were significantly related to performance, while ability was not. Little support was obtained for hypothesized [ie, by expectancy theory] interactions among these variables".

The finding that ability was not significantly related to performance might be considered interesting in its own right, but unfortunately is not explored further.

Korman cites a variety of studies leading to the view that:

"it has generally been concluded that the adequacy of this type of expectancy-value theory can be fairly useful in accounting for performance variation in achievement situations. However, for the most part, the correlations tend to be of a low to moderate level at best ... and sometimes they are even insignificant despite the rationality of the approach" (Korman, 1974).

Shapira (1976) conducted a study testing people's choice behavior in a situation where there is salient monetary reward:

"Vroom's theory led to the prediction that subjects choose the easiest task when equivalent extrinsic rewards are attached to the completion of each task. The present experiment provided support for Vroom's prediction in that subjects who were offered \$2.50 for solving the puzzle of their choice selected relatively easy tasks. They did not, however, choose the easiest tasks. Thus, it seems that subjects tend to choose easy paths for extrinsic rewards, though they may desire some intrinsic satisfaction from doing challenging tasks, so they select tasks which have a fairly high probability of success but provide slightly more than minimal challenge".

This illustrates the complexity of the inter-relationships between valences which makes expectancy theory difficult to operationalise. Vroom himself argued that: "it is important to note that a model of the sort that has been proposed is testable only in conjunction with a particular set of empirical interpretations. It is impossible to subject

it to a 'pure test'" (Vroom, 1964) and acknowledged that "the consistency between predicted and observed relations does not mean that our model can account for all of the findings reported in this book". He specifically mentioned as exceptions not directly interpretable in terms of the model ... those studies showing that the affective consequences of a given level of reward depend on the level that was expected+ and studies dealing with the concept of equity" (Vroom, 1964).

Korman (1974) maintains that: "there are simply too many cases where predictions generated by the theory are not supported. There are too many research studies in which people have been classified by their predominant motive pattern, have been provided with an opportunity to achieve some significant values relative to their motives, and the resulting predicted positive behavior and affect has simply not occurred" and suggests: "One reason may be that people behave not only as a result of values they believe they can obtain from the situation, but also as a result of what they believe to be normal and appropriate for them at the time, independent of the personal values to be obtained" (Korman, 1974).

Kanfer (1994) makes the further point that "most E x V models are considered episodic. That is, these models account for behavior change in terms of changes in the individual's expectancies and anticipated valences. However, ... episodic models cannot readily account for behavior change when expectancies and incentives do not change".

Overall, expectancy theory provides a useful focus on various components of motivation, but may be considered inadequate as an explanation, and certainly as a predictor, of subsequent behaviour. Several references have been made above to the complexity of the interactions between factors which may impel or restrain behaviour, and it is clear that a mathematical model such as Vroom's could only provide reliable predictions of behaviour if *all* the factors were known, if their *precise strengths* of impulse or restraint were known, and if *all* their *interactions* could be precisely mapped. There would appear to be no practical way in which such a situation could be even remotely approached. Bolles (1975), discussing the doctrine of empirical determinism, remarks:

"the doctrine ... maintains that a piece of behavior is explained when it can be related in a lawful manner to any other kind of observation. Behavior may be explained when its survival value has been determined, when the motivational or instinctive forces producing it have been specified, when its history of reinforcement has been discovered, or when its goal and purpose have been indicated.

Empirical determinism is the only system that provides a broad enough frame of reference to explain the greatest puzzle: the mind of man and how it works".

Expectancy orientations led to an increasing emphasis on the nature of desired outcomes: researchers began effectively to ask 'what are people trying to attain or avoid by specific behaviours?' Several ideas are prominent in this area of enquiry, focusing individually on particular kinds of outcomes. In this context, an 'outcome' might be so immediate as to be virtually intrinsic to the activity. Vroom (1964) remarks that 'we must assume that some things are desired and abhorred 'for their own sake' ". In such a case the outcome may be considered as contemporaneous with the activity.

Achievement

The work of McClelland and Atkinson (McClelland, 1955; Atkinson, 1964; McClelland et al, 1976) turned the focus of expectancy theory towards intrinsic factors (Korman, 1974; Shapira, 1976). Central to their ideas is the view that 'there are basically two types of people in a theoretical sense' (Korman, 1974). For some people, pleasure results from achievement. For others, pleasure results from the avoidance of failure.

'We may distinguish ... two kinds of motives by the symbols **n** for need and **f** for fear. Thus we speak of **n** achievement when the person's primary goal is to enjoy the glories of success, and of **f** failure when the person's primary goal is to avoid the misery and disgrace of failure" (McClelland, 1955).

This has an important effect on the motivational value of expectancies. Atkinson holds that a high expectation of success reduces the valence of the outcome, since there is little sense of achievement in successfully completing something that was fairly certain to be accomplished. Equally, where the expectation of success is low, the 'reward' in terms of a sense of achievement which accrues from a successful outcome is high, and the motivation to perform the action is increased. Conversely, the 'misery and disgrace of failure' in not accomplishing something where there was a high expectation of success would be considerable, and the motivation to take that risk would be low for someone with a bias towards **f** failure, in Atkinson's terms, whereas failure to accomplish something which was in any case unlikely to be achieved does not cause too much distress. 'The incentive value of success on a task is an inverse linear function of its expectancy' (Shapira, 1976). Thus as well as being essentially an intrinsic model of motivation, Atkinson's model also incorporates personality differences.

Atkinson's work was largely laboratory-based,

'concentrating more on manipulable experimental variables as opposed to real-life complex social variables' (Korman, 1974). McClelland and his associates were rather more interested in those 'social variables', and developed their ideas from observation: 'the data came first and the theory second' (McClelland et al, 1976).

McClelland takes the view that pleasure, and therefore motivation, is essentially a product of limited variations from some norm. Therefore people will be motivated to achieve end states which show relatively small discrepancies, or differences, from the previous state to which they were accustomed or adapted. Small variations are pleasurable and will be actively sought, whilst large variations produce discomfort and will be avoided if possible.

"Positive affect is the result of smaller discrepancies of a sensory or perceptual event from the adaptation level of the organism; negative affect is the result of larger discrepancies+.

"The achievement motive develops out of growing expectations. ... pleasure from anything ... depends on a moderate degree of novelty, which has to become ever greater as expectations catch up with it".

(McClelland et al, 1976).

That is, when expectations become certainties [that something will happen] interest wanes. "Exactly confirming certain expectations produces boredom and a tendency to discontinue the act unless enough minor variations are permitted to produce positive affect" (McClelland et al, 1976). This can be observed in practice in animal experiments, for example, rats vary the path taken to food when either path is equally efficient, choose a path with a barrier in it over an unobstructed one, or prefer seeds which are difficult to crack open over ones that are easy (McClelland et al, 1976) 'exactly confirming certain expectations produces boredom and a tendency to discontinue the act unless enough minor variations are permitted to produce positive affect+.

