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**THE INFLUENCE OF AGE STEREOTYPING
ON PERFORMANCE APPRAISAL**

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Thesis submitted to the
School of Graduate Studies and Research
in partial fulfillment of the requirements for the
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ABSTRACT

The major objective of this study was to demonstrate that stereotypes of older workers still prevail and that they create a negative bias against the older worker under specific types of performance appraisal methods. (The older worker is defined as those persons in the 45-65 year age bracket). More specifically, the study was an attempt to demonstrate that a subjective type of performance appraisal method encourages the rater to rely on widespread, currently held stereotypes of older workers in making judgements about performance. For example older workers are considered to be overcautious, lacking in initiative, untrainable, resistant to change and advice, and less productive than their younger counterparts. In comparison the younger worker is perceived as exhibiting the following characteristics much more so than the older worker:- innovative, logical, adaptable, ambitious, creative and future-oriented.

The present study compared the results from highly subjective trait based measures of performance with those results obtained from a more objective behaviourally based process in an endeavour to show that an objective method of performance appraisal will reduce the tendency for the rater to be influenced by, and rely on work-related age stereotypes when making a judgement about job performance. In addition, the study also endeavoured to show that the conformity or nonconformity of

the target to currently held work-related age stereotypes influences the judgement given by the rater.

In more specific terms the following three hypotheses were being tested:-

1. That under a subjective trait based measure of performance the following age x conformity interactions were hypothesized:-

i) A younger worker who conforms to currently held work-related age stereotypes for his/her age will receive higher ratings on job performance than an older worker who conforms to the currently held work-related stereotype for his/her age.

ii) A younger worker who conforms to currently held work-related age stereotypes for his/her age will receive higher ratings on job performance than a younger worker who does not conform to the currently held work-related stereotype for his/her age (that is, exhibits traits commonly associated with an older worker).

iii) An older worker who does not conform to currently held work-related age stereotypes for his/her age (that is, exhibits the traits commonly associated with a younger worker) will receive higher ratings on job performance than a younger worker who does not conform to currently held work-related age stereotypes for his/her age (that is, exhibits traits commonly associated with an older worker).

iv) An older worker who does not conform to currently held work-related age stereotypes for his/her age will receive higher

ratings on job performance than an older worker who does conform to currently held work-related age stereotypes for his/her age.

2. Although the training and involvement of the rater in the design and use of a performance appraisal instrument is considered to influence its effectiveness, it was hypothesized that to some extent, the use of a more objective type of performance appraisal such as a Behavioural Observation Scale (BOS) would reduce the bias of age stereotyping towards the older worker, in comparison to a more subjective process such as a trait based approach.

The study found significant differences in ratings for the older and younger worker on specific behaviours and traits under both the subjective and objective measures of performance, although the differences were considerably stronger under the subjective measures. The younger worker was rated more favourably on the following traits and their associated behaviours - adaptable, flexible, initiative, innovative, and logical, whereas the older worker was rated more favourably on reliability and dependability. The results showed that the interaction of age x conformity (to currently held work-related age stereotypes) was significant on these traits and their associated behaviours, and thus illustrated the existence of stereotypes for younger and older workers with personality traits that are consistent with previous studies. No significant differences were found on the overall ratings of job performance

between the four workers (young conforming, young nonconforming, old conforming and old nonconforming).

An important finding was that the younger personality pattern was regarded much more favourably than the older personality pattern. The implication of this is that traits and behaviours associated with this personality pattern may be perceived as much more important to job performance than those traits and behaviours associated with an older worker.

INTRODUCTION TO LITERATURE REVIEW

The performance appraisal process is considered an important part of managing organizational behaviour. As a management tool it fulfills a major role in meeting the organizational objective of increasing productivity. In addition, it is specifically related to employee evaluation and development and serves as a basis on which administrative decisions related to promotions, transfers, terminations, salary increases, selection and placement are made.

Performance appraisal is also considered to be susceptible to both intentional and unintentional bias. The final product of the performance appraisal process, the performance appraisal evaluation, is influenced by personal perceptions in terms of how an individual discerns and interprets the behaviour of another. Such perceptions are in turn influenced by external and internal factors that determine how information is selected from the environment and processed, and the social inferences that result. The use of stereotyping is considered to be one such form of social inference.

In order to investigate the formation of stereotypes however, it is first of all necessary to look in a more general way, at how an individual perceives and interprets the behaviour of others. This can be dealt with in relation to the theory of attribution which examines how an individual explains the behaviour of others. Stereotyping is actually a particular

example of attribution. The attribution process itself deals with an individual's perception and interpretation of the behaviour of another person which is affected by external stimuli and the psychological state of the perceiver.

An individual's perceptions however, are affected by certain biases and errors which will be examined here in some detail. These biases and errors occur because the environment is extremely complex and the perceiver has only a limited ability to process and store information. Therefore the individual always operates under some level of uncertainty and is susceptible to biases in the processing of information about both people and events (Kahneman, Slovic & Tversky, 1982). The reliance an individual places on limited information is often quite substantial. A study by deCarufel & Jabes (1984) revealed that both naive individuals and experienced personnel officers made extreme and highly confident judgements and predictions about a person based on limited and nondiagnostic information. Furthermore, these judgements were not affected by the sample or the number of persons from whom the information was obtained.

A causal analysis of behaviour highlights three major areas of focus. That is behaviour is attributed to one of the following three causes:

1. The internal system of the individual - personality and ability.
2. The external system - the environment or situation.
3. A combination of both.

There appears however to be a tendency for people to rely more on internal explanations of behaviour than external causes.

The current examination of the attribution process will focus on three major stages of information selection, information processing and on the social inferences that are made from this information. The selection stage will consider items that influence which information the individual selectively attends to (Refer Figure 1). Information processing is the analysis phase wherein the perceiver makes judgements about a person's behaviour. Finally the inference stage involves the perceiver drawing conclusions from the information utilized (deCarufel & Jabes, 1986).

Having defined the nature of stereotyping and discussed how stereotypes are formed, attention will then be focused on one particular type of stereotype, that of the older worker. There appear to be several traits or characteristics commonly associated with the older worker and several studies have been done that demonstrate the existence of a stereotype of older workers and its affect on job performance evaluation. Furthermore there appears to have been little change in attitudes towards older workers in the last thirty years and some discussion will be devoted to the resistance of the age stereotype to change. The accuracy of the stereotype of the older worker is also questioned with reference to several studies in this area.

FIGURE ONE

ATTRIBUTION PROCESS

<u>SELECTION OF INFORMATION</u>	<u>PROCESSING OF INFORMATION</u>	<u>SOCIAL INFERENCES</u>
Attention-Drawing Stimuli	Role of Memory	Representativeness
Personality of Perceiver	Timing of Information	Illusory Correlations and Frequency of Events
Arousal Level of Perceiver	Anchoring	
Prior Expectations	Concrete vs Abstract Information	Stereotypes
Negative vs Positive Information	Situational vs Internal	
Extreme Events		
Purpose of Information		

Of particular interest is the influence of work-related age stereotypes on the performance appraisal process. Several studies have examined the existence of age stereotypes and their influence on the evaluation of the older worker. There appear to be many negative consequences or implications for the older worker who is given a biased and unfavourable evaluation, whose outcome may to a large extent be more influenced by stereotypes that prevail for older workers than the actual job performance of the worker.

The performance appraisal process will be examined in some depth with particular attention given to the different types of performance appraisal methods available, the measurement errors that can reduce their effectiveness and how these can be overcome through training. In relation to the different methods of performance appraisal, it is suggested that the way the instrument itself is structured may influence the way the rater attends to the information provided. That is, the format of the instrument may make some facts appear more salient and relevant than others.

THE PERFORMANCE APPRAISAL SYSTEM

A working definition of performance appraisal includes any personnel decision that affects the status of the employee in relation to the following instances - retention, termination, promotion, demotion, transfer, salary increase or decrease, entry into training programs, and selection and placement decisions. It is a process intended to formally evaluate performance and provide feedback on which performance adjustments can be made (Schermerhorn, Hunt & Osborne, 1985). The major functions of performance appraisal are described as follows:

1. To define specific job criteria against which performance can be measured.
2. To accurately measure past job performance.
3. To justify the rewards given to individuals based on a discrimination between high and low performance.
4. To define the developmental needs of the employee in order to improve his/her current job performance and provide for future responsibilities (Schermerhorn et al).

The results of the performance appraisal indicate the areas where further training is necessary and thus provide for improving employee productivity. The feedback provided by the performance appraisal can then be utilized to counsel the employee, which also acts as a motivation tool. Furthermore, the

performance appraisal allows the manager to specify what it is he wants the employee to continue doing, stop or start doing. Performance appraisal is also critical to the selection process. It is the job analysis which defines the scope and content of the appraisal instrument and both of these items then assist the manager in developing appropriate selection instruments. In addition, the performance appraisal provides legitimate documentation if any of the personnel decisions are challenged in the court.

The performance appraisal system itself includes a number of elements which are described as follows:-

1. Rater - the evaluator who completes the appraisal.
2. Ratee - the person upon whom the evaluation is carried out.
3. Rating instrument - the performance appraisal form.
4. Rating context - the type of organization and purpose of the rating.
5. Rating process - includes administrative constraints eg frequency of evaluation, nature of the environment (noise, distractions etc) and the characteristics of the individual rater eg cognitive processes (observation, storage, recall and judgement).
6. Results of the rating.

RATING ERRORS

There are a number of different types of instruments available to conduct a performance appraisal. Ideally a performance measurement should include objective, personnel and judgmental indices. It is however, difficult to obtain objective measures for many jobs. Schermerhorn et al have suggested that output measures can be difficult, if not impossible to obtain in many cases and thus activity or behavioural measures are often used. The ratings or measures themselves are a function of several major components including the performance of the ratee, the observation of that performance by the rater and the recall and interpretation of those observations (Landy & Farr 1980, Ilgen & Feldman 1983). Research has indicated that there are a number of measurement errors that can influence the results of the performance appraisal and these are described as follows:-

1. Deficiency errors occur when elements important to job success are omitted. (Schermerhorn et al)

2. Contamination errors occur when dimensions that are irrelevant to job success are included in the measures. (Schermerhorn et al)

3. Halo errors occur when the rater gives an employee similar ratings on different dimensions. The rating of an employee as excellent on one dimensions influences the rater to give a similar rating on another dimension (Henderson, 1984). The rater fails to discriminate between the strong and weak characteristics of the employee.

4. Leniency/stringency errors occur when the rater follows a general tendency to group all measures together or to assign extreme ratings (Bernardin & Beatty, 1984).

5. Contrast effect errors involve the tendency of the rater to evaluate all employees in relation to each other rather than in relation to the requirements of the job (Wexley, Sanders & Yuki, 1973).

6. Central tendency errors occur when all employees are rated in the centre of the scale and no very good or very poor performance is distinguished (Schermerhorn et al).

7. Recency errors occur when the rater is influenced more by recent events than earlier ones (Schermerhorn et al).

8. Similar-to-me effect is the tendency of the rater to evaluate the employee in relation to him/herself (Latham & Wexley, 1981).

9. First impression errors occur when the rater is heavily influenced by the initial impression he/she formed and tends to ignore the employee's behaviour during the remainder of the rating period (Bernardin & Beatty).

10. Personal bias errors occur when the rater allows individual biases and prejudices such as race, sex and age discrimination to influence the evaluation.

Other errors that have been recognised include overdependence on a single source, categorization errors (forcing observations into categories instead of remembering the differences between ideas, behaviours and people), contextual

errors (being influenced by the situation), and loss of detail through simplification (Thorton & Zorich, 1980 quoted in Martin & Bartol, 1986).

In addition to the above it has also been recognised that rater beliefs about the ratee affect the accuracy and leniency of the report. Favero & Ilgen (1983) suggested that where raters have a stereotype formed of the ratee they spend less time observing their behaviour and this causes a reduction in the accuracy of the rating. Furthermore, where the rater believes there is less variability among the ratees they also fail to spend adequate time observing their behaviour.

RATER TRAINING

Martin & Bartol have suggested that a crucial element in any performance appraisal system is the rater and therefore the rater must be trained to carry out his/her role in an accurate and efficient manner. They have outlined a rater training program which includes the following seven major elements and the suggested time for each segment:-

	Hours
1. Performance appraisal as ad management tool	1
2. Organizations's performance appraisal system	2
3. Setting standards	2
4. Rater as a leader and coach	1
5. Typical rating errors and how to avoid them	5
6. What the rater can expect from the system	1

7. Performance appraisal interview

A description of what is involved in each segment is as follows:-

Performance appraisal as a management tool

Training in this segment is aimed at assisting raters to develop an understanding of performance appraisal as a management system which meets the primary objective of improving organizational productivity by rewarding and reinforcing good behaviours. Furthermore it should enable raters to realise the importance of using the performance appraisal system to focus on specific areas that the organization considers particularly important.

Organizations's Performance Appraisal System

The purpose of this segment is to train the raters to understand the distinctive characteristics of their organization's appraisal system and the intended purposes of their ratings. Raters also need to be made aware of the strengths and weaknesses of the particular rating technique used. In order to use a rating technique effectively, Martin & Bartol have suggested that raters must have a thorough understanding of the meaning of the various dimensions to be rated, the weights placed on them and the objectives to be set. In addition these authors have suggested that if the system involves reviewers of the ratings and an employee appeal process, then the raters

should also have a thorough understanding of role of the reviewers and the appeal process.

Setting standards

This segment is aimed at training raters to set standards through the establishment of goals, which Latham & Locke, 1984 have suggested must be measurable, realistic and challenging in order for the system to work effectively. The rater must also be trained to explicitly communicate these standards to the employee to be rated. In addition the rater must be made aware of the importance of planning for the availability of resources to meet the needs of employees in carrying out their assigned tasks.

Typical rating errors and how to avoid them

Raters need training in how to recognise and avoid typical rating errors. The major errors have been described previously and their occurrence can often be related to the cognitive limitations of the raters such as memory capacity and the ability to obtain adequate information on which to base the appraisal. Martin & Bartol have suggested that this segment of the training program should therefore include techniques to enable raters to gather appropriate information such as the keeping of a diary of particular good and poor behaviours. There is a need for raters to record employees behaviour over time so that fundamental attribution errors of halo and personality theory are reduced and focus is on job-related behaviour, its frequency,

situational specificity and dispersion over time (deCarufel & Jabes, 1986). Martin & Bartol have suggested that this segment of the training program could include a mix of lectures, demonstrations, practice and feedback through discussion, and that such training would require approximately one to two hours per error for particularly complex ones.

What the rater can expect from the system

The purpose of this segment is to guide raters in utilizing feedback from the performance appraisal system with respect to the manner in which they perform their role. This would include a focus on such issues as timeliness of reports, completeness of ratings, quality and consistency of ratings, and rating errors. Furthermore the importance of gathering longitudinal data on each rater could be stressed, so that raters have some information on which to make comparisons of their rating errors across a number of appraisals. It should also enable raters to establish strong relationships between the ratings they give and the rewards they give to their employees so that the system can be used as a motivational tool.

The rater as a leader and coach

This segment would be aimed at familiarizing the rater with his/her responsibility of ensuring that the employee is trained to carry out the assigned work. As a leader and coach he/she is responsible for the professional development of the employee

which can be facilitated by feedback that is continuous and consistent. The rater would need to be made aware of how people learn, and know how to provide positive reinforcement and adequate resources. Martin & Bartol suggested that this segment could include training through case studies, role plays, behavioural modeling and discussions.

The performance appraisal interview

Raters also need training in carrying out the final process in the performance appraisal system, that of the performance appraisal interview. The interview should involve a discussion of the documentation of the work performed and the mutual setting of goals for the next period. Maier (1976) has suggested that the most effective form of interview is the problem solving approach where the rater and ratee are involved in a mutual discussion of good and poor performance, and goals are set jointly. Training in the appraisal interview could involve role plays, video tapes, explanations and behavioural modeling to assist raters in reducing defensive reactions from ratees.

Burke, Weitzel & Weir (1978, quoted in Martin & Bartol) have suggested that an effective performance appraisal interview should include the following characteristics:-

1. High levels of ratee participation in the performance appraisal process.
2. The rater should adopt a helpful and constructive attitude.

3. Mutual setting of specific goals.
4. Solution of problems which may be interfering with the ratee's work.
5. Minimization of criticism by the rater in order to reduce defensive reaction on the part of the ratee.

RATING INSTRUMENTS

There are many different types of performance appraisal systems to choose from. Those that are best suited to administrative purposes include job results indices, essay method, graphic rating scales, mixed standard scales, ranking, forced distribution, peer evaluation and field review. Those more suited to employee development include behavioral checklists, behaviorally anchored ratings scales (BARS) or behavioral expectation scales (BES) and behavioral observation scales (BOS). A brief description of each, together with their major advantages and disadvantages is described as follows:- The two methods utilized in the present study namely a trait based scale and a behavioural observation scale (BOS) are presented first and described in more detail than the others.

Trait Based Appraisal

This type of appraisal uses traits to describe the employee and is deficient in that the traits generally involve words that are highly ambiguous such as creativity and loyalty, and it fails to tell the ratee what it is he needs to do. It is also

difficult to give meaningful feedback and suggest relevant training under such a system because both of these elements need to be related to specific components of the job and not trait-based characteristics. Borman (1979) suggested at best that this system highlights potential predictors of performance rather than describing the desired performance itself. Its main advantages are that it can be developed quickly and used across a number of different jobs. The latter advantage however, highlights the vagueness of this instrument. Finally this type of instrument is subject to leniency and halo effects (Landy & Farr, 1980)

Behavioral Observation Scales

A slight variation of BES is the behavioral observation scale (BOS). As with BES the incidents are numerically rated with the main difference being that the employee is rated on a scale (generally from 5-9 points) as to the frequency or degree to which the behaviour is exhibited. Other features of BOS include the following:- 1) a large number of behavioral statements are gathered, 2) all items are summed and 3) a statistical analysis is conducted to identify behaviours that separate effective from ineffective performance. Several advantages are apparent with this system and these are summarized as follows:-

1. Because it is developed from a systematic job analysis the rater will understand it and thus have a commitment to it.

2. The items are specific to the job.
3. The rater and ratee know what behaviours are required.
4. Unlike BES it is content valid because both good and bad behaviours are included, which forces the rater to make an evaluation rather than merely including what they can recall at the time of the appraisal.
5. Provides feedback on performance.
6. Content validity is established through the interjudge agreement on the categorization system (Latham & Wexley, 1982).
7. The increase in the number of ratings over BES increases its reliability.
8. The internal consistency of each criterion scale can be calculated.
9. It serves as a checklist for the rater and ratee so that the rater knows what to look for and the ratee knows what to do.

The development of a reliable and valid behavioral observation scale demands that the selection of items and anchors be rigorous. Furthermore the number of categories is important as too many can have negative effects on scale reliability. It has been suggested that the number should not exceed nine or be less than three.

Behaviourally Anchored Rating Scales (BARS)

This method consists of a set of scales with one scale for each major job dimension. A set of anchors are placed on the scales which are statements describing the work behaviour on the particular job dimension. Generally there are several anchors attached to each scale which represent varying degrees of performance ranging from excellent to unsatisfactory performance.

Advantages:

1. Can account for job complexity and relates specifically to what the employee actually does.
2. Reduces ambiguity due to the fact that the anchors are expressed in terminology the rater is familiar with.
3. Provides specific feedback which makes it a useful tool for counselling and motivating the employee.
4. The job-based data provide a rationale for the ratings which helps reduce halo, leniency and method variance.
5. Involves the rater and ratee in its development, which acts as a guarantee for acceptability and a commitment to make it work.
6. Meets legal requirements as criteria are job-related.
7. Can be used to compare workers across departments.

Disadvantages:

1. Many critical incidents are often discarded when the rating criteria are selected.

2. The subjective process used in the development of BARS may lead to the selection of criteria that are not independent.
3. Rater may have trouble matching the employee's performance against any of the anchors, especially if he has failed to record samples of the employee's behaviour over time (Borman 1979).
4. Can be problems in identifying anchors for the central portions of the scales.
5. Time-consuming to develop.
6. May not be generalizable from one setting to another, that separate BARS have to be developed for dissimilar jobs.
7. Standard or normal behaviours may not be remembered in comparison to unusual behaviours unless the rater systematically records these behaviors.
8. If the duties of the job change frequently it is difficult to maintain an effective BARS.
9. Not results-oriented - a worker may be performing the activity but not achieving the desired result.

Behavioural Checklist

With this method the rater simply checks off the job-related behaviours that refer to the ratee to yield an overall summary rating. Checklist items may also be weighted.

Advantages:

1. Reduces halo effect.

Disadvantages:

1. Does not control for leniency.
2. May be expensive to develop and administer as is generally geared to an individual job category.

Checklists

These are made up of several items of behaviour which are defined by their degree of desirability on a scale, and the rater indicates the items which relate to the ratee in question.

Advantages:

1. Judgements are based on behaviour rather than ambiguous traits.
2. Generally involve the participation of raters in their development.
3. Good for routine or mechanical jobs with little variation.

Disadvantages:

1. Time consuming and thus costly to develop as it involves statistical analysis. It takes the user a long time to develop as it is based on recall of critical incidents that describe certain behaviours.

Cost-Related Outcome or Job Results Indices

With this method an employee's job results are compared against some objective standard of performance. It relies on a quantitative measure of performance.