This emphasis on change, in small doses, as being a powerful stimulus arises from a common objection to simple reinforcement theory, restated by McClelland in the following terms:

"If some stimuli are inherently pleasant and rewarding ... it is difficult to see why responses producing these stimuli should ever stop, short of extreme fatigue or other shifts producing unpleasant stimulation. Allport's repeated objection to the law of effect has been that it ought to lead people to repeat monotonously things they have done with reward before Our notion of what produces pleasure takes care of this objection. As we have shown, pleasure is dependent on adaptation level or expectation which can be changed in a number of

ways, not least of which is the occurrence of the pleasant event itself" (McClelland et al, 1976).

Failure of the anticipated change to occur produces negative feelings which are stronger and more influential than any putative feelings of deprivation that might have been experienced by the simple absence of reward "as certainty increases and the amount of pleasure anticipated grows greater, nonconfirmation produces a larger discrepancy from expectation and negative affect is necessarily larger" (McClelland et al, 1976).

Once the kinds of outcomes which are likely to produce pleasure, or positive affect, have been established, McClelland makes the connection between outcomes and motive. For McClelland, all motives are the result of learning: a motive is formed by pairing cues with effective arousal or with the conditions ... that produce affective arousal+ (McClelland et al, 1976). Cues in this sense are perceptions, which may be individually very insignificant, which get associated with the affective state so that they can partially reintegrate it on a later occasion+ (McClelland, 1955). [Reintegration is defined by Korman (1974) as a reminder by a stimulus cue that a change in affect is going to take place+].

"Certain stimuli or situations involving discrepancies between expectation [adaptation level] and perception are sources of primary, unlearned affect, either positive or negative in nature. Cues which are paired with these affective states, changes in these affective states, and the conditions producing them become capable of reintegrating a state ... derived from the original affective situation ..., but not identical with it" (McClelland et al, 1976).

From this McClelland was able to derive a contiguity principle:

Stimuli that have previously been associated with positive affect come to stimulate approach behavior, and those associated with negative affect lead to avoidance behavior+ (McClelland et al, 1976).

Thus, motivation to perform an act will be at its highest if that act is expected, in some sense, to lead to a moderate positive change in affect. Affect is dependent on the relation of stimulation to [adaptation level]+ (McClelland et al, 1976). This is firmly grounded in arousal theory:

"the theory and evidence on achievement motivation catches up with the Yerkes-Dodson Law and agrees with the proposal of many others that the relationship of strength of motivation to efficiency of performance is curvilinear"

"as a motive increases in intensity it first leads to an increase in the efficiency of instrumental activity and then to a decrease. Thus it would appear that as far as adjustment is concerned there is a certain optimum level of motive intensity, a level of 'creative anxiety', which leads to maximum problem-solving

efficiency. Too little motivation leads to sluggishness and inertia, too much to disruption and defense against anxiety. The theoretical problems still unsolved are the discovery of what this area of optimum intensity is and why higher intensities lead to inefficiency" (McClelland et al, 1976).

Bandura (1977) argues that high arousal usually debilitates performance+ - which is consistent with Yerkes-Dodson - and for this reason

"individuals are more likely to expect success when they are not beset by aversive arousal than if they are tense and viscerally agitated. Fear reactions generate further fear of impending stressful situations through anticipatory self-arousal+.

"People judge their physiological arousal largely on the basis of their appraisal of the instigating conditions. Thus, visceral arousal occurring in situations perceived to be threatening is interpreted as fear, arousal in thwarting situations is experienced as anger, and that resulting from irretrievable loss of valued objects as sorrow".

(Bandura, 1977)

McClelland rejects the idea that some motivation results from biological sources, or drives. The motivation to eat or drink results, not from internal physiological needs, but from the cues that have been learnt as a result of previous eating or drinking behaviour. This is illustrated with experimental examples:

"It has been found that if a hungry or thirsty rat is given a nibble of food or a few cc of water before he starts working on an experimental day, he performs better and appears more motivated. ... This has seemed somewhat paradoxical to those who think of eating or drinking as producing a reduction in need or motivation. But in our view a bite to eat should also produce cues which arouse a motive based on past association of such cues with the pleasures of eating. In short, pre-feeding produces additional cues for arousing the food motive complex which in turn serves to make the animal perform slightly better".

The fact that certain motives appear to be almost universal does not mean that they are not individually learned: certain situations will produce pleasure or pain with such regularity either through biological or cultural arrangements that the probability of certain common motives developing in all people is very high+ (McClelland, 1955).

The objection that the longer an animal is deprived of food the more motivated he appears to become" (McClelland et al, 1976) is dealt with by the explanation that cues resulting from food deprivation are associated with eating, for example, pleasurable taste sensations and the relief of hunger symptoms. Longer deprivation may be associated with greater pleasure from

eventually eating, or, longer deprivation may lead to stronger or more persistent hunger symptoms, so association is cued-off more frequently. Shorter-term deprivation leads to occasional or intermittent cueing.

"In short, sensations from the stomach or from heat loss in a state of food need have no special motivating properties; they get associated like any other set of cues, though more dependably, with the pleasure and relief accompanying eating and thus are capable of arousing the hunger motive like any other set of cues. ... The hunger motive and the achievement motive have exactly the same status theoretically: they are both learned and both based on the formation of associations between certain cues and changes in states of affective arousal" (McClelland, 1955).

In practice, McClelland's ideas lead to the proposition that individuals differ in the extent to which they will find achievement a satisfying, and therefore motivating, experience. People who have a high need for achievement will prefer, and work harder in, situations that have moderate levels of risk, linked with feedback and personal responsibility [and therefore credit for successful results] (Korman, 1974).

Deci (1992) interprets McClelland's work as suggesting that the need for achievement can be increased through appropriate training, and can lead to increased productivity, although McClelland warns that there is no necessary connection between high achievement motivation and more efficient performance+ (McClelland et al, 1976).

McClelland extended his ideas from the individual level to the macro-sociological scale:

In addition to ... laboratory experiments, McClelland has made more speculative correlational analyses based on historical evidence, literature, and cross-cultural comparisons of economic growth, which he presents in support of his theory about the effects of achievement motivation on individual risk-taking and achievement+ (J Jung, 1978).

These analyses include consideration of the Minoan civilisation of ancient Crete (Korman, 1974).

Like other expectancy propositions [and, indeed, other motivation theories] McClelland's discrepancy hypothesis is difficult to operationalise (Korman, 1974). McClelland's preferred research method was the use of the Thematic Apperception Test [TAT], in which subjects are shown pictures and are asked to tell a story based on what they see. This enabled McClelland to draw inferences about the strength of achievement orientation and other variables in the individual subject, on the grounds that an excellent place to look for and measure the effects

of motivation is fantasy" (McClelland et al, 1976). This has been open to some criticism on the grounds that it is impossible to know all the influences that cause a story to take a particular form. The subjective nature of the evidence leads Korman to express doubts: "most support for the moderate risk-taking notion, a key aspect of the theory, is highly controversial at best ... The reason for this is that in experimental studies in which this aspect has been supported, the level of difficulty has been defined by the experimenter, that is, he is the one who has decided what should be labelled a hard task, a moderate task, and an easy task" (Korman, 1974).

Some studies have tended to support the propositions of achievement theory. For example, work by Smith and colleagues found that high achievement motivation in executives was related to better results+, more noticeably in entrepreneurial organisations than bureaucratic ones+ (Robertson, Smith and Cooper, 1992). There are, however, a number of related studies which fail to support the theory. "While these studies vary in quality and relevance, the large number of negative findings leaves room for pause and considerable doubt" (Korman, 1974).

Goal Theory

To the extent that goals provide the individual with a cognitive representation of desired outcomes+ (Kanfer, 1994), goal theory may be considered as a sub-theory of the expectancy approaches; a view broadly taken by Campbell and Pritchard (1976). The leading exponent of goal theory, E A Locke, describes his model as a partial model of task motivation+ (Locke, 1968). The concern of the model is primarily with the direction of behaviour rather than the context of motivation [ie, the specification of what it is that people want]+ (Deci, 1992), an apparent contradiction which is clarified by Campbell and Pritchard (1976): "a conscious intention, or goal, is defined as a goal the individual *has consciously decided to pursue* ... stating a goal or intention is synonymous with giving behavior a direction".

In this context the term goal+ has a definite meaning which is more precise and more forceful than the semantically similar term intention+:

"The exact process by which intentions becomes goals that are infused with sufficient potency to enable cognitive control over action, is the least well understood, and perhaps the most important of all processes in motivation/volition" (Kanfer, 1994).

"Goals affect arousal by regulating the intensity of effort the individual expends on the task and they affect its duration by leading people to persist in their actions until the goal is reached. They affect choice by leading people to direct attention to and take action with respect to goal-relevant activities

while ignoring nongoal-relevant activities" (Locke and Latham, 1990).

In the organisational context, interest in goals has centred on the effects of goal-setting on performance. Locke contends that "persons assigned [and adopting] difficult and specific goals outperform persons provided ~~to~~ your best [vague and non-specific] goal assignments" (Locke, 1968; Locke and Latham, 1984). "Locke's fundamental idea is that realistic, hard, specific goals produce better performance than easy goals or no goals. Goals have been demonstrated to affect performance through four mechanisms [a] directing attention and action [b] mobilizing effort, [c] increasing task persistence, and [d] motivating the search for appropriate performance strategies" (Robertson, Smith and Cooper, 1992).

Kanfer (1994) cites a variety of research evidence, and meta-analyses, in support of this contention, but cautions that "difficult and specific goal assignments facilitate task performance in many, but not all, situations". The fact that "research has shown that as a goal difficulty increases so does performance" (Locke et al, 1981) is in apparent contradiction to expectancy theory, which would suggest that, to the extent that expectation of success correlates negatively with goal difficulty, the opposite effect might be anticipated, but seems consistent with achievement theory, which would suggest that the more difficult the goal the greater the achievement involved in its attainment - a motivator to greater effort for some, but not all, people. Wright (1994) claims that "more than 30 years of research [including more than 400 studies in 1990] demonstrate the efficacy of goal setting as a motivational tool" The key to the success of goal-setting approaches in stimulating performance improvements lies in Locke's parentheses: "persons assigned [and adopting] difficult and specific goals" - "Difficult goals lead to higher performance only when an individual is committed to them" (Locke and Latham, 1990).

Kanfer (1994) suggests that goal-setting operates by influencing the allocation of resources, such as energy or attention, towards a specific outcome and, by implication, away from other, alternative, outcomes. "Effort is concentrated on particular goals, and some goals require more effort expenditure than others" (Campbell and Pritchard, 1976). In this paradigm, motivation is defined as "the process of allocating personal resources in the form of time or energy to various acts in such a way that the anticipated affect resulting from these acts is maximised (Kanfer, 1994). This leads to a clear distinction between goals and intentions, because goals represent intentions to which resources have been assigned.

If these views are correct then the acceptance of

the goal would be crucial in affecting performance, since during the process of acceptance other contending goals would have to be discarded, or at least subordinated. If these other goals had greater valence for the individual than the imposed goal there would be significant conflict. "Research suggests that, for many people, a goal set and delegated by others serves as a disincentive" (Robertson, Smith and Cooper, 1992). On the other hand, "considerable research has shown that when regulation is through choice [ie, is self-determined] people are not only more intrinsically motivated but they are more creative, display greater cognitive flexibility and conceptual understanding, have a more positive emotional tone, are healthier, and are more likely to support the autonomy of others" (Deci, 1992).

However, Latham et al (1988) suggest that participation in goal setting is not crucial so long as a determined effort is made to "sell" the goals after they have been decided upon". In other words, it is the acceptance, or adoption, of the goals which is the vital element.

"In a study that compared assigned and participative goal setting in relation to the improvement of safety on construction sites in the UK, Cooper et al (1992) found that on sites where operatives participate in the goal setting process there was better performance, compared with sites where goals were assigned".

"In many organizations goal-setting is part and parcel of the performance appraisal process, and research suggests that in appraisal interviews there is a positive link between inviting the subordinate to participate in goal-setting and the subordinate's satisfaction with the appraisal review ... which may be related to perceptions of procedural fairness"

(Robertson, Smith and Cooper, 1992).

Even so, the case for goal-setting is not absolutely clear-cut. Research by Kanfer and colleagues in the late 1980s found some negative effects: "When engaged in novel and complex tasks, the provision of difficult goal assignments was posited to impede performance due to the diversion of critical resources away from task processing. Empirical results ... provide support for the model" (Kanfer, 1994).

Wright (1994) cites research showing that goal-setting leads to increased quantity but reductions in quality. This may, of course, be a function of the specific goals chosen, but this is not clear. Wright also makes some general observations about goal-setting: "one of the major problems with goal setting - and particularly with setting difficult goals - is that it can produce a dysfunctional inertia, encouraging individuals to cling to ineffective approaches rather than developing better ways of doing things" (Wright, 1994). Wright goes on to mention the "goal only

effect" - blinkered behaviour which ignores other needs -, the "end justifies the means effect" and the "easy goal effect" as examples of organisationally dysfunctional behaviours arising from dependence on goal-setting as a management tool.

An interesting allied idea, raised by Robertson, Smith and Cooper (1992) is that some goals may be determined through a process of role modelling

"In essence, observing high performing role models leads individuals to set higher performance goals, increasing commitment to those goals and enhancing self-efficacy, than does observing a low-performing role model ... although these effects disappear as individuals gain experience at the task".

"Other research has shown that self-modelling has even stronger effects on performance than modelling by others or monetary incentives. ... This suggests that if a high-performing role model is available employees will model themselves upon the individual concerned until the behaviour has been internalized. When they feel confident in their own abilities, they become self-motivated to set themselves even more difficult goals".