Advantages:

1. Recognised as an objective measure that eliminates halo and leniency effects because of its quantifiable measure.

Disadvantages:

1. Difficult to obtain quantitative measures in many jobs.
2. Tendency to place an overemphasis on quantitative goals to the detriment of other aspects of the job and to the corporate objectives as a whole.
3. Fails to measure such important factors as teamwork.
4. Fails to recognise that performance may be affected by the performance of other workers.
5. Problems arise when multiple job indices are combined to give an overall job rating.
6. Ignores situational factors beyond the control of the worker such as machinery breakdowns, lack of resources and the work environment itself (Peters, O'Conner & Rudolf, 1980).
7. Does little to inform the worker how present productivity levels can be maintained or increased.

Critical Incidents

This process simply involves keeping a record of things the worker did that were especially effective or ineffective.

Advantages:

1. Emphasis is on actual job behaviour.
2. The critical incidents that are recorded provide a good source of information for establishing objectives, developing training programs, and as a starting point for the development of other rating instruments such as BARS and BOS.
3. Can be used in conjunction with other methods.
4. Reduces leniency.
5. Information is qualitative.

Disadvantages:

1. The recording of critical incidents is time consuming.
2. The appraisal result may vary substantially from one period to the next, due to the infrequent occurrence of outstanding incidents.
3. The reliability and validity of the record of critical incidents is strongly influenced by rater recall.
4. Comparisons across groups is difficult.
5. The standards are set by the rater.

Essay Method

The essay method involves the preparation of a written report by the rater on the ratee's job, behaviour and/or results.

Advantages:

1. Easy to develop.
2. Feedback is detailed.
3. Relates to job performance.

Disadvantages:

1. Unstructured and open-ended nature causes lack of standardization.
2. Highly susceptible to rater bias.
3. Difficult to compare across groups.
4. No quantitative information.
5. Influenced by written and analytical skills of rater.
6. Time consuming to complete.
7. No input from ratee.
8. Would not hold up in court.

Forced Choice System

Under this system a checklist of statements are arranged in groups so that the rater is forced to choose from several equally favourable or unfavourable statements the one that best and/or least describes the ratee's behaviour.

Advantages:

1. The rater has no way of knowing which statements will give higher or lower ratings and therefore rater bias is minimized.
2. Results are considered to be reliable and valid.
3. Reduces leniency.

Disadvantages:

1. Time consuming and costly to develop.
2. In some situations both paired behaviors are typical of the ratee but he/she can not be given a rating for each of them.
3. Raters may dislike the method because they are not sure what type of rating they are giving and feel they have little control.
4. Halo effect is not controlled.
5. Little value for counselling and identifying where improvements need to be made.

Graphic or Summated Scales

On these scales the ratee is evaluated along a continuum of behaviour (eg. excellent to unsatisfactory), or into discrete categories. The scales differ in the types of cues that are placed along the continuum as well as the number of divisions along the scale.

Advantages:

1. Good for positions below managerial level.

2. Easy to develop and administer.
3. Can be used for comparison among groups.
4. Standardized and can be quantified.
5. Can be used with other rating instruments, eg MBO.

Disadvantages:

1. Does not control for leniency or halo effects.
2. Raters can have different ideas of what constitutes excellent or average performance.
3. Raters views may differ on which categories they see as more important than others.
4. Rater has a great deal of control.
5. Gives no indication of what to look for in future performance.

Management by Objectives (MBO)

Under this method expectations are structured by both the rater and ratee. Both parties meet to set goals and objectives, establish action plans and target dates. Feedback is continually provided to the ratee.

Advantages:

1. Results can be measured and quantified.
2. Encourages upward and downward flow of communication.
3. Focuses effort of employee on organizational goals.

4. Employee has knowledge of desired behaviour, results and his individual responsibilities.
5. Improves co-ordination between other managers and directors.
6. Employee effort is measured against results rather than ambiguous traits.
7. Employee is also involved in the establishment and assessment of goals.
8. Suited to non-routine jobs with potential for growth, such a managerial and professional positions. Also good in sales and production departments.
9. Useful for determining rewards based on achievement of results.

Disadvantages:

1. The employee's results can be affected by factors outside his control.
2. The goal-setting process generally does not involve a description of specific behaviours that are required, as it is often difficult to describe objectives in terms of specific behaviours.
3. Feedback in relation to changing and adopting more desirable behaviour is limited because of general nature of objectives.
4. Emphasis on achieving results may neglect other desired behaviours that are difficult to quantify.
5. Not suitable to all management styles - in particular requires a participative management approach.

Ranking Scales

This method simply makes comparisons between employees and ranks them in either ascending or descending order. A variation on this is paired comparisons where pairs of ratees are compared and the best of each pair is chosen. The number of times a ratee is chosen as superior is then calculated.

Advantages:

1. Inexpensive and easy to use - requires little time.
2. Leniency is reduced.

Disadvantages:

1. Can create tension within the group to be rated.
2. Highly susceptible to rater bias.
3. Comparisons across groups are difficult.
4. No knowledge of the differences between ratees.
5. Comparison is generally made on one overall rating and ignores specific behaviours.

The reliability of the testing instrument can be enhanced by testing and retesting, that is, performance should be measured on more than one occasion. In addition if more than one rater is utilized reliability is also facilitated.

The validity of the instrument relates to the following three concepts:-

Content validity - the items selected must be relevant.

Judgements about what items to include can be made by experts such as job analysts, supervisors and clients.

There appears to be little information in the empirical evidence to assist judges in choosing the most relevant type of content. However it has been suggested that the following variables must be considered:-

- i) the nature of the job requirements
- ii) the relevance of personal and performance factors, and
- iii) the empirical defensibility of each content type in terms of reliability, resistance to rating errors and construct validity.

Predictive validity - if the instrument is to be used to predict future performance then its predictive validity must be demonstrated.

Construct validity - this is used to infer the degree to which the ratee has a quality or trait that can be identified in some performance measure.

The effectiveness of a rating instrument is also determined by its practicality and standardization. It should be easy to understand and must be accepted by those who will use it. Steps should also be taken to minimize the differences in the administration and scoring of the rating instrument.

ATTRIBUTION THEORY AND IMPRESSION FORMATION

SELECTION OF INFORMATION

The determinants of what information is attended to and what is ignored is important in examining how a perceiver interprets and explains the behaviour of another individual. These eight factors (refer Figure 1) are described as follows:-

Attention-Drawing Stimuli

It appears that under conditions of high memory load the individual is unable to attend to all the information presented and will give greater attention to some stimuli as opposed to others. Many studies have been carried out in an attempt to determine which stimuli and classifications are more probable and salient than others. Some of the research indicates that in person perception, intense, changing, complex, novel and unit-forming stimuli (stimuli that can be grouped into a homogeneous unit) are selectively attended to. The research in the area of impression formation and causal attribution suggests that there are analogies between object and people perception such that "one might expect that like other figural stimuli, people or behaviours that stand out either as a result of some attention-drawing physical property or as a result of the perceiver's state will:-

1. be more impressive and better recalled
2. create stronger feelings in the perceiver, and
3. more often be perceived as causing the events in a social interaction. (McArthur, 1981 p205).

There is some available evidence to support the claim that intense, novel and changing behaviours gain more attention than moderate, subdued, ordinary or static behaviour. Visual information also appears to have more salient features than verbal information.

McArthur & Ginsbert (1978) and Fiske (1980) showed that perceivers spend more time looking at slides depicting extreme or negative behaviours than those which depict more moderate or positive ones. Langer, Taylor, Fiske & Chanowitz (1976) also showed that perceivers look more at novel stimulus than ordinary stimulus or events. It also appears that when salient information is stored in memory it is weighted more heavily than moderate, common, positive or late behaviours (McArthur).

The evidence does however, appear to be mixed that people with salient physical characteristics create "bigger" impressions. It seems that the strength of the impression may depend upon the quality of the information conveyed. Ratings of attention-drawing people on evaluative dimensions however, have been shown to be more extreme than those of less salient people.

Personality of the Perceiver

Certain personality styles appear to have a tendency to inhibit the inflow of new information. One type of personality style that is suggested to exhibit this tendency is the authoritarian personality. Such a person operates within a mental state that fails to acquire new information about the social world so that old judgements remain intact, however inaccurate they may be. Within such a mental state many of the real details of the present do not get processed (Berninger & DeSoto, 1985). For example such a person when seeking to explain the behaviour of an individual may recall examples of members of a particular social group and impose the attributes from that social group on the present target person.

Arousal Level of the Perceiver

Under high levels of motivation the individual is also seen to ignore relevant information about the social world and to focus on limited aspects of incoming data, or overemphasize the importance of past judgements. High levels of motivation can be brought about by intense competition or anxiety (Berninger & DeSoto). Conversely, Easterbrook (1959) found that when the arousal level is low the range of cues attended to is high and many nonsalient cues are processed. As the arousal level increases however, the range of cues attended to diminishes and nonsalient cues are more likely to be ignored. This finding has gained considerable support (Bahrick, Fitts & Rankin 1952,

Bruner, Matter & Papanek 1955; Callaway & Stone 1960; Hockey 1970; McNamara & Fisch 1964). A further study by Whitehead, Holmes & Zanna (1978) showed that an increase in the perceivers arousal level caused their attention to be focused on cues that they were expecting.

Prior Expectations of the Perceiver

The influence of the perceivers expectations has also received considerable attention. There is substantial evidence to support the view that perceivers impressions move in the direction of what they expect to occur. In addition, when the stimulus itself is ambiguous, the way it is perceived is often determined by the prior expectancies of the perceiver. A study by Zadny & Gerard (1974) found that labeling a person as a music major produced more recall of the person's music-related abilities than when he was labelled as either a psychology or a chemistry major. Enquist, Newston & LaCross (1978) have also demonstrated that expected events tend to be seen as more causal than unexpected ones. Rothbart, Evans & Fulero (1979) examined how prior expectancies helped to structure the recall of behaviour. In their study subjects were presented with 50 behaviour descriptions with each behaviour associated with one member of a group of 50 men. The 50 items included 17 intelligent, 17 friendly, 3 nonintelligent, 3 unfriendly and 10 unrelated behaviours. Half of the subjects were told the group was intellectual and the other half were told they were friendly.

The subjects were better able to remember the behaviour when the behaviour was expected. Of further significance was the fact that memory recall for disconfirming events was no better than for irrelevant events, with even a slight tendency for irrelevant events to have better recall than disconfirming ones.

When the target's present behaviour is consistent with his past behaviour it appears to receive more attention because it is expected. There is considerable research to suggest that perception is influenced more by earlier than later behaviours. One possible reason for this is that earlier information creates expectations that cause the perceiver to give greater attention to later behaviour that is consistent with these expectations. Cantor & Mischel (1977) argue that once a trait scheme or category label is established, further information is identified with the target person to the extent that it is consistent with and can be associated with the pre-existing schema.

Availability of Information

Kahneman et al have suggested that individuals assess the probability of an event by the ease with which similar occurrences can be recalled. This is often referred to as the availability bias wherein the individual is influenced by the speed with which certain information can be retrieved. Thus when the perceiver is interpreting another person's behaviour, events that are readily available from memory will have a strong influence on the interpretation and perception of this behaviour.

When easily retrieved information is used as a basis to make certain judgements it can lead to highly inaccurate inferences.

Negative versus Positive Information

It has been suggested that negative behaviours gain more attention than positive ones. Kanouse & Hanson (1971) revealed a tendency for negative information to have a disproportionate influence compared to positive information and suggest that this may be due to two factors. Firstly a greater motivation to avoid negative consequences than enhance positive ones may result in a greater attention to and learning of negative information, and secondly the relative infrequency of negative events gives them greater power and thus greater informational value.

Extreme Events

Some research has also demonstrated that extreme events have a greater influence on the formation of impressions about groups than less extreme events (Leon, Oden & Anderson 1973; Manis, Gleason & Dawes 1966). Rothbart (1981) also conducted an experiment to determine whether socially extreme behaviour caused an overestimation of the frequency of extreme events. The study revealed that target persons with extreme characteristics were more memorable and the frequency of their occurrence was overestimated. This study was significant in that it was related to the impression formation of groups and showed that the impressions of groups may be "disproportionately influenced by

the characteristics of the group's most memorable constituents" (p172) Studies by Taylor, Fiske, Close, Anderson & Ruderman (1976) and Taylor, Fiske, Etcoff & Ruderman (1978) demonstrated that when the perceivers were exposed to ad-libbed discussions of a black person in an all white group, and a male in an all female group, they rated the salient novel black and the salient novel male more prominent on a number of measures than when the same people were less salient when they appeared in groups with other blacks and males respectively.

Purpose of Information

To some extent the reason for acquiring the information or how it is to be utilized can influence what is selected. A study by Schul and Burnstein (1985) examined this notion by exploring the conditions under which individuals used past judgements instead of current stimulus information to arrive at a new judgement. The study revealed that when past judgements were available the extent to which they were used was dependent on the type of judgement to be made. That is, as the similarity between the past and present judgement increased the utilization of the current stimulus information decreased. When the judgements were identical the stimulus information was ignored and past impressions were used to make the judgements. However, it was also shown that when another activity occurred between the old and new judgements the past judgement was utilized much less as it was more difficult to access. The authors also found that

when the two judgements were completely unrelated, the older judgements tended to be ignored and the stimulus information was more likely to be used in making the new judgement. Finally, when there was some relationship between the judgements, both past judgements and current stimulus information were shown to be utilized. Of further interest in the study was the fact that when the judgements were related more elaborations and inferences were built around the representations than when the judgements were unrelated. In addition, under the condition of identical judgements when the stimulus information was not utilized, it received no additional elaboration, whereas under the condition of related judgements activation of the stimulus information caused it to undergo elaboration. This process of elaboration implies that each new judgement adds to the underlying representation so that at the end of a series of judgements the stimulus information becomes integrated to form a large and rich structure. On the other hand under unrelated judgements, each time a new judgement is made the elaborations are replaced and hence do not accumulate. In the study under examination the stimulus information was a series of trait descriptions. The authors suggested therefore that the memory for a trait description that has undergone several related judgements ought to be superior to the memory for a trait description that has undergone either several unrelated or several identical judgements.

PROCESSING OF INFORMATION

Even before a stereotype is formed the individual must first of all make judgements about the information that has been selected for attention. Rothbart refers to this stage as the process "by which the retrieved events are integrated into a relatively simple decision that can serve as the basis for action" (p155). At this stage of the attribution process there are a number of factors that can influence how the selected information is used and these are presented as follows (Refer Figure 1):-

Role of Memory and Memory Load

One of the major factors that appears to influence how information is processed and again what information is selected, is the memory load of the person at the time the information is presented. This is described simply as the number of separate items the individual has to deal with at one time. When a person is faced with a high memory load reliance will be placed on the most available information to form judgements. For example when a person is involved in a large number of encounters with a group of people and these encounters have occurred under conditions where there are many other demands placed on memory, any judgements made about the group will be based on the most available traits. This association will be made regardless of whether the trait was originally associated with a single person repeatedly or with several persons presented only once. A study

by Rothbart, Fulero, Jensen, Howard & Birrell (1978) illustrated this concept. The authors found that information about individual group members can be organized around the individual group member or around the group as a whole. That is the occurrence of a trait may be associated with the whole group or only with the individual to whom it refers, depending on the conditions under which the information was first received. Under conditions of minimal memory load however, other factors in addition to the availability of the trait determine how information from memory is used in forming judgements about a group and the trait would be associated more accurately with the correct members rather than the group as a whole.

The role of memory in making judgements can also be extended to include the formation of attitudes. It has been suggested (Burnstein & Schul, 1982) that attitudes are formed in two separate ways, either by integrating some stimulus information and abstracting the attitude from it, or by forming the attitude on the basis of a past attitude without taking into account the information underlying the past attitude. The halo effect that influences impression formation is consistent with the notion of the existence of "attitude-based" attitudes.

Timing of Information

A study by Anderson & Hastie (1974) manipulated the timing of information given about two agents and showed that the information was used differently if an identity was created

between the two agents before the information was given. The example they used was as follows:-

The first group of participants was told that John a lawyer engaged in Acts A1, A2 and A3, while the second group was told that John engaged in acts A1, A2 and A3 and was told later that he was a lawyer. The creation of the identity between John and lawyer given prior to the information about the acts generated the creation of one node in memory, whereas when the identity was created after the information was given, two nodes were created in memory. In the latter case the acts associated with John did not automatically transfer to the other agent - lawyer. The implication of this study is that the timing of information may influence how judgements are made and in particular how the behaviour of another is interpreted.

Anchoring

When a person is placed in a situation of uncertainty or the environment is too complex to deal with all incoming stimuli, judgements may be based on the principle of anchoring. That is subsequent judgements about a target person are based on prior or initial information, or anchoring a judgement to a previous estimate (deCarufel & Jabes, 1986). Kahneman et al describe this as the formation of estimates by commencing from an initial value that is adjusted to yield the final answer.

Concrete versus Abstract Information

Nisbet et al (1976) suggest that information received from a vivid, concrete source such as a friend or business associate may influence perception more than information obtained from a more abstract source such as a report or document. Even though the latter source logically appears as more reliable, accurate and researched, the persons's judgement will be swayed more by the information received from the more concrete source.

Situational versus Internal

As was noted previously there is a tendency for individuals to attribute causes to internal dispositions rather than to situational factors. That is a person's behaviour in a certain job may be interpreted as being caused by personality and ability factors rather than as a result of the demand characteristics of the task.

SOCIAL INFERENCES

The final stage to be considered under the attribution process is that of social inference wherein the individual draws conclusions from the information presented and integrates judgements which form the basis of generalizations, theories and stereotypes. The factors that influence these social inferences are described as follows (Refer Figure 1):-

Representativeness

This concept is described by Kahneman et al as follows:- if the degree to which A resembles B is high, then the probability that A originated from B is also deemed to be high. The authors use the example of judging someone's occupation - the probability that a particular individual is a librarian is assessed by the degree to which that person is representative of, or similar to, the stereotype of a librarian.

Illusory Correlation and Frequency of Events

There is sufficient research to suggest that a source of bias in social inference is the tendency to see two things occurring together more often than they actually do and this has been termed illusory correlation. Chapman & Chapman (1967) cite studies that revealed the strong tendencies of individuals to believe that two independent events were connected or strongly correlated when there was some subjective verbal association between the events and/or the pairs of events drew more attention than others, when in fact there was no real relationship at all between the events. In more specific terms, there is evidence that illusory correlation effects occur when people and behaviours are seen to form a unit due to the fact that they occur infrequently.

Research also indicates that there is a tendency for infrequent behaviour to be more associated with infrequent group members than is really the case. This notion of "shared

infrequency" was examined by Jones, Scott, Solernou, Noble, Fiala & Miller (1977) who measured the influence of the relative frequency and infrequency of events on their recall. The target persons were a minority group who were described by personality traits rather than behaviours. The participants were seen to exaggerate the number of statistically infrequent undesirable traits associated with the minority group. The concept of shared infrequency is also supported by Hamilton & Gifford (1976) who argue that infrequent events are often wrongly seen as going together and that an infrequent group of people (minority group) may be associated with an infrequent class of behaviours (which may be socially undesirable) and this association is then also exaggerated.

Infrequent behaviours are generally associated with an outgroup as this is a group the individual has little contact with as opposed to the ingroup. The ingroup is viewed as more heterogeneous and differentiated than the outgroup and the individual tends to associate more with the ingroup than the outgroup, so that this frequency of interaction causes the person to experience more favorable behaviours with the ingroup. An example of ingroup and outgroup labels is given by Rothbart as follows:-

1. "Jim a white construction worker, rescued a child from a burning building"
2. "Jim, a black construction worker, rescued a child from a burning building".

A white person reading these two sentences will view the ingroup label 'white' as meaningless to him and will look for another category to store information about Jim, for example he is a construction worker. The label 'black' however, is homogeneous to the outgroup and maybe used to store information about him as it is seen to be meaningful. According to Rosch (1977) events or behaviours are segmented in such a way to maximize their commonality within a category and to maximize differences between categories.

Another study by McArthur & Friedman (1980) which manipulated the race, sex and age of the target group, found that perceivers' impressions of older patients were more negative when these patients were in the minority than when they were a majority. That is when the demographic groups were distinctive due to their infrequency, behaviours that were related to some members of the group were seen to have a greater association to the whole group than really existed. Furthermore, positive behaviours had stronger associative connections to the younger, white and same sexed patients than did negative behaviours, while the reverse was seen to be true for their demographic opposites.

Conclusion

The discussion so far has focused on the biases and errors that influence the selection of information, judgements based on that information and the integration of judgements in the process of social inference. Perhaps the largest component of social

inference is the formation of stereotypes which individuals use as a shortcut method to interpret and explain the behaviour of others. As was previously mentioned one of the major factors that causes the individual to limit the selection and processing of information is the complexity of the environment itself. Attention was given to those factors that lead to bias in the selection of information which has further implication for the nature and extent of the information that is built into a stereotype. Furthermore, the processing stage illustrated biases that occur as the individual makes judgements about the information that was selected. Again this has strong implication for the integration of information into a label or stereotype for a particular group. Stereotyping is an important part of the attribution process and helps to further explain how an individual perceives and interprets the behaviour of another. The discussion will thus be extended to examine in some detail how and why impressions, perceptions and judgements are grouped into category labels or stereotypes for the purpose of making inferences about certain groups.

NATURE OF STEREOTYPING

Stereotyping occurs when a full set of attributes are associated with a particular target, and is again described as a process utilized by the individual who is attempting to deal with a large source of information with a limited processing capacity (Ashmore & Del Boca, 1981). A distinction is made between a stereotype and the process of stereotyping. The former is seen as a data structure while the latter is a procedure for processing a data structure. Berninger & DeSoto suggest that the contents of the data structure may change over time but the procedure of stereotyping itself may be rigid and inflexible and can result in "rigid perceptual outcomes" (p203).