Equity Theory

Several writers have suggested that the valence of an outcome may be, at least in part, a function of its perceived fairness or "rightness" in relation to the effort expended to attain it, benchmarked against various external factors. The most prominent exponent of such an "equity theory" is J S Adams. Adams (1963) presents a "theory of inequity, which is based upon Festinger's (1957) theory of cognitive dissonance and is, therefore, a special case of it". Adams uses a generalised concept of other people, used for comparison, which he refers to as "other", and refers to the person making the comparison as "person":

"[a] The presence of inequity in Person creates tension in him. The tension is proportional to the magnitude of inequity present. [b] The tension created in Person will drive him to reduce it. The strength of the drive is proportional to the tension created, ergo, it is proportional to the magnitude of inequity present. In short, the presence of inequity will motivate Person to achieve equity or reduce inequity" (Adams, 1963).

Korman (1974) remarks that

"Dissonance theory has actually turned out to be highly useful for understanding achievement motivation ... If we look at [studies by those working within a dissonance framework] as a total group, they provide impressive support for the notion of consistency as an important motivating influence in achievement behavior. It appears clear that under some conditions, we achieve at a level that will achieve a just, or equitable, or balanced outcome, even though such consistency may have to be

achieved at the cost of various kinds of external rewards".

In this Korman is linking equity theory with the consistency theories of researchers such as Heider (1958), who restated cognitive dissonance theory to argue that an individual will seek cognitive or perceptual balance in perceptions of relationships between himself, another and a third party. If any perception is inconsistent, one or other of the perceptions involved will be adjusted to restore balance.

Essentially, equity theory suggests that "people will be most satisfied and work most effectively when they believe that their rewards or outcomes are in balance with their inputs" (Deci, 1992). The norms used in this process are often derived from social comparisons: "Social comparison among individuals is a natural process. When such comparison reveals that similar persons are better off than oneself is, a state of relative deprivation may arise" (Jung, 1978). "The basic premise of organizational justice theories is that individuals seek fairness and justice in the employee-employer social exchange relationship" (Kanfer, 1994). Fairness in this context takes two basic forms: "Distributive fairness pertains to perceptions with respect to the distribution or allocation of outcomes; procedural fairness refers to perceptions about the organizational procedures used to make outcome decisions" (Kanfer, 1994). Adams (1963) emphasises that the employee-employer relationship is not "usually perceived by the former purely and simply as an economic matter. There is an element of relative justice involved that supervenes economics and underlies perceptions of equity or inequity".

Kanfer (1994) lists "five norms that contribute to perceptions of fairness: a) adequate consideration of an employee's viewpoint. b) suppression of personal bias. c) consistent application of criteria across employees. d) provision of timely feedback after a decision. e) providing employees with an adequate explanation for the decision". And Pinder (1984) argues that "it is not the absolute amount of reward that follows performance which determines whether it is satisfying; rather, the amount, however large or small, must be seen by the employee as equitable in order for it to be satisfying".

Perceived fairness on a wider and longer-term scale may also have an effect on attitudes: "The age distribution within an organization forms an implicit career timetable, and people use this timetable to decide whether their own career is on or off schedule. In one study, managers who saw themselves as behind time had more negative attitudes to work than other managers". (Robertson, Smith and Cooper, 1992).

Equity theories predict dissatisfaction from over- as well as under-reward. Adams (1963) argues that a worker has a drive to equate production with the perceived fairness of reward. Thus, a worker who believes himself to be overpaid will strive to produce more, in order to redress the inequity, and a worker who believes himself underpaid will produce less. The evidence for the overpayment effect is rather mixed. Adams's own experiments showed that hourly paid systems did produce the predicted results. However, piece-rate systems did not produce greater quantity for overpayment, but did produce better quality. This was interpreted as a means of redressing the inequity by giving better value.

Adams and Rosenbaum (1962, cited by Vroom, 1964) observed subjects where varying wage rates were paid for the same work. Some subjects were informed that they were being over-paid, whilst others were told that they were being paid the appropriate rate.

"It was predicted that the 'overcompensated' group would be more highly motivated to perform the task effectively than the 'equitably-compensated' group since effective performance was, for them, a means of decreasing the inequity in their wages. The results support this prediction" (Vroom, 1964).

Equity theory assumes that the worker's feelings of over- or under-compensation, which he or she forms by comparing his or her pay with that of other workers or some internal standard, is the key factor. If the worker feels underpaid, he or she will work less effectively, whereas the opposite is predicted if the worker feels overpaid. A number of studies attempted to test [the theory] but the overall findings are equivocal. In part this is due to some vagueness in the concepts of expectancy and equity and also because factors other than pay affect the individual's work performance. Clearcut tests ... have not been achieved (Jung, 1978).

Deci (1972) reports an experiment with 96 undergraduates, randomly assigned to one of six conditions, with eight males and eight females in each condition. The hypothesis that "when a person who is performing an intrinsically motivated activity feels inequitably overpaid, he will increase his performance [ie, make additional inputs] to restore equity" was supported. Jung (1978) offers as a possible explanation for the experimental observations of Adams and others the possibility that "overpaid workers may have felt insecure, because the method of inducing feelings of overcompensation involved telling workers they were unqualified. As a consequence they may have concentrated on producing higher quality work, at the expense of quantity, as a means of proving themselves adequate and qualified".

Kanfer (1990) also remarks that "studies of overpayment inequity ... provide mixed support for

Adams' theory [which] predicts an increase in performance under conditions of perceived overpayment". In such studies overpayment does not consistently produce higher quality or quantity of output. Kanfer also finds methodological problems which make the experimental results difficult to evaluate, but notes that studies where workers' perceptions of fairness were influenced by "casual, overheard" remarks have been found to perform as Adams predicted.

The effects of underpayment have been found to be broadly consistent with Adams' model" (Kanfer, 1990), that is, people who feel they are underpaid by comparison with certain others typically decrease the quality/quantity of their output.

Social Learning Theory

"Social learning theory adopts a similar position [to expectancy theory]. In fact there are many striking similarities between social learning theory and expectancy theory in their joint emphasis on expectancies, individual goals and values and the influence of both person and situation factors. In fact, if we remember that social learning theory also embodies many of the ideas of operant theory, these similarities ... provide the basis for a synthesis between two previously irreconcilable positions concerning motivation: the behavioural, reinforcement based, operant view and the views of expectancy theory which are more concerned with internal psychological processes" (Robertson, Smith and Cooper, 1992).

The most prominent exponent of social learning theory is A Bandura: "it has now been amply documented that cognitive processes play a prominent role in the acquisition and retention of new behavior patterns. ... much human behavior is developed through modelling. From observing others, one forms a conception of how new behavior patterns are performed, and on later occasions the symbolic construction serves as a guide for action" (Bandura, 1977). Thus goals and outcomes may be formulated through experience, and expectancies developed through cognitive processes, rather than simply through direct experience: "Since consequences affect behavior through the influence of thought, beliefs about schedules of reinforcement can exert greater influence on behavior than the reinforcement itself. ... Both the anticipated satisfactions of desired accomplishments and the negative appraisals of insufficient performance thus provide incentives for action" (Bandura, 1977).

This is the view of goal-setting through role modelling suggested by Robertson, Smith and Cooper (1992), quoted above. There are, however, other factors which will impact on behaviour. "Expectation alone will not produce desired performance if the component capabilities are lacking. ... Given appropriate skills and

adequate incentives ... efficacy expectations are a major determinant of people's choice of activities. How much effort they will expend, and how long they will sustain effort in dealing with stressful situations" (Bandura, 1977).

Efficacy is the belief of the individual that a certain behaviour will, in fact, lead to a desired outcome and the belief that he or she will actually be able to perform the necessary behaviour both affect the probability that an action will be performed. This is entirely consistent with the instrumentality concept in expectancy theory. These beliefs may be fragile, and personality differences play a part. Social learning is based upon observations of others, but such observations only act on expectations, which lead to practical trials of behaviour. The results of these experiments reinforce or undermine the behaviour and so influence future behaviours:

"Weak expectations are easily extinguishable by disconfirming experiences, whereas individuals who possess strong expectations of mastery will persevere in their coping efforts despite disconfirming experiences"

"Seeing others perform threatening activities without adverse consequences can generate expectations in observers that they too will improve if they intensify and persist in their efforts. ... Vicarious experience, relying as it does on inferences from social comparison, is a less dependable source of information about one's capabilities than is direct evidence of personal accomplishments. Consequently, the efficacy expectations induced by modeling alone are likely to be weaker and more vulnerable to change".

(Bandura, 1977).

Korman (1974) links this directly to expectancy theory: "behaviors actually oriented to fulfilling one's needs and values are a positive function of one's success [at this] in the past." "The more a person has been punished in the past, the less he will work toward achieving rewards in the future and the less he will change his behavior to maximise the possibility of receiving such rewards in the future". Social learning theory, however, does not interpret this reinforcement history as the direct determinant of behaviour, but as input to a cognitive process: "Reinterpretation of antecedent determinants as predictive cues, rather than as controlling stimuli, has shifted the locus of the regulation of behavior from the stimulus to the individual" (Bandura, 1977).

It should be noted that beliefs about efficacy may arise from previous patterns of reinforcement. If an individual's experience has produced an external locus of control [discussed above in some detail as a factor in stress] then belief in his or her own capability to perform instrumental activities may be weak. The subjective feeling of control, or the lack of it, is an important experience that

may influence our behavior. Loss of hope and the feeling that one's life is under the external control of other persons or factors such as luck may sometimes lead to withdrawal, apathy, and lack of effort. Behavior that may appear irrational or deviant to others is often the consequence of the feeling of powerlessness (Jung, 1978). This has an important influence on the persistence of behaviour: how long we will keep trying at something (Hayes, 1994), as well as on choice.

The evidence to support social learning theory has come mainly from the field of personality studies, rather than workplace motivation. In a series of experiments investigating aggression in the early 1960s, Bandura and colleagues (Bandura and Walters, 1963; Bandura, Ross and Ross, 1963) demonstrated that children would imitate observations of the behaviours of others, reproducing those behaviours on later occasions when it appeared advantageous to do so. Bandura (1969) obtained similar results in later investigations into the effects of reward. He found that children would imitate behaviours which they had observed to be rewarded in others, sometimes after long periods had elapsed. From these observations, Bandura was able to link self-efficacy beliefs with the cognitive evaluation of effective behaviours in others and apply his findings to the field of motivation.

Attitudes

Frequent reference is made throughout the motivation literature, and in the reviews above, to employees' attitudes. According to Fishbein (1967): "an attitude may be characterized as a 'mediating evaluative response', that is, a learned implicit response that varies in intensity and tends to 'mediate' or guide an individual's more overt responses to an object or concept. ... with respect to any object, an individual has a positive, negative, or neutral attitude; that is, there is a mediating evaluative response associated with every stimulus". Fishbein maintains that "with respect to any object, an individual has a positive, negative, or neutral attitude; that is, there is a mediating evaluative response associated with every stimulus".

The implication of this for motivation is that identical situations will be perceived and interpreted differently by different individuals, and by the same individual at different times and in different circumstances. As a result, the valences of various potential outcomes, as well as the intrinsic pleasure to be derived from the performance of an activity, must be regarded as highly variable and not amenable to algorithmic predictability. Attitudes and variations in affect may also influence choices. Kanfer (1994) argues that "Research on the effects of mood on

decision-making indicates that positive and negative mood states influence the perception, organization and recall of information. ... Since these perceptual and cognitive processes serve as the foundation for choice behavior in the motivational system, it is quite possible that individual differences in mood tendencies account for substantial variance in choice behavior. Jung (1978) comments: "Proponents of the view that situational factors are the major determinant of behavior must also account for the obvious fact that wide individual differences in behavior often occur in the same given situation".

Vroom's views on the relationship between expectancy/valence and job satisfaction are set out in the following terms:

"Much of the evidence reported in this chapter on the determinants of job satisfaction is consistent with our proposition about the determinants of valence. People's reports of their satisfaction with their jobs are, in fact, directly related to the extent to which their jobs provide them with such rewarding outcomes as pay, variety in stimulation, consideration from their supervisor, a high probability of promotion, close interaction with co-workers, an opportunity to influence decisions which have future effects on them, and control over their place of work. Furthermore, individual differences in motives seem to have the effects predicted in the proposition. The more a person reports valuing these outcomes, the greater the positive effect on his job satisfaction of an increase in the extent to which it is provided by his job" (Vroom, 1964).

Whilst these outcomes must be highly individual in their valences, research has shown certain patterns, reported by Robertson, Smith and Cooper (1992):

"Satisfaction with work tends to increase with age but there is a dip in satisfaction in the 40-50 years age group which suggests that it is probably the least satisfied and is the group that is most difficult to motivate. In particular, satisfaction with promotion prospects falls to very low levels at age 40-50 before rising again".

"Women tend to be more satisfied than men with their colleagues and to a slight extent, their supervisors. They are less satisfied than men with their promotion prospects, and the type of work they do, and they are much less satisfied than men with their pay".

"Part-time workers were noticeable less satisfied with their pay, promotion prospects and the type of work they do. However part-time workers were rather more satisfied with the company of their colleagues".

Vroom (1964) argues that the assumption, on which so much existing work is based, that differences in job satisfaction are the exclusive results of differences in work roles should be discarded. His findings that differences in the

attractiveness of a work role to persons about to enter the labor market can be accounted for in terms of personality differences lead him to think it reasonable to assume that such personality differences might have similar effects on the attractiveness of the work role to those occupying it.