Lippman, who is referred to as the father of the stereotype, states that "humans do not respond directly to external reality (that is the world outside) but to a representation of the environment which is in a lesser or greater degree made by man himself (cited in Ashmore & Del Boca). This representation is formed because of the complexity of reality which is too vast for the individual to deal with and thus he relies on stereotypes to simplify the perceptive and cognitive processes. Unfortunately however, stereotyping can lead to inaccurate perceptions because every individual is unique and not all members of a category are equally representative of typical members of the category (Berninger & DeSoto).

Snyder (1981) indicated that the following three processes occur under stereotyping:-

1. Categorization of individuals on the basis of highly visible characteristics.
2. Attribution of a set of characteristics to all members of that category.
- 3 Attribution of a set of characteristics to any individual member in that category.

Early studies on stereotyping were based on a sociocultural approach which linked the process with prejudice (Allport 1954). Stereotypes were conceived as rigid categories based on attitudes that grossly oversimplified experiences and lead therefore, to the formation of prejudgements. Further research of this nature focused on the existence of adjective checklists of stereotype categorizations of racial, ethnic and national groups. Stereotypes were seen as emanating from the "deep-seated personality needs of prejudiced persons" (Ashmore & Del Boca). The sustainment of prejudice enables the individual to find and strengthen his own identity, which acts as an ego-defensive mechanism.

In discussing the nature of a stereotype a distinction must be made between personal and social stereotypes. A personal stereotype is one that is held by the individual whereas a social stereotype is one that is shared by a cultural group. A major theme in the literature on social stereotypes is that they are fixed and unchanging (Ashmore & Del Boca) whereas personal

stereotypes have been found to be only moderately stable over time. This latter finding was revealed in a study by Berninger & DeSoto who had subjects take part in three tasks as follows:-

1. Free response task - subjects were asked to produce any information that came to mind when thinking of a particular social group.
2. Most characteristic response task - subjects were asked to produce the three most characteristic attributes for the same social group.
3. Least characteristic response task - subjects were asked to produce the three least characteristic attributes for the same social group.

There appeared to be a moderately low stability of the content of the most characteristic responses after both one week and two months.

The sociocultural approach also views stereotypes as being provided by one's culture, that is associations between certain groups and trait labels are culturally determined and these associations provide utilitarian and value-expressive functions. The expression of stereotyped beliefs is perceived as enabling the individual to affirm the system of beliefs that he/she has accepted as his/her own (Ashmore & Del Boca).

McArthur & Friedman (1980) have shown that sociocultural associations cause certain demographic groups to be formed into a unit with certain behaviours. Taylor et al (1978) present similar findings that showed that when the target was designated

as a man, the participants perceived him to be more analytical, influential, negative, and less sensitive, perceptive and warm, than when the target was designated as a woman. Thus it can be seen that cultural associations caused the participants to create a unit between women and a behaviour that demonstrates sensitivity, perception and warmth. Hamilton & Rose (1978) demonstrated that traits can also be culturally associated with a particular occupation, and some traits were recalled more often than other traits even though the actual frequency of each did not differ.

The activation of a category label or stereotype influences both the encoding and retrieval of information, while the judgements about the frequency of a category are a function of the number of category instances retrieved from memory and the salience of groups of items in relation to other groups. Category or trait labels vary in their properties in the following ways:-

1. Their degree of generality or number of events they refer to.
2. Their absorbing power or degree to which a variety of relevant instances can be grouped into the label.
3. The frequency with which relevant behaviours are expected to occur (Rothbart).

The processing of information and abstraction to form data into a social category has been suggested by Berninger & DeSoto

as being influenced by four organizational principles, which are described as follows:-

1. The information is classified by a defining attribute for the social category, the example cited is a warm or fatherly person. When a defining attribute is given for a social category the subjects can then supply the attributes commonly associated with this category.
2. Attributes are rank ordered in relation to how characteristic of the group an attribute is.
3. A differentiation is made between social categories by excluding what is not associated with the category, that is attributes which are not typical of a particular social category may be recorded in memory.
4. Illustrating the category in memory by an example of a specific person or class of person who exhibits the typical characteristics of the category.

The authors conclude that the second process of rank ordering is perhaps closest to what a stereotype is, and also suggests that a stereotype may likely be a sub-component of a social category and not necessarily synonymous with the entire category.

The individual who adopts stereotyping behaviour is also considered to utilize a reconstructive process, that is, past events in the target's life are reconstructed to support current beliefs. Snyder states this is done by "preferential remembering or selective re-interpretation". The reconstructive process is

based on a number of assumptions that Snyder outlines as follows:-

1. The present ought to be meaningfully reflected in the past.
2. The present effects ought to be traced to historical causes.
3. Knowledge and understanding of origins of personal attributes is represented in terms of "this leads to that" historical propositions.

Snyder's "preferential remembering" can also be related to the previous discussion on the influence of a perceiver's prior expectancies and his own prior behaviour. It appears that the perceiver develops scenarios about what events may be likely to occur and these are based in part on the stereotyped beliefs held (Kahneman et al.). These scenarios then guide the perceivers approach to interaction with the target. This concept was examined in a study by Higgins, Rhodes & Jones (1977) who had perceivers read a description of someone and evaluate the target person based on that description. Some of the perceivers read a selection of positive trait terms about the target person prior to reading the description, while the others read a selection of negative trait terms. Those perceivers who read the positive trait terms rated the target person more favorably than those that read the negative trait terms. Thus the evaluation of the target person was influenced by trait categories to which the perceivers had previously been exposed.

Pettigrew (1981) contended that "whatever human beings perceive as real is in fact real in its social consequences". His study on extending the stereotype concept presents a brief summary of the ideas put forward by others in the field. These ideas are presented as follows:-

Stereotypes occur as a direct function of the categorization process (Tajfel 1969) and are individually and not consensually held. They consist of patterns of traits rather than individual traits considered one at a time (Ashmore & Del Boca). Stereotypes have both potency and evaluative meaning of different traits, which varies from one stereotype group to another, for example a sentimental female is seen by men in a negative light as being inept, whereas women view the trait more positively, eg as nurturant. Stereotypes can be regarded as implicit personality theories applied to social group membership or act as perceived correlations between social groups and patterns of attributes. They are essentially schemata which involve the processes of encoding, interpretation, retention and retrieval of information. As seen earlier these processes are influenced by a variety of factors including memory load, prior expectations, arousal level of the perceiver and the type of information being manipulated. With respect to the latter it was emphasized that the following features of the information were highly relevant to how it is processed - salience of the items; its positive/negative connotations; timing and frequency of information; and its extreme/non-extreme nature.

Stereotypes which have a global nature often evolve into a set of specific subtype stereotypes. Stereotypes can also be fused when the target is classified under two relevant group labels (eg rich American), and are strongly influenced by the salience of the group member and the structure of the intergroup situation. Furthermore, the use of stereotypes is a critical component of the larger process of de-individuation of those categorized as outgroup members. Finally, stereotypes are seen as extremely persistent - they resist alteration because of basic cognitive processes as well as the extensive social support they typically receive.

Conclusion

The implications of this observation that stereotypes are so persistent are the adverse effects that such stereotyping can have on opportunities for older workers within an organization. Stereotyping can exert a lot of influence in many vital areas of decision making with respect to human resources. Of particular interest to this study is its affect on performance appraisal and the decisions that flow from this process, such as promotions, transfers, salary increases and further training and development. The following discussion will therefore take a close look at the nature of work-related age stereotypes and their influence on the performance appraisal process.

STEREOTYPES OF THE OLDER WORKER AND THEIR EFFECT ON
PERFORMANCE APPRAISAL

Attitudes toward the employment of older workers appear to have undergone little change in the last thirty years (Bird & Fisher, 1986). Negative stereotypes of older workers still prevail with the older worker seen as slow, absentminded, reserved, resistant to change, slower to learn, difficult to get along with, more passive and obsolete (Rosen & Jerdee, 1976a, Schwab & Heneman, 1977, Cleveland & Landy, 1981). In addition it is commonly believed that the older worker suffers a decline in motivation and merely goes through the motions with respect to the job (Rosen & Jerdee, 1976b).

Rosen and Jerdee in their research into job-related age stereotypes have carried out two studies that are seen as relevant to this current study and are described as follows:

A questionnaire was administered to 56 realtors and 50 students who were asked to evaluate the work-related behaviour of two persons a 30 year old male and a 60 year old male. No other information was given about the two males. The questionnaire included 65 items in four work related scales, these being

1. Performance capacity (productive, creative, efficient).
2. Potential for development (capable of learning, versatile and eager to achieve)
3. Stability (careful, dependable, steady).
4. Interpersonal skills (aware of others' feelings and effective in group situations).

The results of the study showed that the younger male was rated higher on the following dimensions:- performance capacity-ability to work under pressure, innovation, logic, reception to new ideas, adaptation and versatility; potential for development - more ambitious, eager and future oriented. The older male was seen as more accident prone, rigid, dogmatic but received higher ratings on stability - more reliable, honest and trustworthy. When the age of the respondent was taken into account, the effect was minimal except that the older respondents perceived a smaller difference in the performance capacity of the younger and older male (1976a).

In a second study 142 undergraduates students evaluated 6 memos dealing with 6 work incidents, with each incident representing a different type of managerial problem. Again the age of the target was varied with each incident being presented in two versions - one for an older worker and one for a younger worker. The results of the study revealed the following negative characteristics as pertaining to the older worker:- more resistant to managerial influence, lacking creativity, more cautious (financial risk taking), less interested in technological change, less trainable, and lower in physical capacity.

The existence of age stereotyping in performance appraisal was investigated by Schwab & Heneman (1978) who had 35 personnel specialists evaluate written performance descriptions of four

secretaries. The age and experience of the fourth secretary was manipulated (age 24 and 61 years, experience 6 months or 5 years). In addition the age of the participant was also measured. No significant effects due to age and experience were revealed. The age of the participant was however related to recommended salary increases and an age of participant X age of target interaction was found to be significant in relation to ratings on job knowledge, responsibility and recommended salary increases. Participants above the median age of 33 provided lower evaluations to the 61 year old than the 24 year old, while participants below the median age provided higher evaluations to the 61 year old than the 24 year old.

The age interaction effects may possibly be due to the fact that persons who have difficulty in adjusting to old age may see older persons in a more negative light, while the younger participants may be sensitive to the possibility of age stereotyping and thus tend to overcompensate.

This study is however, seen to have problems of external validity due to the following:- the participants were mainly from a restricted age range (21-29), attempts to separate age effects from work experience, the effects of treating experience as an experimental variable, the work behaviours were not observed but only read, small sample size (35) and the demand characteristics of the task.

The variance in results of this study as compared to the Rosen and Jerdee studies may be related to the methodology

differences in terms of the types of evaluators, demand effects, nature of the task and the greater information about the target that was provided to the participants in the latter study.

Ferris, Yates, Gilmore & Rowland (1985) in an attempt to overcome the limitation of previous studies on age and performance that relied on "paper" people, carried out a field study with actual supervisors and subordinates, where the supervisors had to rate both older and younger subordinates doing the same job. This study revealed that the older workers received lower ratings than the younger workers. A significant age x performance interaction was found on ability attributions. That is, for lower performing workers, the supervisors tended to attribute performance to lack of ability more so for older workers than younger workers. At high performance levels however, the performance was attributed more to ability for the younger workers than the older worker. This finding is also consistent with a previous study by Banziger & Drevenstedt (1982). The implication of this finding is that supervisors made an internal attribution for low performance of older workers, blaming their lack of ability, while for younger workers low performance was attributed to other factors such as task difficulty and luck. Conversely, younger workers were given credit for their high performance as being a function of their ability, whereas older workers were not. There appears to be little research in this area of whether high or low performance is attributed to different causes as a function of age. The

implication of such causal relationships cannot be ignored when one considers that the attributions that supervisors make for performance (eg ability, task difficulty, luck etc.) is considered to influence their behaviour towards their subordinate (Green & Mitchell, 1979). The importance of causal information is apparent - it can provide specific information to explain ratings given and to explain both the actions of the supervisor and organization towards the worker.

In the above study workers were also required to provide self-ratings of performance with the older workers (40-61) rating their own performance higher than the younger workers (21-29). The correlation between self-appraisal and supervisor appraisal revealed the following:-

1. Younger workers (21-29) - rated themselves lower than the supervisors rated them.
2. Middle age workers (30-39) - this group showed a perfect average agreement in ratings with supervisors.
3. Older workers (40-61) - rated themselves higher than the supervisors rated them.

A further study by Cleveland and Landy (1981) examined the effect of rater and ratee age on performance appraisal. The participants were supervisors in a large manufacturing organization who completed evaluations on 513 managers aged 21-65. The first sample involved supervisors (150) who had extensive training on the evaluation form. They were given examples of the types of rater errors and suggestions as to how

to avoid them. In the second sample the supervisors (178) only received minimal briefing on the form. The form included 15 positively worded statements with a 1-7 point rating. Each rating was summed and averaged and in addition an overall rating was given on an 11 point scale. In both samples older workers (45-65) received lower ratings on self-development and interpersonal skills than the younger workers (21-34) and the middle aged worker (35-44). Younger raters also gave significantly higher ratings than older raters on interpersonal skills in the first sample, and marginally higher ratings than middle-age raters. The rater age X ratee age interaction showed less of a discrepancy in ratings given by older supervisors in both samples one and two. In sample two younger ratees received higher ratings on use of time, problem solving and overall rating. Rater age influences were also seen in problem solving, communication skills and summed rating. Also in sample two, the ratings received by the younger workers were not significantly higher than those received by the middle aged. The findings of this study are also consistent with those of the two previously mentioned Rosen and Jerdee studies.

The greatest influence of age bias found in the Cleveland & Landy study accounts for only 1-4% of the variance of specific performance dimensions. Age of rater and ratee is only one characteristic however that may influence the appraisal. When one considers that other variables such as sex, race, nationality etc may also influence the appraisal it becomes increasingly

important and necessary to try and minimize the effect of stereotyping, by making the performance measures as objective as possible.

Cleveland & Landy (1983) have also examined the effects of person and job stereotypes on managerial decisions. This study involved 18 hypothetical employees in three jobs that varied on age stereotype. The participants were 19 middle managers aged 26-52 years, from a large manufacturing organization. The three jobs involved plant manager (stereotypically an older job), production planner (age neutral), and intermediate programmer (younger job). The target group involved two older workers (61, 62 years), two middle aged (40, 41) and two younger (27, 28). In the first sample participants were asked to distribute award money based on their evaluations. In the second, participants were asked to make promotion recommendations. Ten areas of performance were evaluated in both experiments. In experiment two the five target areas of self-development skills, interpersonal skills, technical competence, problem solving and attention to detail were found to be more important than non-target areas in the younger job. The results suggest that performance dimensions may influence the job X pattern interaction on promotion decisions. That is, the perceived difference in importance between target and nontarget performance areas influences promotion decisions, and furthermore that participants may use different subjective weights depending upon the nature of the task, that is, different weighting

schemes. In both studies the job X age and age X pattern interactions were not significant, that is the subject's age had no influence on decisions of award or promotion. This is not consistent with previous studies cited, however the majority of the subjects were between the ages of 35-50. Also the demand characteristics of the task may have cued the participants. It must also be considered that the target were hypothetical employees (paper people) and the results may not therefore be generalizable (Gorman, Clover & Doherty, 1978).

Another potential source of bias examined in the above study is that of job stereotype. The results revealed that the amount of variance in recommended awards was not only significant but quite sizeable. Those persons who showed the younger pattern of behaviour in the younger job received more award money than persons exhibiting the older pattern of performance. However, the older pattern of performance was not viewed as more favourable than the younger pattern in the older-person job. Overall performance was rated higher when the stereotyped pattern of behaviour matched the stereotype of the job.

A study by Rhodes (1983) which reviewed several previous works examining the relation between age and job performance, revealed that there was equal support for job performance increasing with age, decreasing with age or remaining the same. Waldman & Avolio (1986) suggested there is an absence of definite conclusions regarding the age/job performance relationship. The study by Waldman & Avolio does however, suggested that their

appears to be a growing bias against older workers. Other factors besides age were mentioned as a possible cause for decreases in job performance, these being job boredom, meaninglessness of work and lack of intellectual stimulation. Furthermore, it was also suggested that the differences in the age/job performance relationship appear to depend on the type of measure used. A possible explanation of the variance in correlations between age and job performance was given as the job type, that is professional versus non-professional. In this study three performance measures were utilized, these being productivity, supervisory ratings and peer ratings. The study revealed significant unexplained variance for both nonprofessional and professional workers for all three performance measures. Further findings of this study revealed a pattern of increases in performance at higher ages as measured by productivity indices, but that supervisory ratings tended to be lower for older employees. Finally, performance ratings showed more positive relations with age for professionals as compared to nonprofessionals. The implication of this latter finding is perhaps that strong negative bias may exist against older nonprofessional workers, or that the difference in ratings may reflect actual declines. This study suggested further areas that need to be examined - firstly that both objective and subjective performance indices need to be used simultaneously in the same study (this is being manipulated in the present study), secondly that job-type variables need to be examined to identify the

nature of the work in which ratings of older workers may be lower, and thirdly, the effect of other potential moderators such as experience and technological change need to be determined.

Landy & Farr (1980) in their extensive study on performance ratings with respect to the age variable concluded that "rater and ratee age has been studied too infrequently to make general statements about their effect".

In their study on attitudes towards older workers, Lee and Clemons (1985) found that employment decisions regarding older workers are affected by the amount of information available, and whether the situation requires a choice between an older and younger person. The decisions made with respect to the older worker were seen to be more favourable when the amount of information available about the older worker was increased and when it was a no choice situation. These authors also indicated that their review of the literature revealed mixed findings on whether significant differences existed in evaluations where age was varied.

ACCURACY OF AGE STEREOTYPES

The accuracy of work-related age stereotypes is however, questionable. Shaie (1974) states that age differences in intellectual performance may be insignificant, while Heron and Chown (1967) suggest that personality changes are unrelated to age. Older workers are also seen as a better accident risk than their younger counterparts across a variety of jobs (McCormick &

Tiffin, 1974) and in some studies evidence indicates they perform as well as younger workers on almost all criteria (Bowers 1952). Further support of this is given by Crites (1969), Kelleher & Quirk (1973), Meier & Kerr (1976) and Odell (1958) who believed that the older worker tends to be as productive as the younger worker even after controlling for the older worker's experience.

Riley & Johnson (1972) (cited in Bourne) made a similar claim and even suggested that the older worker is generally capable of performing as well as the younger worker if not better in some areas. They suggested this may be due to the competencies and commitment developed over a period of time. Some research however, did show slight declines in performance with age but generally for those over 65. This decline was associated with such things as memory, cognition, problem solving and performance on speed or paced tasks. Where timed activities were utilized as a measure, the older worker showed increases in anxiety and errors and subsequent decrease in performance (Arenburg 1965). On self-paced untimed tasks however, the performance of older and younger workers appeared to be similar. There does appear to be some disagreement in the literature as to at what age these declines begin to occur and large individual differences have been noted. In relation to this latter point, Shock (1959) stated that individual differences increase with age and those workers with high levels of competence do not exhibit declines in performance as long as their tasks remain

challenging. The type of performance measures used were also seen to be a major contributing factor to discrepancies (Heron & Chown 1966). In general the gerontology literature indicated that "chronological age is not a valid predictor of performance for a specific individual in a particular job" (Cleveland & Landy, 1983).

Some changes have been noted in the older worker in relation to work satisfaction. Bourne's findings about older workers revealed that intrinsic work satisfaction was more important to them than extrinsic rewards such as money and promotion. The older worker was seen as being more appreciative of a pat on the back or a feeling that the job was meaningful (Eisdorfer, 1968). It has also been suggested that the older worker may suffer a decrease in motivation over time due to the fact that he is not reinforced as much as his younger counterpart (Bourne). Expectancy motivation is also seen to be lower for the older worker, that is the belief that a greater effort will produce the desired benefits (Arvey & Warren 1976, Heneman 1973). Bourne mentioned other factors that can affect performance in the older worker. He believed that the older worker can perform as well as the younger worker but certain external and psychological conditions interfere, for example negative cultural expectations, lower self-esteem, high anxiety and cautiousness. This increase in cautiousness could however, be attributed to the tendency to overcompensate for cognitive deficits, or could simply be due to a lowered self-concept. (Arenburg, 1965).

The interference of negative cultural expectations such as "new things cannot be learned, new situations cannot be handled and unknown areas cannot be explored" may become a self-fulfilling prophecy for the older worker to the extent that "older" behaviour is learned (Bourne). This self-perpetuating nature of stereotyping was also supported by Snyder who inferred that a person who has adopted stereotyped beliefs about a target will act as follows in relation to that target:-

Remember and interpret past events from the target's life to support the current stereotyped beliefs, and secondly will act in such a way that will cause the target to indulge in behaviour that confirms and validates these beliefs. In addition, he also concluded that how other individuals treat us, is to a large extent a reflection of how we treat them.

A further extension of the concept of the self-perpetuating nature of stereotypes was the notion that if the new behaviour of the target (that is fostered by the actions of the person holding the stereotyped beliefs) is not strongly dissonant from his/her own self-image, then these new behaviours may be internalized into the target's self-concept (Snyder). In addition, this process will be strengthened if the behaviour is performed in a situation that encourages the target to view it as a reflection of his personality.

External factors such as changing life roles and life stages may also have some affect on the performance or attitude of the older worker.