Attitudes and performance

Performance, assessed in a variety of ways, has been used as a validating measure in many of the motivation studies mentioned above. The question of a relationship between employee satisfaction, or attitudes, and job performance appears not to have been satisfactorily resolved. Brayfield and Crockett (1955) conducted an extensive review of the literature and found little evidence in the available literature that employee attitudes ... bear any simple, - or for that matter, appreciable, - relationship to performance on the job. Bennis (1962) arrived at a similar conclusion:

"Indeed, today we are not clear about the relation of performance to satisfaction, or even whether there is any interdependence between them. Likert and his associates have found organizations with all the logical possibilities - high morale with low productivity, low productivity with low morale, etc. ... Generally speaking, this is the state of affairs: two criteria, crudely measured, ambiguous in meaning, questionable in utility, and fraught with value connotations".

Vroom also comments that correlations between [job satisfaction and job performance] vary within an extremely large range and the median correlation of .14 has little theoretical or practical importance. J Jung (1978), however, points out that absenteeism and turnover do appear to decrease as satisfaction rises. There is some suggestion that the relationship between satisfaction and performance becomes more positive as the level of skill required by the job increases" (Likert, 1961) and that the correlation between these two variables becomes stronger as the level of discretion the employee has over his or her work increases (for example in Porter and Lawler, 1968, or Tampoe, 1993). In other words, where there is decision-making responsibility high job satisfaction or positive attitudes towards the job or the employer may result in better performance. Again, multiple variables and uncertainty about the direction of causation make this difficult to prove.

Organisational Implications

The range of theories discussed above, and the limited empirical research available to support any of them with great confidence, may distract a little from the value of the theoretical work for organisational practice. However, much of the

theoretical disputation may be seen as taking place below the threshold of practical application. Whether basic behaviours are driven by physiological, instinctual, or homeostatically regulated mechanisms, or are drawn by hedonistic, conditioned, or learned associations, or are due to some combination of all these factors, it is beyond dispute that basic behaviours are essential to the continuation of life. Organisms that fail to eat and drink, to seek shelter from extremes of climate, or to find refuge from predators, will die and their species will become extinct. Similarly, organisms which do not seek mates, or make provision for the survival and development of their offspring, will not survive as species. That a variety of mechanisms may lead to appropriate behaviour for these ends is not especially remarkable.

Organisations are not normally concerned with issues of physical survival. They are concerned with commercial survival, which normally means they must satisfy the needs of customers, in a variety of guises, who have the ultimate power to starve the organisation of income. Customer satisfaction involves both quality and cost elements (Kottler, 1986), which means that organisations must achieve required standards of quality at a cost which enables financial survival whilst keeping prices to a level which customers are willing to pay. In order to do this they must normally enlist the help of their employees. The motivation issue here is what forms of organisational behaviour are most conducive to maximum customer satisfaction at acceptable cost.

The issue can be further limited in context when the focus of attention is on a class of employee which exercises executive responsibility, involving decision-making, discretion, and planning, ie, managers and executives.

Motivation theory can offer some guidance in an organisational context. According to Kanfer (1994) two broad themes categorize recent motive-based research: [1] identification of the organizational conditions that activate particular motives; and [2] investigation of the influence of motives on specific components of the motivation system, such as job commitment, task interest, and motivational orientation.

Korman (1974) concurs that for many psychologists, the study of motivation involves studying the characteristics of people and the characteristics of the environment where the behavior takes place. Management writers, such as Adair (1990), have applied this dual influence model to frame recommendations for organisational design. Adair concentrates on leadership: fifty per cent of motivation comes from within a person and fifty per cent from his or

her environment, especially from the leadership encountered there, and criticises Herzberg for using the term 'supervision' rather than 'leadership'. Adair suggests that this choice of words is highly significant. 'Supervision' indicates a negative, passive approach on the part of management, whereas 'leadership' is dynamic, positive and more empathetic with the needs and desires of subordinates.

Likert (1961) found significant correlations between high production and supervisors who helped their subordinates to do the job well for their own satisfaction as much as for the attainment of departmental goals (Adair, 1990). Vroom (1964) also found that: 'It appears that measures of the amount of consideration shown by a supervisor for his subordinates are frequently positively related to the effectiveness of his work unit, although he noted some inconsistencies in findings from study to study which may reflect the fact that different situations require different supervisory methods'. It should be noted that, whereas Likert is clearly arguing for a particular causal direction, Vroom is noting, with the above reservation, only a correlation between two variables. In Vroom's observations, it could well be that supervisors seen to be more considerate towards their subordinates when productivity was high; a reactive rather than a proactive stance.

Deming (eg, Deming 1982) is in no doubt about the need for trust between managers and employees. He insists that managers must work to drive out fear because no one can put in his best performance unless he feels secure, reinforcing the point made by McGregor (1960) that when [someone] feels threatened or dependent, his greatest need is for protection, for security. These observations may be linked with the findings of reinforcement researchers (eg Skinner, 1938; Korman, 1974) that punishment is an ineffective means of shaping behaviour, and the studies of arousal (eg. McClelland et al, 1976; Bandura 1977), which indicate that optimum performance, especially of high-discretion tasks, is seen when arousal levels are moderate. The implication is that a secure environment which stimulates but does not over-tax the worker should be most conducive to high performance.

Within such a general environment, factors which will persuade individual workers to put optimum effort into specific tasks or responsibilities become much more difficult to define. Expectancy theory is not very helpful at this level because of the virtual impossibility, outlined above, of identifying and quantifying all the interacting factors which would enable an assessment to be made of the forces operating to determine observable performance. Goal theory does, however, offer some useful insight into performance in a project

setting, since project management revolves around specifying a variety of clearly-defined goals. This topic will also be discussed in more detail in a subsequent chapter. The requirement for goals to be accepted (Locke, 1968) should be noted here, as should the dangers of a %linked+ dependence on specified goals to the exclusion of other [especially unanticipated] demands (Wright, 1994).

The strong message of ambiguity concerning the effects of reward and financial incentives is particularly relevant in the present context. The findings of McGraw (1978) and Kohn (1993) suggest that performance-linked rewards would not be helpful in improving the performance of project managers. However, it is not clear whether the units of rewarded performance, for example, task-based, time-based, or total project outcome-based assessments, would make a difference here. There is also the issue of whether linking rewards to specific achievements might be detrimental to the employing organisation in a similar way to the dangers associated with goal-setting identified by Wright. For example, rewards

based on task or project completion measures might lead to continuation of activities which should properly be terminated.

There is a strong theme throughout much of the literature that high performance is associated with interest in and commitment to the content of the work, as distinct from anticipated outcomes. In this context personal recognition for contribution may be viewed as an intrinsic factor, where it occurs during the course of the work, as well as being a potential post-activity outcome. Membership of a team or task-group may offer opportunities for such recognition as well as the satisfactions to be derived from mutual support. Opportunities for role-modelling, suggested by Robertson et al (1992) as a factor in determining goals, may also be greater in a team than in other kinds of work setting.

Overall, it appears that an emphasis on the creation of a favourable work environment for managers is likely to be a more fruitful organisational approach than concentrating on the manipulation of individual personal motivation.