IMPLICATIONS OF AGE STEREOTYPES

The existence of age stereotypes may account for much of the declining status of our older generation, and may be causing potential damage to the career progress of older workers. The danger to the organization is that personnel policies and practices based on age stereotypes are potential sources of age discrimination. Palmore & Manton (1973) reported that there is some evidence to suggest that older workers may be more subject to unjust treatment than other classes of employees. Rosen & Jerdee (1976a) voiced their concern over this issue in the following statement - "when negative stereotypes are relevant to a work situation, older workers are potential victims of discriminatory managerial decisions". An example of this is the stereotype of the older worker as being rigid and resistant to change. When such a stereotype exists the tendency is for the supervisor to re-assign the worker to other duties when a conflict arises instead of confronting the worker with the issue. This decision denies the worker the chance to improve his performance and also prevents the supervisor from learning that the age stereotype is possibly invalid. A further assumption that older workers lack motivation, ability and interest in the job leads to decisions to avoid investment in the development of older workers and generally a decision to terminate is favoured. In actual fact such discriminatory practices against older workers may be the cause of their lack of motivation.

The performance appraisal is generally used in making recommendations for salary increases, promotion and bonuses. If such an appraisal is based on erroneous stereotypes then such a negative bias will seriously disadvantage the older worker. Ratings of older workers are seen to influence a large range of decisions including training evaluation, feedback and employee counselling. They may also function as a reward and may be capable of inducing feelings of satisfaction in some employees (Landy & Farr, 1980).

Of further concern to the older worker is that once unemployed they have more difficulty in finding jobs than their younger counterparts and once re-employed they may have to take pay cuts and face the prospect of limited upward mobility. Evidence of discrimination against older workers in the recruitment and selection phases also exists (Arvey & Mussio, 1973).

Regardless however, of whether significant differences do exist in evaluations of older and younger workers, there appears to be growing evidence of older workers asserting age discrimination claims concerning promotion (Pritchard & Maxwell, 1984). Furthermore, the courts are placing greater reliance on statistical evidence in age discrimination cases. A review of 26 court cases involving age discrimination and performance appraisal in the United States revealed that the method of appraisal used was an important issue in the defense of cases involving employees aged 40-70 years (Schuster & Miller, 1984).

A 1981 study conducted by Louis Harris & Associates for The National Council on Aging, Washington, DC, revealed that 8 out of 10 Americans believe most employers discriminate against older workers and make it difficult for them to find work (cited in Ossofy, 1982).

It is clear then that stereotypes of older workers still exist and that the negative characteristics of this stereotype are having an adverse affect on older workers and at times the organizations who employ them. It would seem feasible at this point therefore to explore the reasons why stereotypes are so persistent and examine ways they can be modified or changed.

RESISTANCE OF STEREOTYPES TO CHANGE

The extreme resistance of stereotypes to change or modification was examined by Nisbett, Borgida, Crandall & Read (1976) who suggested that people tend to ignore consensus information and place greater reliance on information that is more personally conveyed. Some labels and stereotypes are extremely difficult to remove because there may be no specific action that clearly disconfirms the label. For example, a study by Rosenhan (1973) of pseudopatients in a psychiatric ward revealed that there are no specific actions that clearly disconfirm the label "devious" (cited in Rothbart, 1981).

The media also has a major influence in the formation and continuation of stereotypes as it is generally responsible for the presentation of extreme behaviours that lead to the

formation of stereotypes. The overestimation of extreme instances of behaviour of the outgroup is not counterbalanced by any other information received about them and the individual therefore remains relatively ignorant about them and will maintain an undifferentiated opinion and regard the extreme instances of behaviour as being highly representative. On the other hand, information is received about the ingroup from a variety of sources and this variety serves to counterbalance any extreme instances that are received through the media.

MODIFICATION OF STEREOTYPES

How then is it possible to modify erroneous beliefs that we have about others. Rothbart presented two models for consideration. The first of these was the bookkeeping model which stated that people monitor the number of disconfirming and confirming instances and periodically compare the differences and on this basis retain or reject the belief. The second model, which was preferred by Rothbart, is the conversion model which suggested that the change is more sudden and that a "few highly salient, critical instances play a dominant role in the disconfirmation process". (p176).

The continuation of stereotypes may be based on their utility as people group together stimuli which they see as having common elements. Rosch (1977) argued that the only way to change the categories and the negative stereotypes that exist is to change the social and economic status of the groups for whom

these negative stereotypes exist.

The elimination of reliance on stereotypes in performance appraisal is a major focus of this study. It would appear that the performance appraisal system itself can have a great deal of influence on the extent to which a reliance on stereotypes is allowed to creep into the appraisal process. In order to seek to eliminate stereotyping from this process it would seem appropriate at this point to review the performance appraisal system itself and to examine potential areas of bias that exist within the many different appraisal methods.

METHODOLOGY

SUBJECTS

The subjects in the study were eighty (80) people employed in the public and private sector in the city of Ottawa, Ontario. (Refer Appendix 7, Tables 1-5 describe the subject population). All were members of the Personnel Association of Ottawa, and were sent a questionnaire through the mail. The material received by the subjects consisted of stimulus material and the questionnaire which was then returned. After a period of six weeks a second follow up reminder was sent out.

TESTING INSTRUMENT

A performance appraisal instrument was developed to evaluate the performance of Pat a hypothetical employee (Refer Appendix Four). The instrument contained four sections. Part A contained 18 questions based on a seven point behaviourally based observation scale. The points on the scale were described as follows:-

1. Strongly disagree
2. Disagree
3. Slightly disagree
4. Neither agree or disagree
5. Slightly agree
6. Agree
7. Strongly agree

Subjects were then asked to rate the worker on the degree to which they felt the worker exhibited the behaviour described. For example, question one relating to job knowledge and skills requested subjects to rate Pat on the scale to the extent that he/sheDemonstrates up-to-date knowledge and the necessary skills to carry out the job. This section attempted to measure Pat's work behaviour along nine different dimensions which described as follows:-

1. Job knowledge and skills.
2. Quality and quantity of work.
3. Planning and organization.
4. Leadership skills.
5. Managing and developing subordinate's talent.
6. Interpersonal and communication skills.
7. Decision making and problem solving.
8. Dealing with the need for change.
9. Proposing new ideas and methods.

Part B required the subjects to evaluate Pat in terms of 18 trait based descriptions along a five point scale. For example, question one required subjects to rate Pat on a scale of one to five on the trait of adaptive, with one representing 'not at all adaptive' and five representing 'very adaptive'. Each trait description in Part B had previously been validated as highly related to a specific performance measure in Part A. Validation of the testing instrument had been carried out by

students from the University of Ottawa who were exposed to the descriptions of job performance and asked to rank the traits most important to this performance on a five point scale of relevance (Refer to Appendix One). They were also asked to propose other traits not mentioned, that they felt were highly relevant. The traits chosen as representative of each of the nine categories of job performance achieved a mean of 3.5 and above on a scale of 5. Part A also contained a question requesting subjects to indicate their overall rating of Pat's performance, while Part B contained a question requesting them to indicate their overall impression of Pat's suitability for the job.

Part C involved a manipulation check to identify the following factors:

1. To determine whether subjects could remember Pat's age after reading the material.
2. To identify whether the subjects agreed with the traits chosen as being consistent with work-related age stereotypes of older and younger workers subjects.
3. To ascertain whether Pat's behaviour was seen as typical for his/her age. This was a test for manipulation of Pat's conformity/non-conformity to currently held work-related age stereotypes.
4. To examine whether the subjects perceived Part A as being a more objective measure of performance than Part B.
5. To gauge subjects' perception of the status of Pat's

position in the organization.

In order to provide feasible information to the participants in relation to job performance, a job description for a particular position was also provided to describe work behaviour and results (Refer Appendix Six). This job description was obtained from a real organization, involved in the manufacture of highly technological equipment.

THE EXPERIMENT

Independent Variables of Age and Conformity/Nonconformity to Work-Related Age Stereotypes:

Participants received one of four descriptions of Pat's performance (Refer Appendix 5).

1. A younger worker (age 33) who conforms to the widely held work-related age stereotype for his age group. Particular descriptive adjectives included:- innovative, overambitious, lack of integrity, eagerness, impatience, creative, logical, sometimes lacking in conscientiousness, originality, risk-taking, impulsive, versatile, receptive, sometimes lacking in both carefulness and dependability.

2. Pat was described as a younger worker (age 33) who does not conform to the widely held work-related age stereotype for his age group. Particular descriptive adjectives included:- stable, steady, lacks flexibility, stubborn nature, reserved, rigid, overcautious, consistent, dependable, thorough, careful,

lack of originality, reliability, resistant to change, honest, trustworthy, keen, not outgoing or ambitious.

3. Pat was described as an older worker (age 61) who conforms to the widely held work-related age stereotype for his age group. Particular descriptive adjectives were the same as for the younger nonconforming worker (refer number 2 above).

4. Pat was described as an older worker (age 61) who does not conform to the widely held work-related age stereotype for his age group. Particular descriptive adjectives were the same as for the younger conforming worker (refer number one above).

Both positive and negative aspects of each stereotype were given equal consideration.

Dependent Variables:

Each question on the performance appraisal questionnaire represented a dependent variable. The ratings given by the subjects on each question and trait, based on their perception of performance represented the measures on the dependent variables. As previously mentioned the questions were designed to measure nine separate dimensions of work performance. Each dimension included two questions on Part A and two traits on Part B.

Design and Hypothesis

The following tables illustrate the experimental design and indicate the projected overall performance ratings on a scale of 1-9, that the employee would receive under each of the conditions

on the dependent variables. In these tables all dependent variables in Part A were grouped together as an overall objective measure, while all dependent variables in Part B were grouped together as an overall subjective measure. Thus the predicted effects were an age x conformity interaction on the subjective measures in Part B. On Part A it was predicted that the use of the more objective, job related measures would reduce the bias against the older workers and thus guarantee them ratings similar to the younger workers. The specific pattern is described below:-

Dependent Variable - Overall Rating of Employee on Part A-Objective Measures (BOS)

	33 YEAR OLD EMPLOYEE	61 YEAR OLD EMPLOYEE
CONFORM	7	6
NONCONFORM	6	7

Dependent Variable - Overall rating of Employee on Part B-
Subjective measures (trait based)

	33 YEAR OLD EMPLOYEE	61 YEAR OLD EMPLOYEE
CONFORM	7	4
NO. CONFORM	5	6

The arbitrarily assigned numbers are used to illustrate the following hypotheses:

1. That under a subjective trait based measure of performance the following age x conformity interactions would occur:-

i) The 33 year old worker who conforms to currently held work-related age stereotypes for his/her age would receive higher ratings than the 61 year old worker who conforms to the currently held work-related stereotype for his/her age.

ii) The 33 year old worker who conforms to currently held work-related age stereotypes for his/her age would receive higher ratings on job performance than a 33 year old worker who does not conform to the currently held work-related stereotype for his/her age (that is, exhibits traits commonly associated with an older worker).

iii) The 61 year old worker who does not conform to currently held work-related age stereotypes for his/her age (that

is, exhibits the traits commonly associated with a younger worker) would receive higher ratings on job performance than the 33 year old worker who does not conform to currently held work-related age stereotypes for his/her age (that is, exhibits traits commonly associated with an older worker).

iv) The 61 year old worker who does not conform to currently held work-related age stereotypes for his/her age would receive higher ratings on job performance than the 61 year old worker who does conform to currently held work-related age stereotypes for his/her age.

2. Although the training and involvement of the rater in the design and use of a performance appraisal instrument is considered to influence its effectiveness, it was hypothesized that to some extent the use of a more objective type of performance appraisal instrument such as a behavioural observation scale would reduce the bias of age stereotyping towards the older worker, in comparison to a more subjective process such as a trait-based approach.

It was felt that the format of the instrument would influence the way the subjects attended to the information provided, such that under each type of performance instrument (subjective/objective) some parts of the information would appear more salient and relevant than others.

In order to test for any significant differences on the ratings given to the different groups on the dependent variables it was necessary to conduct Multianalysis of Variance statistics,

to see which dependent variables were different at the .05 level of significance. In addition Scheffe tests were required to indicate the direction of the differences in the age x conformity interaction.

RESULTS OF PILOT STUDY

The experiment was initially pretested on a small group of 16 undergraduate students from the University of Ottawa, in order to carry out a manipulation check on the factors of age, conformity/non-conformity of target to stereotype, and the subjective/objective nature of the performance appraisal form.

Results from this pretest revealed that the manipulation checks appeared to indicate that the behaviour described was seen as typical for an employee of that age when the behaviour conformed to currently held stereotypes for younger and older workers (Refer Appendix Three - Table Two, mean for 33 year old was 4.6, for 61 year old 6.0 on a seven point scale). Conversely when the behaviour was described as nonconforming the respondents indicated that the behaviour was not typical (mean for 33 year old was 3.0, for 61 year old 3.2).

The manipulation check on whether Pat was viewed as an older employee revealed that both the older employees were perceived as older by the respondents (old/conform mean = 5.2, old/nonconform mean = 6.5, $F(1) = 62.68$ $p < .000$). The younger conforming employee was not perceived as being older (mean = 1.75) but the younger nonconforming employee was (mean = 5.2, $F(1) = 98.68$ $p < .000$). Hence a further reference was made to the younger nonconforming employee in the final version of the experimental questionnaire as being a younger employee.

The manipulation checks on the specific traits of steady,

reliable, receptive and cautious appeared to indicate a positive effect. For example when Pat was described as cautious he was perceived by the respondents to be more cautious than when it was not mentioned. That is, when the old conforming and young nonconforming employees were described as cautious (means were 5.4, and 5.4 respectively), while for the old nonconforming and young conforming employees this trait was not mentioned (means were 2.25 and 4.00 respectively).

The manipulation check on whether Part A was perceived as being a more objective appraisal than Part B revealed a mean of 4.6.

A further examination of the pilot study means (Refer Appendix Three - Table One) revealed that the younger, conforming worker received the highest rating on Part A, while the older, conforming worker received the lowest rating. The same results occurred under Part B. This appears to support the hypothesis that negative bias exists against the older worker and thus he receives a lower rating. In addition, the fact that the younger, nonconforming worker received lower ratings than the younger, conforming worker, indicates perhaps that the traits generally associated with an older worker are viewed more negatively than those generally associated with a younger worker.

The results from Part A do not appear at this stage to support the hypothesis that an objective performance appraisal format will guarantee all employees equal ratings, even though Part A was perceived as more objective in format than Part B, in

the manipulation checks. It is expected however, that the strengthening of the manipulation of the younger worker (refer page 82) in the stimulus material for the larger population will make the outcome much clearer. That is the manipulations did not appear to be quite strong enough in the pilot study but by strengthening them in the final version it is expected that hypothesis two will then be supported.

RESULTS AND DISCUSSION

SUBJECTS

The subjects in this study were chosen by convenience and ease of access from the Personnel Association of Ontario to test the experimental hypotheses discussed below. Of the 160 questionnaires mailed, 95 were returned and yielded 80 usable questionnaires, representing a 50% return rate. Appendix Seven, Tables One to Five illustrate the demographics of the subject population. There were an equal number of subjects in the 30-39 year (27) and 40-49 (27) age groups, with 14 in the 21-29 year group and 12 in the 50-59 year group (Table One). There was an equal representation of male (40) and female (39) subjects in the group (Table Two, one subject failed to indicate). Subjects were asked to indicate their position within their organization with respect to the following four categories:- non-management, supervisory, middle management and senior management. The majority of the respondents held middle management positions (43) with the next largest group being in senior management (24) (Table Three). Representation of subjects from the private and public sectors of the workforce was 46 and 34 respectively (Table Four). Within their current positions the largest group of subjects (29) had under three years of experience, with 24 between 3-6 years, 16 between 6-9, 7 between 9-12 and 4 with more than 12 years of experience (Table Five). In relation to the total number of years in the workforce fulltime, the largest group (27) have been employed for more than 20 years, 19 have

been in the workforce 15-20 years, 17 for 10-15 years, 10 for 5-10 years and the smallest group (7) for under 5 years (Table Six). The majority of the subjects (61) are currently involved in completing performance appraisals (Table Seven).

MANIPULATION CHECKS

Part C

TABLE ONE

MANIPULATIONS (PART C)

	<u>33 YRS</u>	<u>61 YRS</u>	
AGE	33.10	61.00	CONFORM
Significance Age	32.85	61.00	NONCONFORM
AMBITIOUS	5.40	3.75	CONFORM
Sign. Conformity	3.10	3.75	NONCONFORM
STEADY	4.65	5.50	CONFORM
Sign. Age	4.15	5.55	NONCONFORM
RECEPTIVE	4.15	4.55	CONFORM
Sign. Age	3.85	4.35	NONCONFORM
CAUTIOUS	3.20	5.10	CONFORM
Sign. Age	3.50	4.85	NONCONFORM

TYPICAL	4.75	5.60	CONFORM
Sign. Age	3.35	3.60	NONCONFORM
Sign. Conformity			
OLDER	2.35	5.95	CONFORM
Sign. Age	1.75	6.00	NONCONFORM
OVERALL2 (PERSONALITY)	5.40	4.70	CONFORM
(Q.7) Sign. Conform.	4.40	5.00	NONCONFORM
Sign. Age x Conf. Scheffe test 1,4 vs 2,3 (1=Young/conform, 2=young/nonconform, 3=old/conform, 4=old/nonconform)			

The manipulation checks in Part C as presented in Table One above revealed that the respondents were aware of the employee's age after reading the stimulus material and that they regarded the 61 year old employee as being an older worker (mean = 61 vs 32.85, $F(1,76) = 96664.69$, $p < .000$). Furthermore the traits of cautious and steady were perceived as being consistent with an older worker.

The manipulation checks also revealed a significant effect for conformity on the degree to which ambition was seen as consistent with someone of the employee's age. The results indicate that ambition is decidedly perceived as a trait commonly associated with younger workers and this is consistent with the previous findings and expected results.

In relation to Question 3 (Pat's behaviour is typical of someone of this age) the manipulations checks revealed that for

both the younger and older worker, when behaviour was described in terms of the currently held work-related age stereotypes it was perceived as conforming behaviour ($F(1,76) = 43.11, p < .000$). Conversely when behaviour was described in terms of the currently held work-related age stereotypes for the opposite group (i.e. an older worker was described with a younger worker's traits) the behaviour was seen as nonconforming.

Before proceeding with a discussion of the results of the study the experimental hypotheses are again presented.

1. Under a subjective trait based measure of performance the following age x conformity interactions were predicted to occur:-

i) A younger worker who conforms to currently held work-related age stereotypes for his/her age will receive higher ratings on job performance than an older worker who conforms to the currently held work-related stereotype for his/her age.

ii) A younger worker who conforms to currently held work-related age stereotypes for his/her age will receive higher ratings on job performance than a younger worker who does not conform to the currently held work-related stereotype for his/her age (that is, exhibits traits commonly associated with an older worker).

iii) An older worker who does not conform to currently held work-related age stereotypes for his/her age (that is, exhibits the traits commonly associated with a younger worker) will receive higher ratings on job performance than a younger worker

who does not conform to currently held work-related age stereotypes for his/her age (that is, exhibits traits commonly associated with an older worker).

iv) An older worker who does not conform to currently held work-related age stereotypes for his/her age will receive higher ratings on job performance than an older worker who does conform to currently held work-related age stereotypes for his/her age.

2. Although the training and involvement of the rater in the design and use of a performance appraisal instrument is considered to influence its effectiveness, it was hypothesized that to some extent the use of a more objective type of performance appraisal method such as a behavioural observation scale, would reduce the bias of age stereotyping towards the older worker, in comparison to a more subjective process such as a trait based approach.

MAIN EFFECT FOR AGE

It was predicted that only an age x conformity interaction would occur and thus the lack of significant main effects for age was consistent with the hypotheses as stated above. The main effect for age alone was not significant on Part B and only significant on Part A for three variables ($F(19,58) = 1.46$, $p < .134$, $F(19,58) = 2.69$, $p < .002$). It is apparent from this then that the respondents did not focus on age alone but also took into account the way the employee was described in terms of characteristics and personality traits. This finding has some

very positive implications for older workers in that age alone is not always a cause for discrimination and negative stereotyping but is considerably influenced by the employee's behaviours. The behaviours where age was seen to have a significant affect are described as follows:-

On Part A the employee's age had a significant effect on the ratings given to proficiency, ability to co-ordinate a team effort and initiative. The question on proficiency related the employee's comprehension of company procedures and methods and illustrated that the older workers (both conforming and non-conforming) received higher ratings than both of the younger workers. Although the factor of experience was controlled for, this finding suggests perhaps that one perception of older workers (because of their greater length of time in the work place) is that they have a greater familiarity with operating procedures and methods in general. The effect of age on initiative followed the original hypothesis that younger workers will score higher on this dimension of behaviour, followed by older nonconforming workers.

On Part C, manipulations check (refer Table One above), the traits associated with the younger worker were viewed as more positive in relation to the employee's personality with the younger conforming worker receiving the highest rating on Question 7 (which required respondents to indicate their overall impression of the employee's personality), followed by the older nonconforming worker.

MAIN EFFECT FOR CONFORMITY

There was no main effect for conformity on Part A or Part B ($F(19,58) = 1.7, p < .062, (F(19,58) = .964 p < .513)$). Again this was consistent with the experimental hypotheses which predicted only an age x conformity effect.

AGE X CONFORMITY INTERACTION

TABLE TWO

BEHAVIOURS (PART A)

	<u>33</u>	<u>61</u>	
PROFICIENCY (Q.2)	4.5	5.35	CONFORM
Sign. Age	4.85	5.20	NONCONFORM
DEPENDABLE (Q.4)	4.20	4.85	CONFORM
Sign. Age x Conf.	5.30	3.70	NONCONFORM
TEAM (Q.9)	5.30	5.70	CONFORM
Sign. Age x Conf.	4.55	5.90	NONCONFORM
Sign. Age			
LOGICAL (Q.14)	5.55	4.50	CONFORM
Sign. Age x Conf.	3.85	5.40	NONCONFORM
ADAPTABLE (Q.15)	5.65	4.70	CONFORM
Sign. Age x Conf.	4.00	5.20	NONCONFORM

FLEXIBLE (Q.16)	5.35	4.80	CONFORM
Sign. Conformity	3.95	5.05	NONCONFORM
Sign. Age x Conf.			

INITIATIVE (Q.18)	5.15	4.60	CONFORM
Sign. Age x Conf.	4.20	4.65	NONCONFORM
Sign. Age			

Scheffe procedure revealed the following groups to be significantly different at the .050 level: (Group 1 = young, conform; Group 2 = young, nonconform; Group 3 = old, conform; Group 4 = old, nonconform).

Dependable	2, 3 vs 1, 4
Logical	1, 4 vs 2, 3
Adaptable	1, 4 vs 2, 3
Flexible	1, 4 vs 2, 3
Initiative	1, vs 2, 3, 4
Team	3, 4 vs 1, 2

Part A

On Part A of the performance appraisal questionnaire the interaction of age x conformity was significant over a number of variables, which included dependable (Q.4), team (Q.9), logical (Q.14), adaptable (Q.15), flexible (Q.16) and initiative (Q.18) ($F(19,58) = 5.43, p < .0001$ (refer Table Two above). When the

younger worker conformed to the currently held work-related stereotype for his age group he/she scored significantly higher on the following behaviours (compared to the younger nonconforming and older conforming workers), which have previously been associated with the stereotypes of younger workers:- logical, adaptable, flexible and initiative (Rosen & Jerdee). When the younger worker did not conform he/she scored significantly lower than the younger conforming worker on all of these behaviours. When the older worker did not conform he/she received comparable ratings to the younger conforming worker, except on the behaviour identified with initiative. On initiative the younger conforming worker scored significantly higher than all other workers, perhaps indicating that this characteristic is influenced by age more so than conformity. It was also interesting to note that the younger non-conforming worker also scored lower than the older conforming worker on the behaviours of adaptable, flexible and logical. The only explanation proposed for this is that the exhibition of "older worker" characteristics by a younger worker is viewed very negatively, perhaps because of the feeling that some of these characteristics such as rigidity, caution and lack of creativity may exacerbate over time. These results indicate that such behaviours are positively associated with younger workers, and that if an older worker is described as having these traits that are generally associated with younger workers, he/she will also score positively on behaviours that relate to such traits.

On the behaviour associated with dependability the younger nonconforming and old conforming workers scored significantly higher than the young conforming and old nonconforming workers. This result supports previous studies that have found examples of this behaviour to be more associated with older than younger workers (Rosen & Jerdee, Schwab & Heneman, Cleveland & Landy, 1983). The only variable where the interaction of age x conformity favoured both older workers was on the ability to coordinate a team effort. This is perhaps somewhat contradictory of previous studies which have indicated that younger workers are seen as more co-operative than their older counterparts, but as mentioned previously this may have been due to the perception that the older worker had greater experience in working with others due to perceived length of time in the workforce.

These results give support to hypothesis one that manipulation of the independent variables of age and conformity will influence the ratings given to the workers on job performance. Although it was predicted that the overall ratings for job performance would show significant differences, this did not occur. However there were significant differences on the traits that have previously been associated with the stereotypes of younger and older workers, with these differences appearing in the directions as predicted (refer Scheffe tests, Table Two above). For example, the behaviour associated with adaptable (a trait commonly related to a younger worker) revealed higher ratings for the younger conforming and older nonconforming

workers. The significance of these findings is evident when they are related back to the question in the manipulation checks which asked subjects to indicate their overall impression of Pat's personality (refer Table One above). The subjects' impressions of the younger, conforming pattern of behaviour was significantly more positive than their impression of the older, conforming pattern of behaviour, which suggests that the type of personality that is viewed more favourably with respect to job performance is more positively related to traits commonly associated with a younger worker, such as adaptable, flexible, innovative, initiative and logical than those more generally associated with older workers such as dependability, reliability and stability.

The results from Part A do not fully support the original hypothesis that an objective measure of performance would reduce the bias of age stereotyping towards the older worker. Although the hypothesis was not supported the absolute size of the multivariate F was smaller in Part A than in Part B, $F=5.43$ compared to $F=7.56$ thus indicating slight support for the hypothesis. In addition, on the individual values that revealed significant differences the univariate F values in Part B were much stronger in the majority of cases. (Refer Table Three and Four below).

TABLE THREE
MANOVA ON PART A - AGE BY CONFORMITY

	F Value	Sign. of F
<u>Behaviour (Part A)</u>		
Dependable (Q.4)	20.01	.000
Team (Q.9)	3.76	.056
Logical (Q.14)	24.87	.000
Adaptable (Q.15)	17.93	.000
Flexible (Q.16)	4.67	.034
Initiative (Q.18)	6.22	.015

TABLE FOUR
MANOVA ON PART B - AGE BY CONFORMITY

	F Value	Sign. of F
<u>Traits (Part B)</u>		
Adaptable	22.46	.000
Dependable	19.85	.000
Flexible	33.93	.000
Initiative	17.33	.000
Innovative	39.21	.000
Reliable	12.91	.001

It appears that the influence of age stereotypes combined with the tendency of the rater to focus on personality traits rather than behaviours that actually occurred, still had a significant affect on the ratings given to the individual workers. Several reasons are proposed for this. First of all it could be attributed to the lack of training and involvement of the subjects in the use of and development of the performance appraisal instrument. Although 76% of the subjects indicated they were currently involved in the performance appraisal process it was not possible to determine their familiarity or exposure to the BOS method. Several discussions with various members of the Personnel Association of Ontario, and a review of performance appraisal forms from others revealed however, that such a method has favourable support. It seems apparent though that in order to realise the advantages inherent in the objectivity of the BOS method the users would need to undergo further training and perhaps have some involvement in the development of the BOS (Cooper, 1981, Latham & Wexley). Such training could involve the type of program suggested by Martin & Bartol which was outlined previously as including training on the following major elements:- performance appraisal as a management tool; organization's performance appraisal system; setting standards; rater as a leader and a coach; typical rating errors and how to avoid them; what the rater can expect from the system; and the performance appraisal interview. As Denisi, Cafferty & Meglino (1984) have suggested raters need to be fully conversant with the

type of rating technique used and its inherent strengths and weaknesses. Respondents may also have experienced difficulty in evaluating the employee from a paper description of behaviour and may not have been able to find sufficient information in the description of behaviour to make a judgement on all questions. As Ilgen & Feldman have strongly pointed out, many rating errors can be attributed to the limitation of the rater in gathering adequate information on which to make an accurate performance judgement. In a real setting raters could be trained to keep a record of particularly good and poor behaviours (that is, critical incidents) of employees (Bernardin & Buckely, 1981). In describing behaviour however, this factor was given serious consideration and all attempts were made to control for it. The respondents may also have experienced difficulty in basing their performance appraisal on one observation of behaviour. The stereotyping on Part A may also have been a result of it coming first in the material to be completed, and hence the information from the stimulus material was still clear and vivid in the respondent's minds. There is also the possibility that Part A and Part B were not perceived by the respondents as being different in their approach to appraisal and the items showing stereotyping effects in Part A may not have been perceived as being job related. As Martin & Bartol have indicated raters must have a good understanding of the meaning of the dimensions of the behaviour to be rated, the weighting given to them and the objectives that flow from them in order to use a technique

effectively. Finally, the ratings may have been influenced by the fact that the raters were unaware of the intended purposes of their ratings. A study by Zedeck & Cascio (1982) suggested that raters vary their ratings depending on how they perceive these ratings will be used. Furthermore, a previously cited study by Schul & Burnstein revealed that the way information is to be used can often influence what is selected. The fact that the subjects were not aware of the intended purpose of the results may have affected the way they rated the worker.

Part B

TABLE FIVE

<u>TRAITS (PART B)</u>	<u>33</u>	<u>61</u>	
ADAPTABLE	4.05	3.05	CONFORM
Sign. Age x Conf.	3.10	3.80	NONCONFORM
DEPENDABLE	3.95	4.70	CONFORM
Sign. Age x Conf.	4.35	3.65	NONCONFORM
FLEXIBLE	3.90	3.00	CONFORM
Sign. Age x Conf.	2.80	3.80	NONCONFORM
INITIATIVE	4.20	3.50	CONFORM
Sign. Age x Conf.	3.40	4.05	NONCONFORM

INNOVATIVE	4.15	3.20	CONFORM
Sign. Age x Conf.	2.85	3.85	NONCONFORM
RELIABLE	4.05	4.65	CONFORM
Sign. Age x Conf.	4.25	3.80	NONCONFORM

Scheffe procedure revealed the following groups to be significantly different at the .050 level.

Adaptable	1, 4	vs	2, 3
Flexible	1, 4	vs	2, 3
Dependable	2, 3	vs	1, 4
Initiative	1,	vs	2, 3, 4
Innovative	1, 4	vs	2, 3
Reliable	3	vs	1, 2, 4

On Part B the interaction of age x conformity showed the younger conforming and older nonconforming workers to be perceived as more adaptable, flexible, innovative and having more initiative, compared to the young nonconforming and old conforming worker (except again on initiative where only the younger conforming worker was rated significantly higher than all other workers) ($F(19,58) = 7.56, p < .0001$ (refer Table Five above)). It appears then that adaptable, flexible, innovative and initiative are all traits commonly associated with a younger worker. The interaction of age x conformity on the trait of

reliability also bore out previous studies which showed such behaviour to be more commonly associated with older workers. On this particular variable the older conforming worker scored significantly higher than all the other workers.

Scheffe tests carried out on the age x interaction affects over Part A and Part B indicated the pattern as discussed above that the younger conforming and older nonconforming employees were rated higher on traits and behaviours commonly associated with younger workers, these being innovative, flexible, adaptable, initiative and logical (refer end of Tables Two and Five). The older conforming and younger nonconforming employees were rated higher on the traits and behaviours of reliable and dependable.

It may be that the traits commonly associated with the younger worker were selectively attended to by the subjects because they represented unit-forming stimuli, that is stimuli that can be grouped into a homogenous unit (McArthur). The same could be true of the traits commonly associated with an older worker, and as such these could have been perceived as being responsible for job performance.

The present findings therefore indicate a general trend for the younger pattern of behaviour to be viewed more positively as indicated by the age x conformity interaction on Question 7, Part C of the manipulation checks relating to overall impression of Pat's personality ($F(11,66) = 15.36, p < .000$). There is also a larger number of behaviours where the younger worker received

significantly better ratings than the older worker. However, the younger pattern of performance was not always regarded as favourably when it was held by an older worker. One point worthy of consideration here though is whether the occurrence of the younger conforming pattern of behaviour being viewed more positively was related to the nature of the job. The position in the present study was regarded as a middle management position and further studies would need to be carried out to investigate whether the traits positively related to good performance in this position are also attributable to lower and senior management. It may be that the position in the study was regarded as a younger person's job and thus caused the older pattern of behaviour to be viewed more negatively. This is consistent with a previously cited study by Cleveland & Landy (1983) which showed that a person exhibiting a younger pattern of performance in a younger job was allocated more award money than a person exhibiting an older pattern of performance. In this study however, the older pattern of performance was not viewed as more favourable than the younger pattern in the older job, perhaps indicating that the younger pattern of behaviour was perceived as being generally more favourable, despite the type of job. It is considered that management positions would generally all exhibit the same pattern of desirable traits and characteristics but it would be interesting to see how these patterns change as one proceeds up the management ladder. It is also feasible to suggest that some of the traits positively related to management

positions may not be regarded so favourably in other jobs which are more routine in nature. Sadly, the implication here is that older workers may be perceived to fit more appropriately into a position that requires little initiative and creativity and focuses on routine and mundane tasks.

CORRELATIONS (Refer Results - Appendix Eight, Tables 7, 8, 9)

Pearson correlation coefficients were analyzed for those behaviours and traits that indicated significant differences due to age, conformity or interaction effects. Table Seven of the results illustrates that the following traits on Part B were seen to be significantly correlated with their associated behaviours on Part A: adaptable, dependable, flexible, initiative, insight and reliable. The inference from these results is that on the areas where significant differences were noted for older, younger, conforming and nonconforming workers both Parts A and B showed similar results. That is, if the worker scored well on Question 15 in Part A (understands the need for change and the nature of the change) he/she also scored well on the trait of adaptable in Part B. It appears therefore that the above-mentioned traits are strongly related to the stereotypes of older and younger workers with the younger worker seen as more adaptable, flexible, and having more initiative and insight than the older worker who is considered to be more reliable and dependable.

Table Seven of the results indicates the correlation between the overall rating given on Part A with the various questions. These results suggest that a good overall rating is consistent with good ratings on these variables and is perhaps indicative of the most desirable behaviours for good performance in the type of work position used in the study. The behaviours are listed in order of their strength of correlation with the overall rating. It is interesting to note that the highest correlation occurred with Question 3 which attempts to measure reliability in quality and quantity standards. Question 15 and Question 16 appeared to be the next most important and these attempted to measure the worker's adaptability and flexibility. It is also important to note that the table includes significant correlations with five behaviours that are commonly associated with a younger worker and only two that are commonly associated with an older worker. The implication is perhaps that good performance in such a position would be more associated with a younger worker than an older one.

Table Nine correlates the overall rating given on Part B with the traits being measured on this section. Again the traits are listed in order of their strength of correlation with the overall rating. The highest correlation occurred with insight, compared to reliable on Part A. Again the correlations show that there are five behaviours that this study related to younger workers that correlate positively with a high overall rating than for older workers, where only two behaviours correlated positively with the overall rating.

It is interesting to note that there are more behaviours in Part B that correlate with overall performance than in Part A and it would appear therefore that the type of performance appraisal method utilized causes the rater to see some behaviours as being more important than others. The ideal appraisal method is one that causes the rater to focus on those behaviours that are the most important for good job performance. The development of such a performance appraisal form within an organization would therefore require strong consideration of job descriptions and job analyses, and consultation between human resource specialists and line managers.

INFLUENCE OF DEMOGRAPHIC FACTORS

It was highlighted in the literature review that in some cases the age of the rater has an affect on the rating given to the employee. Furthermore it was also noted that some traits are perceived by males and females in a different light. The studies by McArthur & Friedman and Taylor et al indicated that sociocultural associations cause certain demographic groups to be formed into a unit with certain behaviours. On the present study the sex of the target worker was not identified and merely described as Pat. The way the traits and behaviours were perceived by the respondents therefore may have been influenced by whether they perceived Pat to be a male or female. For example Taylor et al mention sociocultural associations that perceive men as being more analytical and assertive and women as

more sensitive, perceptive and warm. Thus it was considered useful to examine the responses to see if any difference in ratings was due to the demographic factors of age and sex of the respondents. In addition, the results were examined to see if any difference existed between respondents from the two sectors of the workforce - public and private. It was felt that this may indicate any variations in performance expectations between these two groups, that is whether the different nature of the work environment caused some behaviours to be seen as more important in one sector compared to the other.

Age of Respondent

The results from forty one respondents under the age of 40 (Refer Results - Appendix Eight, Table Twenty Four & Twenty Five) showed significant differences on only two behaviours in Part A compared to the 39 respondents over the age of 40 who showed significant differences on five behaviours ($F(19,19) = 3.69, p < .003$, $F(19,17) = 3.86, p < .004$). This suggests that the older respondents were perhaps more susceptible to the influence of stereotypes than the younger respondents. It was suggested in the Schwab & Heneman study which revealed an age of respondent x age of target interaction that persons who have difficulty in adjusting to old age may see older persons in a more negative light, while younger participants may be more sensitive to the possibility of age stereotyping and perhaps overcompensate by seeking to avoid it.

On Part B of the appraisal the results for both age groups were very similar (refer Table Twenty Five and Twenty Seven). This suggests that the younger respondents were perhaps more sensitive to the format of the performance appraisal form in Part A than the older respondents and may have focused more on the actual work behaviour of the employee in this section instead of personality traits.

It was also interesting to note that the older respondents rated the older worker higher on Question 9 (Is able to organize a joint effort and invites and respects employee's input when appropriate) and this may be related to the perceptions as previously mentioned of the older worker having greater experience due to perceived length of time in the workforce.

In comparison the younger employees were perceived by the older respondents as having better communication skills. This is consistent with the Cleveland & Landy study that found that younger workers were rated higher on interpersonal skills than older workers.

Sex of Respondent

These results show that the female respondents were much more sensitive to the format of the performance appraisal form than the male respondents and did not indicate an age x conformity interaction ($F(19,17) = 2.16, p < .058$). The only significant difference on Part A for female respondents was a conformity effect on the variable of efficiency (Q.5), which is a

characteristic not considered to be related to age stereotypes. In comparison the male respondents showed significant differences on nine behaviours in Part A ($F(19,18) = 4.40, p < .001$). It could also be however, that males are more easily influenced by work-related age stereotypes than females and this would seem to be an interesting area for further study. Furthermore, in relation to the McArthur & Friedman and Taylor et al studies if the females perceived the employee Pat to be a woman they may have formed a different stereotype of her than if they perceived Pat to be a man. In the former case different traits and behaviours would have come into play that may not have been mentioned in the study. Another consideration is that the two groups - male and female, perceive different traits and behaviours as being important to and associated with good job performance.

Further comparison of the two groups revealed that the male respondents gave the younger conforming employee a significantly higher overall rating on Part A than all the other employees. This is again a further indication of the male respondents' greater susceptibility to the prevailing work-related stereotypes that exist for older workers than evidenced by the female group.

Public vs Private Sector

Respondents from the private sector appeared to be only slightly more influenced by work-related age stereotypes than those from the public sector, and this occurred only under Part A. For the private sector respondents significant age x

conformity interactions were found on five variables ($F(19,24) = 2.53, p < .016$) whereas the public sector respondents only perceived significant differences on four variables ($F(19,12) = 4.43, p < .006$). Further study would need to be done here to examine whether it is the nature of the environment or the type of person that elects to work in each particular environment that accounts for such a difference. It may well be that there are different performance expectations in the private as compared to the public sector and this may lead to the formation of different work-related age stereotypes.

CONCLUSION

The lower ratings received by the older conforming worker on the traits of adaptable, flexible, logical, initiative and innovative, compared to the younger conforming worker reflect the existence of work-related age stereotypes for older workers. As previously mentioned however the accuracy of such a stereotype is the subject of serious contention and several studies have shown that the older worker can perform just as well as younger workers on almost all criteria.

The fact that the younger pattern of behaviour was perceived as being more positive than the older pattern of behaviour, suggests a negative bias against older workers. It is suggested therefore, that the older worker, who in this study was rated lower on the traits of adaptable, innovative, flexible, logical

and initiative fits easily into the negative stereotype of older workers that has been previously identified with the following traits and behaviours:- slow, absentminded, reserved, resistant to change, slower to learn, difficult to get along with, and more passive and obsolete (Rosen & Jerdee, Schwab & Heneman, Cleveland & Landy). The formation of such a stereotype was described as part of the attribution process which deals with how an individual perceives, interprets and explains the behaviour of another. This process was seen to include the following three stages:-

1. selection of information from the environment
2. processing of the information
3. drawing conclusions from the information that form the basis of generalizations, theories and stereotypes.

During the first stage the formation of stereotypes of older workers is influenced by several factors which include the following:-

1. attention-drawing stimuli associated with the older worker (eg. intense or changing behaviours)
2. the personality and arousal level of the perceiver
3. prior expectations held by the perceiver
4. the nature of the information presented, with negative information gaining more attention than positive, such as the older worker being resistant to change
5. existence of extreme events, and
6. how the information is to be used

In the second stage as the information about the older worker is processed, it is influenced by the limitations of memory, timing of information, source of information - with a concrete source such as someone else in the office having more influence than an abstract source such as a written report, and situational and internal factors. In relation to these latter two, reference was previously made to a study by Ferris et al that showed that supervisors made an internal attribution for low performance of older workers, blaming their lack of ability, while for younger workers low performance was attributed to other factors such as task difficulty and luck.

Finally the conclusions that are drawn from the information that has been selected and processed are used to form stereotypes which are in essence a shortcut method of interpreting and explaining behaviour. Individuals rely on this shortcut method largely because of their limited processing capacity and the complexity of the environment itself.

One way to deal with the complexity of the environment in conducting a performance appraisal, and utilizing information that is directly related to job performance is to record the behaviour of the worker over time. Bernardin & Buckely suggested that a record be kept of critical incidents which include particularly good and poor behaviours. When the time then comes for the rater to complete the performance appraisal, he/she will be able to rely on concrete examples rather than stereotypes in the evaluation of behaviour. Although in the present study the

more objective measure of performance only revealed a slight tendency to reduce reliance on negative age stereotypes, it is considered that training on the use of such an instrument and involving the rater where possible in its development would greatly increase the accuracy and fairness of such a system. The current literature does appear to favour the BOS over most methods and recognises its objectivity, reliability and validity in examining performance. Furthermore, discussions with several human resource specialists in the city of Ottawa revealed that many organizations are currently reviewing their performance appraisal processes and switching to the use of such methods as BOS.

As previously mentioned an effective performance appraisal system is one which is tailored to the particular needs of the organization that uses it (Martin & Bartol). Furthermore it will be more effective and accurate when there is an organizational commitment to it and when raters have received training on its use. Such training should enable an organization to reduce the reliance on negative age stereotypes by controlling for rater and measurement errors such as halo, leniency, deficiency, contamination, contrast effect, central tendency, recency, similar-to-me, first impression and personal bias.