References

- ACAS (1992) *Motivating and Rewarding Employees Some aspects of Theory and Practice* London, ACAS
- Adair, J (1990) *Understanding Motivation* Guildford, Talbot Adair Press
- Adams, J S (1963) Toward an understanding of inequity+ *Journal of Abnormal and Social Psychology*, Vol 67, 22-436
- Adams, J S and Rosenbaum, W B (1962) The relationship of worker productivity to cognitive dissonance about wage inequities+ *Journal of Applied Psychology* Vol 46 pp 161-164
- Alderfer, C P (1969) An Empirical Test of a New Theory of Human Needs+ *Organizational Behavior And Human Performance*, Vol 4, 142-175
- Atkinson, J W (1964) *An Introduction to Motivation* Princeton, NJ, Van Nostrand
- Atkinson, R L; Atkinson, R C; Smith, E E and Bem, D (1993) *Introduction To Psychology* London, Harcourt Brace
- Bandura, A (1969) *Principles of Behavior Modification* New York, Holt, Rinehart and Winston
- Bandura, A (1977) *Social Learning Theory* Englewood Cliffs, New Jersey, Prentice Hall
- Bandura, A and Walters, R (1963) *Social Learning and Personality Development* New York, Holt, Rinehart and Winston
- Bandura, A; Ross, D and Ross, S (1963) Imitation of film mediated aggressive models+ *Journal of Abnormal and Social Psychology* No 66, pp 3-11
- Bennis, W B (1962) Toward a 'Truly' Scientific Management: The Concept of Organizational Health+ *Sloane Management Review* Vol 4 No 1 Fall
- von Bertalanffy, L (1968) *General System Theory* New York, Braziller
- Block, P (1993) *Stewardship: Choosing Service Over Self-Interest* San Francisco, Berrett-Koehler
- Bolles, C (1975) *Theory of Motivation* New York, Harper and Row
- Brayfield, A H and Crockett, W H (1955) Employee attitudes and employee performance+ *Psychological Bulletin* Vol 52 pp 396-424
- Burke, R J (1966) Are Herzberg's Motivators and Hygienes Unidimensional?+ *Journal of Applied Psychology*, Vol 50, No 4, 317-321
- Burnes, B (1992) *Managing Change* London, Pitman
- Campbell, J P and Pritchard, R D (1976) Motivation Theory in Industrial and Organizational Psychology+ in M D Dunnette [ed] *Handbook of Industrial and Organizational Psychology*, Chicago, Rand McNally
- Checkland, P (1984) *Systems Thinking, Systems Practice* Chichester, Wiley
- Checkland, P and Scholes, J (1990) *Soft Systems Methodology In Action* Chichester, John Wiley
- Davis, T R V and Luthans, F (1980) A social learning approach to organizational behavior+ *Academy of Management Review* Vol 5 pp 281-290
- Deci, E L (1971) Effects of externally mediated rewards on intrinsic motivation+ *Journal of Personality and Social Psychology* Vol 18 pp 105-115
- Deci, E L (1972) Intrinsic Motivation, Extrinsic Reinforcement, and Inequity+ *Journal of Personality and Social Psychology*, Vol 22, No 11, 13-120
- Deci, E L (1992) The History of Motivation in Psychology and Its Relevance for Management+ in V H Vroom and E L Deci [eds] *Management and Motivation* 2nd edtn., London, Penguin
- Deming, W E (1982) *Quality, Productivity and Competitive Position* Cambridge Massachusetts, MIT CAES
- Dobson, C B; Hardy, M; Heyes, S; Humphreys, A and Humphreys, P (1981) *Understanding Psychology* London, Weidenfeld and Nicolson
- Dulany, D E (1968) Awareness, Rules, and Propositional Control: A Confrontation with S-R Behavior Theory+ in T R Dixon and D L Horton *Verbal Behavior and General Behavior Theory* Englewood Cliffs, NJ, Prentice-Hall
- Festinger, L (1957) *A Theory of Cognitive Dissonance* Evanston, USA, Row, Peterson

- Fishbein, M (1967) *A Behavior Theory Approach to the Relations Between Beliefs about an Object and the Attitude Toward The Object*+ in M Fishbein [Ed] *Readings In Attitude Theory And Measurement* London, John Wiley
- Goldthorpe J; Lockwood D; Bechhofer F and Platt J (1968) *The Affluent Worker: Industrial Attitudes and Behaviour* Cambridge, Cambridge University Press
- Graen, G (1969) *Instrumentality Theory Of Work Motivation: Some Experimental Results and Suggested Modifications*+*Journal of Applied Psychology Monograph*, Vol 53, No 2, pp 21-25
- Gray, R J (2000) "Organisational Climate and the Competitive Edge" in L Lloyd-Reason & S Wall [Eds] *Dimensions of Competitiveness: Issues and Policies* Cheltenham, Edward Elgar Publishing
- Gross, R D (1992) *Psychology The Science Of Mind And Behaviour* London, Hodder and Stoughton
- Hall, D T and Nougaim, K E (1968) *An examination of Maslow's need hierarchy in the organizational setting*+*Organizational Behavior and Human Performance* Vol 3 No 1 pp 12-35
- Hayes, N (1994) *Foundations Of Psychology* London, Routledge
- Heider, F (1958) *The Psychology of Interpersonal Relations* New York, John Wiley
- Heneman, H G and Schwab, D P (1972) *Evaluation of Research on Expectancy Theory Predictions of Employee Performance*+*Psychological Bulletin* Vol 78 No 1 July pp1-9
- Herzberg, F (1966) *Work and the Nature of Man* New York, Crowell
- Herzberg, F (1968) *One more time: How do you motivate employees?*+*Harvard Business Review*, January-February, 53-62
- Herzberg, F (1993) Introduction to the Transaction Edition of *The Motivation to Work*, London Transaction
- Herzberg, F; Mausner, B; Peterson, R and Capwell, D (1957) *Job Attitudes: Review of Research and Opinion* Pittsburgh, Psychological Service of Pittsburgh
- Herzberg, F; Mausner, B and Snyderman, B B (1959) *The Motivation to Work* New York, John Wiley
- House, R J and Widgor, L A (1967) *Herzberg's dual-factor theory of job satisfaction and motivation: A review of the evidence and a criticism*+*Personnel Psychology*, Vol 20, 369-389
- Hull, C L (1943) *Principles of Behavior* New York, Appleton-Century-Crofts
- Ilgen, D R and Klein, H J (1988) *Individual Motivation and Performance: Cognitive Influences on Effort and Choice*+in J P Campbell; R J Campbell and Associates [eds] *Productivity in Organizations* London, Jossey-Bass
- James, W (1890) *Principles of Psychology* New York, Holt
- Jung, J (1978) *Understanding Human Motivation: A Cognitive Approach* New York, Collier Macmillan
- Kanfer, R (1990) *Motivation Theory and Industrial and Organizational Psychology*+in M D Dunnette, and L M Hough [eds] *Handbook of Industrial and Organizational Psychology*, Vol 1, 2nd edtn, Palo Alto, California, Consulting Psychologists Press
- Kanfer, R (1994) *Work Motivation: New Directions In Theory And Research*+in C L Cooper and I T Robertson [eds] *Key Reviews In Managerial Psychology*, Chichester, John Wiley and Sons
- Katzell, R A and Thompson D E (1990) *Work Motivation Theory and Practice*+ *American Psychologist* February pp 144-153
- Kohn, A (1993) *Why Incentive Plans Cannot Work*+*Harvard Business Review*, September-October, 54-63
- Korman, A (1974) *The Psychology of Motivation* Englewood Cliffs, New Jersey, Prentice Hall
- Kotler, P (1986) *Principles of Marketing* Englewood Cliffs, New Jersey, Prentice Hall International
- Latham, G P et al (1988) *Resolving scientific disputes by the joint design of crucial experiments by the antagonists*+*Journal of Applied Psychology*, Vol 73, 753-772
- Lawler, E E and Porter, L W (1967) *Antecedent attitudes of effective managerial performance*+ *Organizational Behavior and Human Performance* Vol 2 pp 122-142
- Lawler, E E and Suttle, J L (1972) *A Causal Correlational Test of the Need Hierarchy Concept*+ *Organizational Behavior And Human Performance* Vol 7 pp 265-287