The importance of the performance appraisal system should not be undermined. The results from this process serve as a basis for many personnel decisions such as salary increases,

promotions, bonuses, transfers, training and development needs, feedback and employee counselling.

A performance appraisal method that serves its purpose to accurately and reliably measure job performance must meet the criteria that were discussed in this study and are summarised again as follows:-

1. It must be practical in terms of its time and cost of development and implementation.
2. It must be standardized.
3. It needs to record behaviour over time.
4. It must exhibit internal validity and consistency.
5. The rater must be familiar with its use and may require training.
6. It must be developed from a systematic job analysis.
7. It should provide useful feedback on performance.

If the performance appraisal of older workers is seriously biased by negative and erroneous stereotypes a no-win situation occurs for both the older worker and the organization. The older worker is disadvantaged in terms of the personnel decisions that are affected by this appraisal, the difficulty he/she may have in finding work in the future, having to take pay cuts to gain re-employment, limited upward mobility, and the discouraging effects of receiving a poor performance rating and subsequent channeling into routine and mundane jobs. For the organization the major loss is its failure to utilize to full potential a valuable human

resource. The older worker has competencies, experience and proficiencies developed over a long period of work, and in many cases a strong commitment to the organization. The wealth of experience accumulated by such workers can also be tapped to assist with the training and development of younger workers. It must also be noted that individual differences do increase with age although declines in performance rarely occur as long as the tasks remain challenging. The onset of job boredom, exposure to meaningless tasks and lack of intellectual stimulation may well be a greater cause for decreases in performance than any age related effects.

Negative culture expectations were also discussed as having an adverse effect on the performance of older workers. The existence of the beliefs that older workers have difficulty in learning new things and adapting to new situations can have a self-perpetuating affect on the older worker such that he/she learns how to behave old.

It was also noted that reinforcement is very important to the older worker and lack of such can lead to declines in performance. Bourne suggested that older workers value intrinsic work satisfaction much more so than extrinsic rewards such as money and promotion and thus signs of appreciation are very important to the older worker.

The stereotype of the older worker as being rigid and resistant to change certainly acts against him/her in the work place. The tendency to pass over the older worker for promotion

or further training and development can lead to a lack of motivation on his/her part and thus performance declines. A vicious circle is set in motion whereby the organization fails to offer the worker any incentive to improve or maintain performance and so performance declines and the organization then takes steps to move the worker into even more mundane and routine tasks. A worker in his/her sixties still has a lot to offer, but sadly in many cases is considered and treated as a burden, added to the pending retirement list and channelled into meaningless and tedious jobs.

A further potential loss to the organization is the chance that it may become the subject of an age discrimination suit. The last few years have seen a steady increase in the number of older workers asserting age discrimination claims against personnel policies regarding selection, promotion and salary increases.

An organization committed to growth and development and to its employees must give serious consideration to the accuracy and reliability of its performance appraisal process. If it is concerned with creating an environment in which both younger and older employees are able to further develop their own potential, then both the organization and the employee will benefit. This study has attempted to show that negative stereotypes of older workers do exist and that they are highlighted and perpetuated through the performance appraisal process. It was also the purpose of this study to suggest ways the performance appraisal

process can reduce the bias against older workers so that they are no longer the potential victims of discriminatory managerial decisions or allowed to become a wasted human resource for the organization. Further study in relation to performance appraisal and age stereotyping could serve to improve the efficiency and accuracy of the performance appraisal process. It is suggested that the following areas may prove worthy of investigation:

1. The examination of job type variables to identify the nature of the work in which negative stereotypes of older workers exist.
2. The examination of other moderators on the performance appraisal evaluation, such as experience and technological changes.
3. Further study on the effects of rater x ratee age, and
4. Further comparison of whether males and females perceive different traits and behaviours as being important to and associated with good job performance.

Changing the performance appraisal process itself however may not be enough. In order to change the current negative stereotypes that exist for older workers it has been suggested that we may well need to change the social and economic status of this group, and this is a task that goes far beyond the organization.

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APPENDIX ONE

QUESTIONNAIRE TO DETERMINE RELEVANCE OF TRAITS TO BEHAVIOURS

Please choose the traits you think are the most important to enable an individual to carry out the following behaviours, and rate the traits in their order of importance on a scale of one to five. The dimensions of the scale are as follows:-

- 1 = Highly irrelevant
- 2 = Partially relevant
- 3 = Relevant
- 4 = Slightly more relevant
- 5 = Extremely relevant

If you think there are other traits that are more important please list them in the space provided, and rate them as above.

Job Knowledge and Skills

1. The employee has up-to-date knowledge and the necessary skills to carry out his job.
2. The employee has a good comprehension of Company procedures and methods.

Proficiency _____

Job-Knowledge _____

Quality and Quantity of Work

1. The productivity of the employee and that over which he supervises, consistently meets established quality standards and expected volume levels.
2. All work is performed in accordance with policies, practices and procedures of the organization.
3. The employee's reports are always thorough, and the information and recommendations he provides are highly appropriate.

Reliability _____

Consistency _____

Stability _____

Dependability _____

Planning and Organization

1. The employee efficiently allocates and utilizes resources, people and time.
2. He sets realistic objectives and schedules for his unit and ensures deadlines are met.
3. He achieves accurate planning and control of budgets.

Efficient _____

Organized _____

Leadership Skills

1. The employee is able to motivate and challenge his subordinates to work enthusiastically and hard. (This is often through his own example eg demonstrates increased effort where necessary).
2. He is able to identify each person's contribution and guide them with the appropriate management style.
3. He is able to organize a joint effort and invites and respect employee's input when appropriate.

Democratic _____

Initiative _____

Insight _____

Judgement _____

Managing and Developing Talent

1. He can delegate effectively and assigns tasks to employees who have the ability and motivation to take responsibility.
2. He is effective in monitoring and evaluating employee performance, communicating the evaluation to the employee,

identifying strengths and weaknesses and developing a plan
for improvement.

Insight _____

Judgement _____

Integrity _____

Interpersonal Relationships and Communication

1. He demonstrates his willingness to help others.
2. He conveys information accurately and concisely in both
written and oral form.

Co-operative _____

Tactful _____

Sensitive _____

Diplomatic _____

Decision-making and Problem Solving

1. Decisions and recommendations are appropriate and within the
authority limitations of the job.
2. Problems are analyzed with regard to all relevant and
available information and dealt with expediently.

Rational _____

Risk-taker _____

Careful _____

Logical _____

Dealing with the Need for Change

1. Understands the need for change and the nature of the change
2. Switches gears and assesses the effectiveness of the response to the change.

Adaptive _____

Flexible _____

Original _____

Creative _____

Proposing New Ideas and Methods

1. Generates and evaluates alternative ideas and methods, and communicates and sells these proposals to managers and colleagues.

2. Implements new ideas and evaluates their impact.

Innovative _____

Initiative _____

APPENDIX TWO

PERFORMANCE APPRAISAL REVIEW

PART A

Please rate the employee's job performance on each of the performance related factors by circling the appropriate number below each one.

- 1) Demonstrates up-to-date knowledge and the necessary skills to carry out the job.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

- 2) Shows a good comprehension of Company procedures and methods.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

- 3) The productivity of the employee and that over which he/she supervises meets established quality standards and expected volume levels.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

- 4) Reports are thorough and the information and recommendations provided is highly appropriate.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

5) Efficiently allocates and utilizes resources, people and time.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

6) Sets realistic objectives and schedules for the unit and ensures deadlines are met.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

7) Is able to motivate and challenge subordinates to work well.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

8) Is able to identify each person's contribution and guide them with the appropriate management style.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

9) Is able to organize a joint effort and invites and respects employee's input when appropriate.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

10) Can delegate effectively and assigns tasks to employees who have the ability and motivation to take responsibility.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

11) Demonstrates willingness to help others.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

12) Conveys information accurately and concisely in both written and oral form.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

13) Decisions and recommendations are appropriate and within the authority limitations of the job.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

14) Analyses problems with regard to all relevant and available information, and deals with them quickly.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

15) Understands the need for change and the nature of the change.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

16) Is able to switch gears and assess the effectiveness of the response to the change.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

17) Generates and evaluates alternative ideas and methods and communicates and sells them to others.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

18) Implements new ideas and evaluates their impact.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

PART B

Please rate the employee on each of the following traits by circling the appropriate number below each one.

Not at all Adaptive

1

2

3

4

5

Very Adaptive

Not at all Co-operative

1

2

3

4

5

Very Co-operative

Not at all Democratic

1

2

3

4

5

Very Democratic

Not at all Dependable

1

2

3

4

5

Very Dependable

Not at all Diplomatic

1

2

3

4

5

Very Diplomatic

Not at all Efficient

1

2

3

4

5

Very Efficient

Not at all Flexible

1

2

3

4

5

Very Flexible

Not at all Generous

1

2

3

4

5

Very Generous

No Job Knowledge

1

2

3

4

5

Very good Job
Knowledge

Poor Judgement

Very good
Judgement

1

2

3

4

5

No Initiative

Very good
Initiative

1

2

3

4

5

Not at all Innovative

Very Innovative

1

2

3

4

5

No Insight

Very good Insight

1

2

3

4

5

No Integrity

Very good
Integrity

1

2

3

4

5

Not at all Proficient

Very Proficient

1

2

3

4

5

Not at all Logical

Very Logical

1

2

3

4

5

Not at all Organized

Very Organized

1

2

3

4

5

Not at all Rational

Very Rational

1

2

3

4

5

Not at all Reliable

Very Reliable

1

2

3

4

5

Not at all Sincere

Very Sincere

1

2

3

4

5

PART C

Please answer the following questions without referring back to the previous material.

1. How old is Pat Everingham? _____

2. Please rate the following behaviours on the degree to which it is consistent (Cons.) or inconsistent (Incons.) with an employee of Pat's age. Circle your answer on the scale below each behaviour.

a) Pat is ambitious.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons.or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

b) Pat is steady.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons.or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

c) Pat is reliable.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons.or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

d) Pat is receptive to others.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons.or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

e) Pat is cautious.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons. or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

3. Pat's behaviour is typical of someone of this age?

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

4. The questions in Part A give a more objective indication of Pat's actual job performance compared to those in Part B.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

5. Pat is an older employee.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

6. Pat's job has middle level status in the organization.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

PART D

Please indicate your answers to the following questions in the spaces provided.

Age: 21-29 [] 30-39 [] 40-49 [] 50-59 [] Over 60 []

Sex: Male [] Female []

Current Position:

Non-management []

Supervisory []

Middle management []

Senior management []

In the Public sector [] Private sector []

How many years of experience do you have in your current position? _____

How many years have you been in the workforce? _____

APPENDIX THREE

RESULTS FROM PILOT STUDY

The initial performance appraisal questionnaire was administered to 16 undergraduate students at the University of Ottawa. Means were calculated for eight questions on Part A and their related traits on Part B and then combined into an overall mean for Part A and B (refer Table One). Means were then calculated for individual questions and their related traits. The traits chosen were those which had been mentioned in previous studies as reflecting work-related age stereotypes for older and younger workers. Knowledge and reliability were chosen as the traits most representative of the older worker, while co-operative, rational, adaptive and innovative were chosen as traits specifically pertaining to younger workers. Means were also calculated for each of the manipulation checks in Part C.

The eight questions in Part A that were chosen to calculate overall means included the following:-
Question 1, 3, 6, 8, 11, 14, 16 and 17. The related traits from Part B included: job knowledge, reliable, organized, insight, co-operative, rational, adaptive, and innovative. These traits were previously determined as being relevant to the behaviours mentioned above respectively (i.e. job knowledge relates to Question 1, reliable to Q 3 etc). The overall means for Part A and Part B are as follows (scale = 7):-

TABLE ONE - PART A - AGE X CONFORMITY

	OLD	YOUNG
CONFORM	4.25	5.34
NONCONFORM	4.66	4.35

TABLE ONE - PART B - AGE X CONFORMITY

	OLD	YOUNG
CONFORM	3.31	4.03
NONCONFORM	3.81	3.33

The means for each of the manipulation checks are as follows: All students answered question one correctly, that is- How old is Pat Everingham.

TABLE TWO - MANIPULATION CHECK MEANS

	OLD	YOUNG	
AMBITION	4.2	6.0	CONFORM
	4.4	4.2	NONCONFORM
STEADY	5.6	4.75	CONFORM
	5.0	5.6	NONCONFORM
RELIABLE	6.0	4.25	CONFORM
	5.5	6.0	NONCONFORM
	OLD	YOUNG	
RECEPTIVE	4.0	4.5	CONFORM
	4.2	4.2	NONCONFORM
CAUTIOUS	5.4	4.00	CONFORM
	2.25	5.4	NONCONFORM

TYPICAL BEHAVIOUR	4.6	6.0	CONFORM
FOR AGE	3.0	3.2	NONCONFORM
QUESTIONS IN PART	4.6	5.5	CONFORM
A MORE OBJECTIVE	5.0	4.6	NONCONFORM
PAT IS OLD	5.2	1.75	CONFORM
	6.5	5.2	NONCONFORM
JOB STATUS	5.8	6.75	CONFORM
	5.75	5.8	NONCONFORM

TABLE THREE - COMPARISON OF INDIVIDUAL TRAITS

Behaviour/ Trait	YC A	YC B	YNC A	YNC B	OC A	OC B	ONC A	ONC B
Knowledge	5.65	5.6	6.0	4.5	5.0	5.95	5.5	5.6
Reliable	5.25	5.6	6.5	4.75	5.5	5.25	5.75	5.95
Co-operative	5.75	5.6	4.0	3.0	5.0	4.9	5.25	5.25
Rational	5.5	4.9	3.25	3.25	3.0	4.9	5.0	5.25
Adaptable	5.75	4.9	3.25	2.5	3.25	4.2	4.75	4.25
Innovative	5.0	5.6	3.75	2.5	4.0	3.5	3.25	4.25

TABLE FOUR - PEARSON CORRELATION COEFFICIENTS

Trait/Behaviour*	Significance	Correlation
Adaptable by Rational	.000	.7462
Adaptable by Innov (T)	.042	.4454
Adaptable by Insight (T)	.016	.5388
Adapt (T) by Co-operative	.013	.5532
Adapt (T) by Co-op (T)	.036	.4616
Adapt (T) by Innov (T)	.001	.7102
Adapt (T) by Insight (T)	.035	.4647
Co-op (T) by Co-operative	.049	.4280
Insight (T) by Innov (T)	.009	.5828
Rational by Knowledge	.031	.4760
Rational (T) by Organized (T)	.045	.4376
Rational by Innov (T)	.016	.5390
Rational by Insight (T)	.030	.4809
Rel (T) by Reliable	.041	.4490
Rel (T) by Organized (T)	.037	.4594
Reliable by Know (T)	.045	.4352

* (T) indicates item was a trait from Part B.

After an analysis of the preceding data the following changes were made to the questionnaire:-

PART A

Respondents were asked to indicate their overall rating of Pat's performance on the job.

PART B

Deleted traits - democratic, integrity.

Respondents were asked to indicate their overall impression of Pat's suitability for the job.

PART C

Deleted questions for - cautious. Reword question 4 and added question 7 and 8.

STIMULUS INFORMATION

The information about the young, nonconforming Pat was altered by making one further reference to him as being a younger employee. This was done because of the high mean received in response to the manipulation check for Pat as an older employee (5.2).

APPENDIX FOUR

PERFORMANCE APPRAISAL REVIEW

PART A

Please rate the employee's job performance on each of the performance related factors by circling the appropriate number below each one.

- 1) Demonstrates up-to-date knowledge and the necessary skills to carry out the job.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

- 2) Shows a good comprehension of Company procedures and methods.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

- 3) The productivity of the employee and that over which he/she supervises meets established quality standards and expected volume levels.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

- 4) Reports are thorough and the information and recommendations provided is highly appropriate.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

5) Efficiently allocates and utilizes resources, people and time.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

6) Sets realistic objectives and schedules for the unit and ensures deadlines are met.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

7) Is able to motivate and challenge subordinates to work well.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

8) Is able to identify each person's contribution and guide them with the appropriate management style.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

9) Is able to organize a joint effort and invites and respects employee's input when appropriate.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

10) Can delegate effectively and assigns tasks to employees who have the ability and motivation to take responsibility.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

11) Demonstrates willingness to help others.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

12) Conveys information accurately and concisely in both written and oral form.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

13) Decisions and recommendations are appropriate and within the authority limitations of the job.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

14) Analyses problems with regard to all relevant and available information, and deals with them quickly.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

15) Understands the need for change and the nature of the change.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

16) Is able to switch gears and assess the effectiveness of the response to the change.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

17) Generates and evaluates alternative ideas and methods and communicates and sells them to others.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

18) Implements new ideas and evaluates their impact.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

19) Please indicate your overall rating of Pat's performance on the job.

1	2	3	4	5	6	7
Very Poor	Poor	Fair	Average	Good	Very Good	Excellent

PART B

Please rate the employee on each of the following traits by circling the appropriate number below each one.

Not at all Adaptive

Very Adaptive

1

2

3

4

5

Not at all Co-operative

Very Co-operative

1

2

3

4

5

Not at all Dependable

Very Dependable

1

2

3

4

5

Not at all Diplomatic

Very Diplomatic

1

2

3

4

5

Not at all Efficient

Very Efficient

1

2

3

4

5

Not at all Flexible

Very Flexible

1

2

3

4

5

Not at all Generous

Very Generous

1

2

3

4

5

No Job Knowledge

Very good Job
Knowledge

1

2

3

4

5

Poor Judgement

Very good
Judgement

1

2

3

4

5

No Initiative

Very good
Initiative

1 2 3 4 5

Not at all Innovative

Very Innovative

1 2 3 4 5

No Insight

Very good Insight

1 2 3 4 5

Not at all Proficient

Very Proficient

1 2 3 4 5

Not at all Logical

Very Logical

1 2 3 4 5

Not at all Organized

Very Organized

1 2 3 4 5

Not at all Rational

Very Rational

1 2 3 4 5

Not at all Reliable

Very Reliable

1 2 3 4 5

Not at all Sincere

Very Sincere

1 2 3 4 5

Please indicate your overall impression of Pat's suitability for the job.

1 2 3 4 5 6 7

Very Poor Poor Fair Average Good Very Good Excellent

PART C

Please answer the following questions without referring back to the previous material.

1. How old is Pat Everingham? _____

2. Please rate the following behaviours on the degree to which it is consistent (Cons.) or inconsistent (Incons.) with an employee of Pat's age. Circle your answer on the scale below each behaviour.

a) Pat is ambitious.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons.or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

b) Pat is steady.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons.or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

c) Pat is receptive to others.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons.or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

d) Pat is cautious.

1	2	3	4	5	6	7
Strongly Incons.	Incons.	Slightly Incons.	Neither Cons.or Incons.	Cons.	Slightly More Cons.	Strongly Cons.

3. Pat's behaviour is typical of someone of this age?

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

4. The dimensions along which Pat was rated in Part A are directly related to the job.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

5. Pat is an older employee.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

6. Pat's job has middle level status in the organization.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

7. Please indicate your overall impression of Pat's personality.

1	2	3	4	5	6	7
Extremely Negative	Very Negative	Negative	Neither Positive or Neg.	Positive	Very Pos.	Extreme Posit.

8. The dimensions along which Pat was rated in Part B are directly related to the job.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Agree	Strongly Agree

PART D

Please indicate your answers to the following questions in the spaces provided.

Age: 21-29 [] 30-39 [] 40-49 [] 50-59 [] Over 60 []

Sex: Male [] Female []

Current Position:

Non-management []
Supervisory []
Middle management []
Senior management []

In the Public sector [] Private sector []

How many years of experience do you have in your current position? _____

How many years have you been in the workforce? _____

Are you presently involved in completing performance appraisals?
Yes [] No []

APPENDIX FIVE

DESCRIPTIONS OF EMPLOYEE'S PERFORMANCE

This appendix includes the four versions of Pat's behaviour on the job which are as follows:-

1. Age 33, described as conforming to work-related age stereotype.
2. Age 33, described as not conforming to work-related age stereotype.
3. Age 61, described as conforming to work-related age stereotype.
4. Age 61, described as not conforming to work-related age stereotype.

DESCRIPTION OF EMPLOYEE'S PERFORMANCE

NAME: Pat Everingham
DATE OF BIRTH: 6th June, 1955
POSITION: Production Section Manager

The following employee description has been prepared by Pat's immediate supervisor, (Manager, Production Department) who has been Pat's boss for the last 4 years.

Pat Everingham is one of our younger managers (33 years old) and has been with the Company for the last 5 years. During this time production in Pat's unit has fluctuated slightly around the desired levels, generally being either 2-3% above or below what is expected. Pat is regarded as being an innovative manager however, and has managed to increase production about 5% above the required levels over the last six months.

Pat's unit has just completed three new contracts that the organization won in March. I was satisfied with the end product but Pat seemed to tread on a few toes in the process. Perhaps Pat is being over ambitious. Three production section managers from other units certainly felt Pat was infringing on their territory with some of the decisions that were made. It's not as if Pat isn't familiar with our way of doing things here though, maybe its a lack of integrity due to Pat's relatively young age.

Morale seems to be satisfactory in the unit, although some workers do find Pat a bit difficult to get along with, though this may be due to Pat's eagerness and impatience with less

forward thinking employees. Pat does know what the workers are capable of though and seems to get good work out of them.

Pat is generally regarded as being a creative employee, who came to us with all the necessary skills and continues to keep abreast of changes in the field. In addition, any new or necessary information is always passed down the line by Pat, and the workers in the unit feel their input is appreciated.