- Lewin, K (1926) %Morsatz, Wille und Beduerfnis+in D Rapaport [ed] *Organization and pathology of thought* (1951) New York, Columbia University Press
- Lewin, K (1958) %Group Decisions and Social Change+in Swanson, Newcombe and Hartley *Readings In Social Psychology*, New York, Holt Rhinehart and Winston
- Likert, R (1961) *New Patterns of Management* New York, McGraw-Hill
- Locke (1968) %oward a theory of task motivation and incentives+ *Organizational Behavior and Human Performance* Vol 3 pp 157-189
- Locke, E A and Latham, G P (1984) *Goal Setting: A Motivational Technique That Works* Englewood Cliffs, New Jersey, Prentice Hall
- Locke, E A and Latham, G P (1990) *A Theory of Goal Setting and Monetary Incentives* Englewood Cliffs, New Jersey, Prentice Hall
- Locke, E A et al (1981) %Goal-setting and task performance, 1969-1980+*Psychological Bulletin*, Vol 90, 125-152
- Maslow, A H (1943) %A Theory of Human Motivation+*Psychological Review*, Vol 50, 370-396
- McClelland, D C (1955) %Notes for a Revised Theory of Motivation+in D C McClelland [ed] *Studies In Motivation* New York, Appleton-Century-Crofts
- McClelland, D; Atkinson, J; Clark, R and Lowell, E (1976) *The Achievement Motive* New York, Irvington
- McDougall, W (1914) *An Introduction to Social Psychology* 8th edtn., Boston, Massachusetts, Luce
- McGraw, K O (1978) %The detrimental effects of reward on performance: a literature review and a prediction model+in M R Lepper and D Greene [Eds] *The Hidden Costs of Reward* Hillsdale, New Jersey, Erlbaum
- McGregor, D (1950) Personal communication with Warren Bennis, Cited by Bennis in his Foreword to McGregor's *The Human Side Of Enterprise* 25th Anniversary edition (1985) , London, McGraw-Hill
- McGregor, D (1957) %The Human Side of Enterprise+in *Adventures in Thought and Action* Proceedings of the 5th Anniversary Convocation of the School of Industrial Management, Massachusetts Institute of Technology
- McGregor, D (1960) *The Human Side Of Enterprise* 25th Anniversary edtn. (1985) Foreword by Warren Bennis, New York, McGraw-Hill
- Murray, H A (1938) *Explorations in Personality* New York, Oxford University Press
- Pavlov, I P (1927) *Conditioned Reflexes: An Investigation of the Physiological Activity of the Cerebral Cortex* New York, Dover
- Pinder, C C (1984) *Work Motivation* Glenview, Illinois, Scott, Foresman
- Porter, L W (1964) *Organizational Patterns of Managerial Job Attitudes* New York, American Foundation for Management Research
- Porter, L W and Lawler, E (1968) *Managerial Attitudes and Performance* Homewood, Illinois, Irwin
- Robertson, I T; Smith, M and Cooper, D (1992) *Motivation Strategies, Theory and Practice* London, IPD
- Rosenberg, M (1957) *Occupation and Values* Glencoe, Illinois, The Free Press
- Shapira, Z (1976) %Expectancy Determinants of Intrinsically Motivated Behavior+*Journal of Personality and Social Psychology*, Vol 34, 235-244
- Skinner, B F (1938) *The Behavior of Organisms* New York, Appleton-Century-Crofts
- Tampoe, M (1993) %Motivating Knowledge Workers - The Challenge for the 1990s+ *Long Range Planning* Vol 26 No 3 pp 49-55
- Thorndike, E L (1911) *Animal Intelligence: Experimental Studies* New York, Macmillan
- Tolman, E C (1923) %The Nature of Instinct+*Psychological Bulletin*, Vol 20, 200-218
- Vroom, V H (1964) *Work And Motivation* Chichester, John Wiley
- Vroom, V H (1966) %Some Observations Regarding Herzberg's Two-factor Theory+presented at APA Convention, New York [cited in House and Wigdor (1967)]
- Walster, E (1963) %Post-decisional re-evaluation of alternatives: Regret and dissonance reduction+ Unpublished PhD dissertation, Stanford University, cited in Vroom (1964)
- Watson, J B (1913) %Psychology From The Standpoint of a Behaviorist+*Psychological Review*, Vol 20, 158-177
- Weiner, B (1992) *Human Motivation. Metaphors, Theories and Research* London, Sage

Wilde et al (1970)	Job satisfaction and labour turnover amongst women workers+ <i>Journal of Management Studies</i> vol 7
Wood, D A and LeBold, W K (1970)	The Multivariate Nature of Professional Job Satisfaction+ <i>Personnel Psychology</i> , Vol 23, 173-189
Wright, P M (1994)	Goal Setting and Monetary Incentives: Motivational Tools That Can Work Too Well+ <i>Compensation and Benefits Review</i> , May-June, 41-49

Author profile:

Dr Roderic Gray is a consultant, writer and management coach, with a particular interest in the relationships between individuals and their organisations. He has published a number of articles on management topics including 'The Padua Paradigm: assessing organisational climate' and 'Organisational Climate and the Competitive Edge', and also on project management and product development. His book 'How People Work' published in 2004 has been translated into Chinese, as well as being available in English in many countries. His career involved a variety of practical, hands-on management roles before becoming a senior internal consultant in a major blue-chip company. Since 1997 he has worked in his own consulting practice, Kumpania Consulting. He has lectured on a range of postgraduate management and HR professional courses and currently supervises a number of doctoral researchers in the UK and abroad.

He has a PhD in organisational behaviour and an MSc in human resource management, and is a Chartered Member of the Chartered Institute of Personnel and Development, as well as a Member of the Association for Project Management and the Chartered Management Institute.