On the whole Pat's approach generally appears to be logical, although this is not always the case with the monthly budget. Getting it all down on paper initially is OK, but Pat seems to have some trouble staying within the limits for spending on the H451 component that is an integral part of the unit's output. Pat doesn't always appear to be as conscientious as the last person in the job.

Pat's originality shows in the reports which are always accurate but could do with a bit of a shape up in terms of organization and logical flow of ideas. Pat's technical skills are fine but communication skills are sometimes a bit lacking. I have noticed that Pat needs to repeat things on occasion to the workers, they don't always catch on the first time and seem to require more than one explanation.

The workers in the unit seem satisfied with their weekly work schedule, it appears to be flexible enough to keep them sufficiently challenged and motivated, and they feel they can ask Pat for help if they need it. There have been a few organizational changes passed down through the hierarchy to Pat's

department in the last six months after our merger with ACR Components. Despite the fact that some see Pat as a risk-taker, the unit is running smoothly and everyone in it is responding satisfactorily to the changes.

Although Pat is viewed by some as being an impulsive, younger manager who doesn't always take the necessary precautions, there have been some good ideas come out of the unit over the last few years. I was a bit reluctant at first with one or two of them because of the way Pat documented them, but once we had discussed them a couple of times I could see the reasoning behind them.

Pat's unit had a crisis just recently with one of its parts being sent back because it didn't meet design specifications. Pat analysed the problem well but I felt the response could have been a bit quicker. The unit also had to deal with three unplanned emergency jobs last month but managed to complete them with only minimal disruption to weekly targets.

On the whole Pat seems to be doing OK, shows interest in the new training schemes being developed and is versatile and receptive. One thing though, Pat doesn't seem ~~to be as~~ careful and dependable as some of our older managers.

DESCRIPTION OF EMPLOYEE'S PERFORMANCE

NAME: Pat Everingham
DATE OF BIRTH: 6th June, 1955
POSITION: Production Section Manager

The following employee description has been prepared by Pat's immediate supervisor, (Manager, Production Department) who has been Pat's boss for the last 4 years.

Pat Everingham is one of our younger managers (33 years old) and has been with the Company for the last 5 years. During this time production in Pat's unit has fluctuated slightly around the desired levels, generally being either 2-3% above or below what is expected. Pat is regarded as a stable and steady manager however, and has managed to increase production about 5% above the required levels over the last six months.

Pat's unit has just completed three new contracts that the organization won in March. I was satisfied with the end product but Pat seemed to tread on a few toes in the process. Perhaps Pat is not flexible enough. Three production section managers from other units certainly felt Pat was infringing on their territory with some of the decisions that were made. It's not as if Pat isn't familiar with our way of doing things here though, maybe its due to a stubborn nature.

Morale seems to be satisfactory in the unit, although some workers do find Pat a bit difficult to get along with, though this may be due to Pat's reserved and rigid manner and tendency

to be overcautious at times. Pat does know what the workers are capable of though and seems to get good work out of them.

Pat is generally regarded as being a consistent and dependable employee, who came to us with all the necessary skills and continues to keep abreast of changes in the field. In addition, any new or necessary information is always passed down the line by Pat, and the workers in the unit feel their input is appreciated.

On the whole Pat's approach generally appears to be thorough and careful, although this is not always the case with the monthly budget. Getting it all down on paper initially is OK, but Pat seems to have some trouble staying within the limits for spending on the H451 component that is an integral part of the unit's output. Perhaps this is due to a lack of originality on Pat's part.

Pat's thoroughness and reliability shows in the reports which are always accurate but could do with a bit of a shape up in terms of organization and logical flow of ideas. Pat's technical skills are fine but communication skills are sometimes a bit lacking. I have noticed that Pat needs to repeat things on occasion to the workers, they don't always catch on the first time and seem to require more than one explanation.

The workers in the unit seem satisfied with their weekly work schedule, it appears to be flexible enough to keep them sufficiently challenged and motivated, and they feel they can ask Pat for help if they need it. There have been a few

organizational changes passed down through the hierarchy to Pat's department in the last six months after our merger with ACR Components. Despite the fact that some see Pat as resistant to change, the unit is running smoothly and everyone in it is responding satisfactorily to the changes.

Although Pat is viewed by some as being a rigid supervisor there have been some good ideas come out of the unit over the last few years. I was a bit reluctant at first with one or two of them because of the way Pat documented them, but once we had discussed them a couple of times I could see the reasoning behind them.

Pat's unit had a crisis just recently with one of its parts being sent back because it didn't meet design specifications. Pat analysed the problem well but I felt the response could have been a bit quicker. The unit also had to deal with three unplanned emergency jobs last month but managed to complete them with only minimal disruption to weekly targets.

On the whole Pat seems to be doing OK, always very honest and trustworthy, he still seems keen and shows interest in the new training schemes being developed. One thing though, Pat doesn't seem to be as outgoing and ambitious as some of the other younger managers.

DESCRIPTION OF EMPLOYEE'S PERFORMANCE

NAME: Pat Everingham
DATE OF BIRTH: 4th January, 1927
POSITION: Production Section Manager

The following employee description has been prepared by Pat's immediate supervisor (Manager, Production Department) who has been Pat's boss for the last 4 years.

Pat Everingham is 61 years old and has been with the Company for the last 5 years. During this time production in Pat's unit has fluctuated slightly around the desired levels, generally being either 2-3% above or below what is expected. Pat is regarded as a stable and steady manager however, and has managed to increase the output of the unit 5% above the required levels over the last six months.

Pat's unit has just completed three new contracts that the organization won in March. I was satisfied with the end product but Pat seemed to tread on a few toes in the process. Perhaps he is not flexible enough. Three production section managers from other units certainly felt Pat was infringing on their territory with some of the decisions that were made. It's not as if Pat isn't familiar with our way of doing things around here though, maybe it's due to a stubborn nature.

Morale seems to be satisfactory in the unit, although some workers do find Pat a bit difficult to get along with, though this may be due to Pat's reserved and rigid manner and tendency

to be overcautious at times. Pat does know what the workers are capable of though and seems to get good work out of them on the whole.

Pat is generally regarded as being a consistent and dependable employee, who came to us with all the necessary skills and continues to keep abreast of changes in the field. In addition, any new or necessary information is always passed down the line by Pat, and the workers in the unit feel their input is appreciated.

On the whole Pat's approach to the job generally appears to be thorough and careful, although this is not always the case with the monthly budget. Getting it all down on paper initially, is OK but Pat seems to have some trouble staying within the limits for spending on the H451 component, that is an integral part of the unit's output. Perhaps this is due to a lack of originality on Pat's part.

Pat's thoroughness and reliability shows in the reports which are always accurate but could do with a bit of a shape up in terms of organization and flow of ideas. Pat's technical skills are fine, but communication skills are sometimes a bit lacking. I have noticed that Pat needs to repeat things on occasion to the workers. They don't always catch on the first time and seem to require more than one explanation.

The workers in the unit seem satisfied with their weekly work schedule, it appears to be flexible enough to keep them sufficiently challenged and motivated, and they feel they can ask

Pat for help if they need it. There have been a few organizational changes passed down through the hierarchy to Pat's department in the last six months after our merger with ACR Components. Despite the fact that some see Pat as resistant to change, the unit is running smoothly and everyone in it is responding satisfactorily to the changes.

Although Pat is viewed by some as being a rigid, older supervisor there have been some good ideas come out of the unit over the last few years. I was a bit reluctant at first with one or two of them because of the way Pat documented them, but once we had discussed them a couple of times I could see the soundness of them.

Pat's unit had a crisis just recently with one of its parts being sent back because it didn't meet design specifications. Pat analysed the problem well but I felt the response could have been a bit too fast. The unit also had to deal with three unplanned emergency jobs last month but managed to complete them with only minimal disruption to weekly targets.

Pat has been asking me about superannuation and retirement plans lately, though he still seems keen and shows interest in the new training schemes being developed.

On the whole Pat seems to be doing OK, always very honest and trustworthy. One thing though, Pat doesn't seem to be as outgoing and ambitious as some of the younger managers.

DESCRIPTION OF EMPLOYEE'S PERFORMANCE

NAME: Pat Everingham
DATE OF BIRTH: 4th January, 1927
POSITION: Production Section Manager

The following employee description has been prepared by Pat's immediate supervisor, (Manager, Production Department) who has been Pat's boss for the last 4 years.

Pat Everingham is 61 years old and has been with the Company for the last 5 years. During this time production in Pat's unit has fluctuated slightly around the desired levels, generally being either 2-3% above or below what is expected. Pat is regarded as being an innovative manager however, and has managed to increase production about 5% above the required levels over the last six months.

Pat's unit has just completed three new contracts that the organization won in March. I was satisfied with the end product but Pat seemed to tread on a few toes in the process. Perhaps Pat is being over ambitious. Three production section managers from other units certainly felt Pat was infringing on their territory with some of the decisions that were made. It's not as if Pat isn't familiar with our way of doing things here though, maybe its a lack of integrity on Pat's part.

Morale seems to be satisfactory in the unit, although some workers do find Pat a bit difficult to get along with, though

this may be due to Pat's eagerness and impatience with less forward thinking employees. Pat does know what the workers are capable of though and seems to get good work out of them.

Pat is generally regarded as being a creative employee, who came to us with all the necessary skills and continues to keep abreast of changes in the field. In addition, any new or necessary information is always passed down the line by Pat, and the workers in the unit feel their input is appreciated.

On the whole Pat's approach generally appears to be logical, although this is not always the case with the monthly budget. Getting it all down on paper initially is OK, but Pat seems to have some trouble staying within the limits for spending on the H451 component that is an integral part of the unit's output. Pat doesn't always appear to be as conscientious as the last person in the job.

Pat's originality shows in the reports which are always accurate but could do with a bit of a shape up in terms of organization and logical flow of ideas. Pat's technical skills are fine but communication skills are sometimes a bit lacking. I have noticed that Pat needs to repeat things on occasion to the workers, they don't always catch on the first time and seem to require more than one explanation.

The workers in the unit seem satisfied with their weekly work schedule, it appears to be flexible enough to keep them sufficiently challenged and motivated, and they feel they can ask Pat for help if they need it. There have been a few

organizational changes passed down through the hierarchy to Pat's department in the last six months after our merger with ACR Components. Despite the fact that some see Pat as a risk-taker, the unit is running smoothly and everyone in it is responding satisfactorily to the changes.

Although Pat is viewed by some as being an impulsive, older manager who doesn't always take the necessary precautions, there have been some good ideas come out of the unit over the last few years. I was a bit reluctant at first with one or two of them because of the way Pat documented them, but once we had discussed them a couple of times I could see the reasoning behind them.

Pat's unit had a crisis just recently with one of its parts being sent back because it didn't meet design specifications. Pat analysed the problem well but I felt the response could have been a bit quicker. The unit also had to deal with three unplanned emergency jobs last month but managed to complete them with only minimal disruption to weekly targets.

On the whole Pat seems to be doing OK, shows interest in the new training schemes being developed and is versatile and receptive. One thing though, Pat doesn't seem to be as careful and dependable as some of our older managers.

APPENDIX SIX

JOB DESCRIPTION

PRODUCTION SECTION MANAGER

Job Summary

This position exists in a high-technology company which manufactures parts for a variety of products including communications equipment, computer hardware and electrical goods. The position is generally regarded as a middle-management position with equal emphasis placed on technical and managerial skills. The Production Section Manager of the electrical assembly section works under the general supervision of the Manager, Production Department and is responsible for the efficient operation of the section.

Job Duties

1. To plan and schedule the work of the section in order to achieve maximum utilization of employees, facilities and equipment.
2. To maintain the costs of production within budgetary constraints.
3. To ensure desired standards of quality are adhered to.
4. To provide guidance and counseling to employees with respect to performance attributes.
5. To resolve production problems promptly.

6. To determine manpower and budget requirements.
7. To requisition and select qualified employees to fill positions.
8. To supervise either directly or indirectly through subordinate supervisors all workers in his unit (average number of subordinates is thirty five)
9. To assign employees to jobs, instruct them in the correct performance of work and orient them to Company policies, rules and regulations.
10. To maintain the discipline of employees in accordance with Company rules and regulations.
11. To be responsible for the health and safety of the unit.
12. To be responsible for employee relations and industrial relations.
13. To ensure machinery, equipment and facilities in the unit are properly maintained.
14. To recommend and/or approve personnel changes for subordinates including promotion, transfer, pay increases, leave of absence etc.
15. To co-ordinate activities of unit with other departments of Purchasing, Stock Control, Quality Control, Planning, and Engineering.
16. To recognise needs for improvements and initiate them in areas under his control.
17. Prepares and/or supervises preparation of reports required

for his unit.

Qualifications Required

Grade 13 graduate with a minimum of 5 years experience in production at supervisory level, or

Community College graduate with a minimum of 3 years Manufacturing Engineering experience.

APPENDIX SEVEN

TABLES ONE TO SEVEN

**DESCRIBE THE
SUBJECT POPULATION**

TABLE ONE

AGE OF SUBJECTS

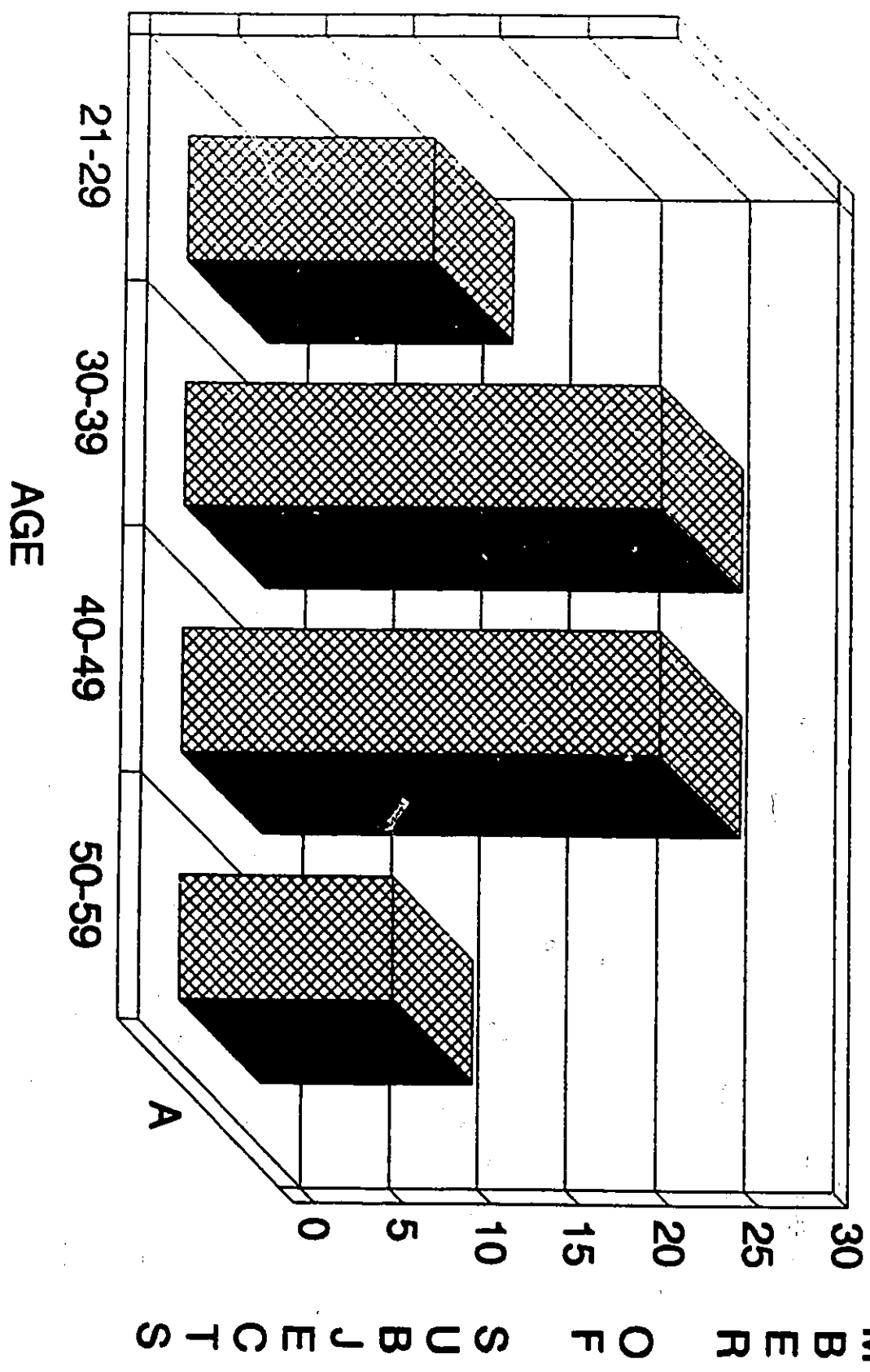


TABLE TWO
SEX OF SUBJECTS

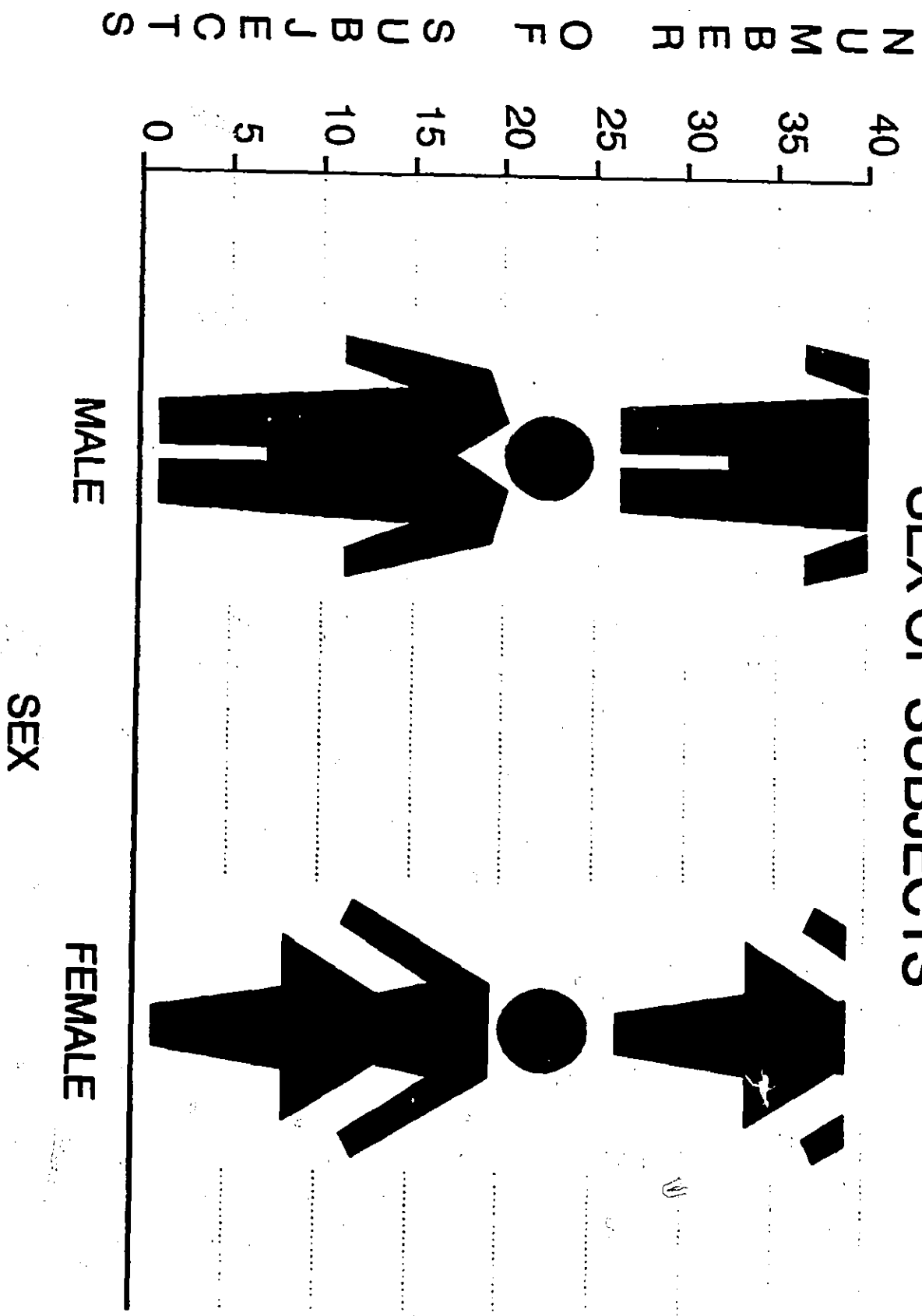


TABLE THREE
POSITION OF SUBJECTS

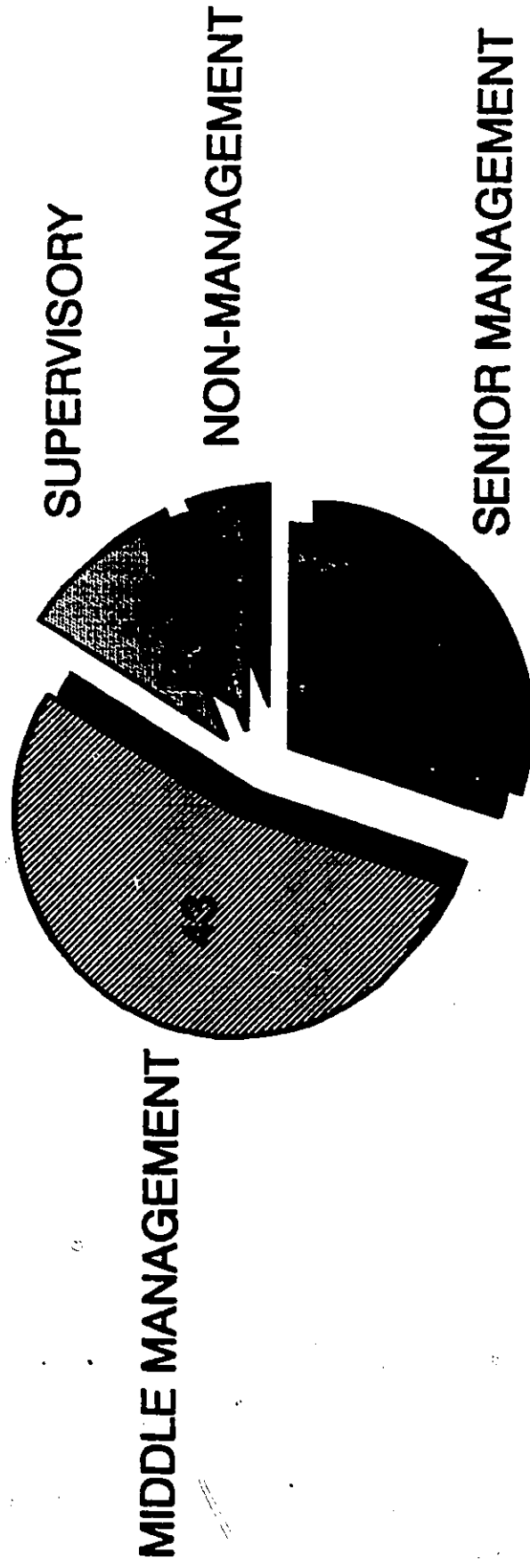
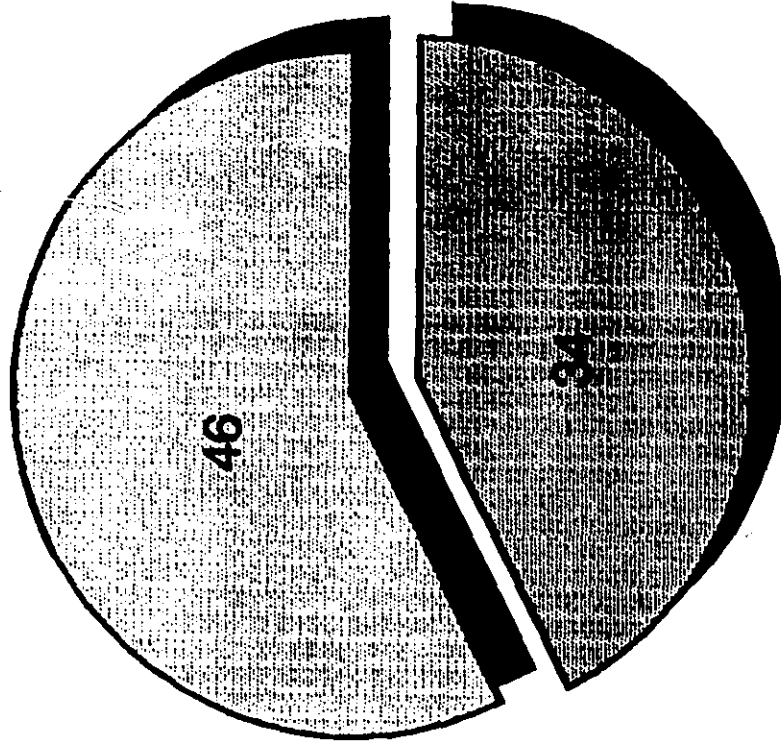


TABLE FOUR

SECTOR OF BUSINESS

PRIVATE



PUBLIC

TABLE FIVE
YEARS IN POSITION

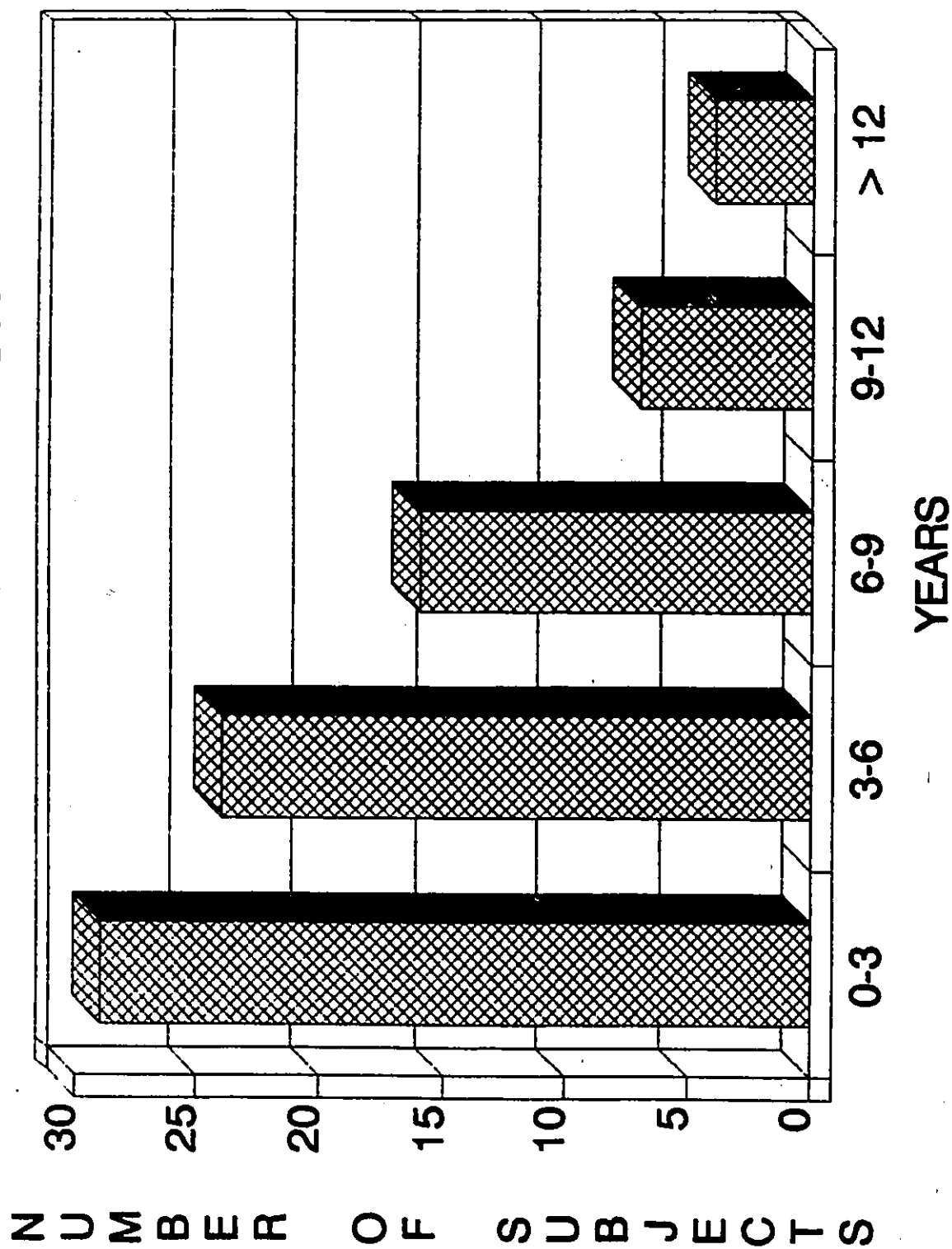


TABLE SIX

YEARS FULL-TIME

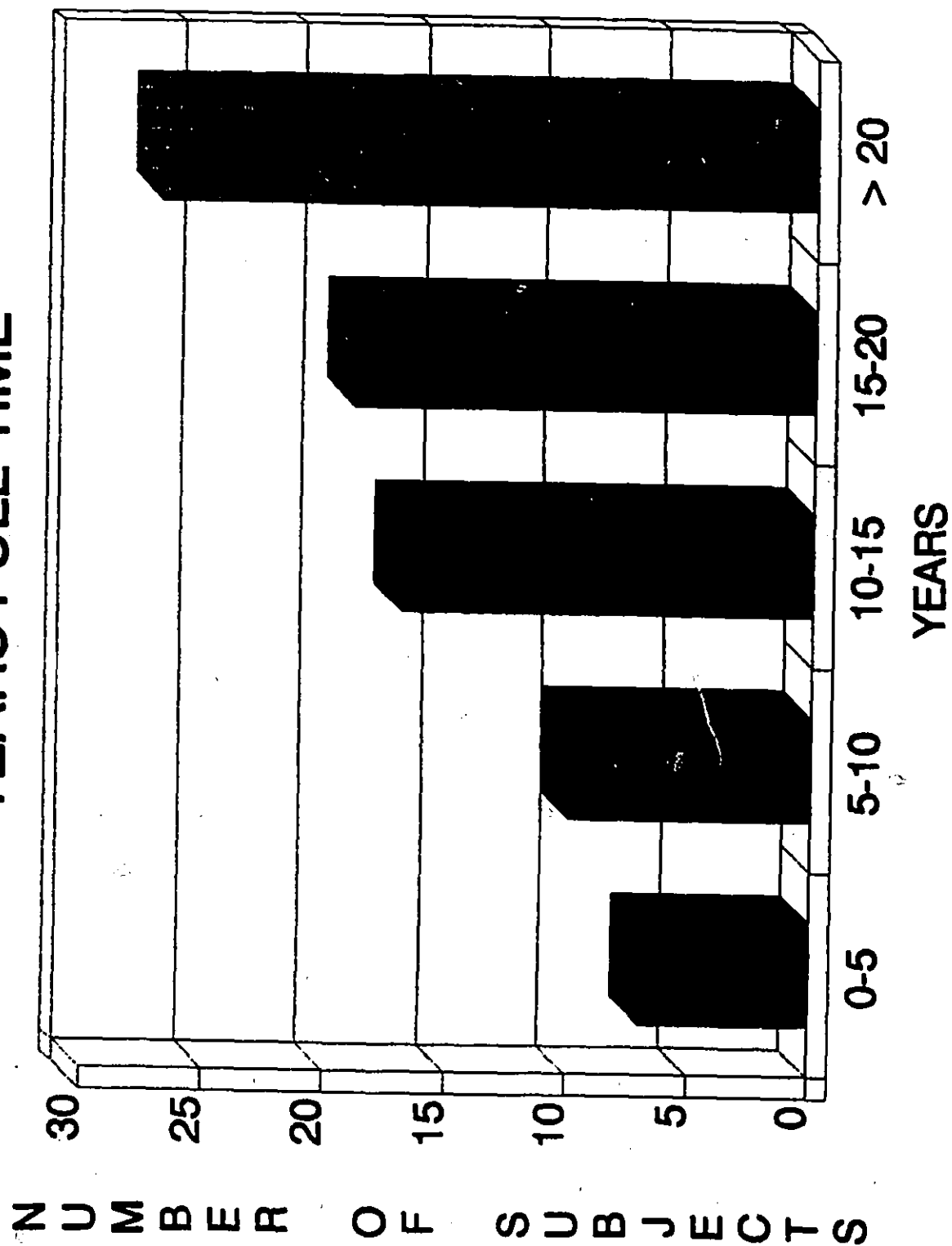
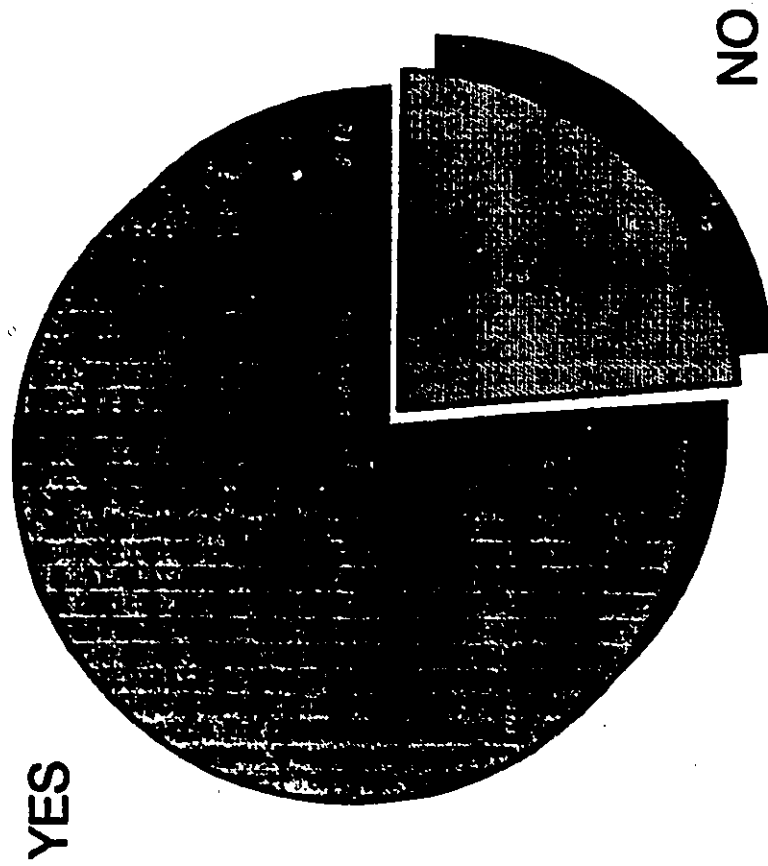


TABLE SEVEN

INVOLVED WITH APPRAISALS



APPENDIX EIGHT

RESULTS

Multianalysis of variance on Part A only revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19, 58) = 5.43$, $p < .0001$. Univariate F tests with $F(1, 76)$ d.f showed that the interaction was significant on the following dependent variables on Table One below:-

TABLE ONE

MANOVA ON PART A - AGE BY CONFORMITY

	F Value	Sign. of F
<u>Behaviour (Part A)</u>		
Dependable (Q.4)	20.01	.000
Team (Q.9)	3.76	.056
Logical (Q.14)	24.87	.000
Adaptable (Q.15)	17.93	.000
Flexible (Q.16)	4.67	.034
Initiative (Q.18)	6.22	.015

The main effect for conformity for Part A was not significant, Wilks multivariate $F(19, 58) = 1.7$, $p < .062$.

The main effect for age for Part A was significant, Wilks multivariate $F(19, 58) = 2.69, p < .002$. Univariate F tests with $F(1, 76)$ d.f. revealed that the following dependent variables in Table Two were significantly dependent on age:-

TABLE TWO
MANOVA ON PART A - AGE

	F Value	Sign. of F
<u>Behaviour (Part A)</u>		
Proficiency (Q.2)	5.00	.028
Team (Q.9)	12.77	.001
Initiative (Q.18)	5.03	.028

Multianalysis of variance for Part B revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19, 58) = 7.56, p < .0001$. Univariate F tests with $F(1, 76)$ d.f. revealed that the interaction significantly affected the following dependent variables in Table Three below:-

TABLE THREE
MANOVA ON PART B -- AGE BY CONFORMITY

	F Value	Sign. of F
<u>Traits (Part B)</u>		
Adaptable	22.46	.000
Dependable	19.85	.000
Flexible	33.93	.000
Initiative	17.33	.000
Innovative	39.21	.000
Reliable	12.91	.001

The main effect for conformity for Part B was not significant, Wilks multivariate $F(19, 58) = .964$, $p < .513$.

The main effect for age was also not significant, Wilks multivariate $F(19, 58) = 1.46$, $p < .134$.

Multianalysis of variance of Part C revealed that the interaction of age by conformity was significant, Wilks multivariate $F(19, 58) = 2.96$, $p < .003$. Univariate F tests with $F(11, 66)$ d.f. revealed that the interaction had a significant effect on the following dependent variables in Table Four below:-

TABLE FOUR

MANOVA ON PART C - AGE BY CONFORMITY

	F Value	Sign. of F
<u>Manipulations</u>		
Ambitious	11.96	.001
Overall12 (personality)	15.36	.000

-

The main effect for conformity in Part C was significant, Wilks multivariate $F(11, 66) = 5.27$, $p < .0001$. Univariate F tests with $F(1, 76)$ d.f. revealed that the main effect was significant on the following dependent variables in Table Five below:-

TABLE FIVE

MANOVA ON PART C - CONFORMITY

	F Value	Sign. of F
<u>Manipulations</u>		
Ambitious	11.96	.001
Typical	43.11	.000

The main effect for age on Part C was also significant, Wilks multivariate $F(11, 66) = 8110.35$, $p < .0001$. Univariate F tests with $F(1, 76)$ d.f. revealed that the following dependent variables in Table Six below were significantly affected by age:-

TABLE SIX
MANOVA ON PART C - AGE

	F Value	Sign. of F
<u>Manipulations</u>		
Pat's age	96664.69	.000
Steady	20.24	.000
Receptive	4.49	.037
Cautious	30.28	.000
Typical	4.51	.037
Older	288.20	.000

PEARSON CORRELATION COEFFICIENTS

TABLE SEVEN

Behaviour x Trait	Significance	Correlation
Adaptable x Adaptable	.000	.6132
Dependable x Dependable	.038	.2001
Flexible x Flexible	.000	.5095
Initiative x Initiative	.017	.2386
Insight x Insight	.004	.2985
Reliable x Reliable	.017	.2386

TABLE EIGHT

Overall Rating Part A x Behaviours	Significance	Correlation
Reliable (Q.3)	.000	.4740
Flexible (Q.16)	.001	.3406
Adaptable (Q.15)	.001	.3362
Insight (Q.8)	.003	.3094
Efficiency (Q.5)	.004	.2989
Knowledge (Q.1)	.011	.2559
Logical (Q.14)	.013	.2489
Proficiency (Q.2)	.014	.2466
Team (Q.9)	.031	.2098
Initiative (Q.18)	.038	.1990
Innovative (Q.17)	.043	.1927
Dependable (Q.4)	.047	.1888

TABLE NINE

Overall Rating Part B x Traits	Significance	Correlation
Insight	.000	.5008
Proficiency	.000	.4323
Rational	.000	.4281
Reliable	.000	.4233
Diplomatic	.000	.4090
Flexible	.000	.3860
Cooperative	.001	.3595
Logical	.000	.3762
Organized	.000	.3837
Efficiency	.002	.3181
Judgement	.004	.2944
Dependable	.009	.2629
Adaptable	.010	.2584
Knowledge	.012	.2520
Initiative	.019	.2325
Innovative	.049	.1864

RESULTS FROM RESPONDENTS UNDER 40 YEARS OLD

Multianalysis of variance on Part A only revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,19) = 3.69$ $p < .003$. Univariate F tests with $F(1,37)$ d.f. showed that the interaction was significant on the following dependent variables on Table Thirteen below:-

TABLE TEN
MANOVA ON PART A - AGE BY CONFORMITY

	F Value	Sign. of F
Dependable (Q.4)	15.12	.000
Logical (Q.14)	11.37	.002

The main effect for conformity for Part A was not significant, Wilks multivariate $F(19,19) = 1.63$, $p < .147$.

The main effect for age for Part A was also not significant, Wilks multivariate $F(19,19) = 1.92$, $p < .081$.

Multianalysis of variance on Part B only revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,19) = 2.38$, $p < .033$. Univariate F tests with $F(1,37)$ d.f. revealed that the interaction was significant on the following dependent variables on Table Fourteen below:-

TABLE ELEVEN
MANOVA ON PART B - AGE BY CONFORMITY

	F Value	Sign. of F
Adaptable	6.68	.014
Dependable	12.83	.001
Flexible	8.40	.006
Initiative	5.30	.027
Innovative	10.48	.003
Reliable	7.80	.008

The main effect for conformity for Part B was not significant, Wilks multivariate $F(19,19) = .62$, $p < .848$.

The main effect for age for Part B was not significant, Wilks multivariate $F(19,19) = .95$, $p < .548$.

RESULTS FROM RESPONDENTS OVER 40 YEARS OLD

Multianalysis of variance on Part A revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,17) = 3.86$, $p < .004$. Univariate F tests with $F(1,35)$ d.f. showed that the interaction was significant on the following dependent variables on Table Fifteen below:-

TABLE TWELVE
MANOVA ON PART A - AGE BY CONFORMITY

	F Value	Sign. of F
Dependable (Q.4)	4.35	.044
Logical (Q.14)	16.13	.000
Adaptable (Q.15)	25.21	.000
Flexible (Q.16)	5.86	.021
Initiative (Q.18)	4.41	.043

The main effect for conformity for Part A was not significant, Wilks multivariate $F(19,17) = 2.20$, $p < .054$.

The main effect for age was significant, Wilks multivariate $F(19,17) = 2.99$, $p < .014$. Univariate F tests with $F(1,35)$ d.f. revealed that the following dependent variables in Table Sixteen below were significantly dependent on age:-

TABLE THIRTEEN
MANOVA ON PART A - AGE

	F Value	Sign. of F
Dependable (Q.4)	9.06	.005
Team (Q.9)	7.75	.009
Communication (Q.12)	8.89	.005

Multianalysis of variance on Part B revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,17) = 3.25$, $p < .009$. Univariate F tests with $F(1,35)$ d.f. showed that the interaction was significant on the following dependent variables on Table Seventeen below:-

TABLE FOURTEEN
MANOVA ON PART B - AGE BY CONFORMITY

	F Value	Sign. of F
Adaptable	13.10	.001
Dependable	8.61	.006
Flexible	29.74	.000
Initiative	13.68	.001
Innovative	31.62	.000
Reliable	5.65	.023

The main effect for conformity for Part B was not significant, Wilks multivariate $F(19,17) = 1.17$, $p < .375$.

The main effect for age for Part B was not significant, Wilks multivariate $F(19,17) = 1.42$, $p < .235$.

RESULTS FROM MALE RESPONDENTS ONLY

Multianalysis of variance on Part A only revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,18) = 4.40$, $p < .001$. Univariate F tests with $F(1,36)$ d.f. showed that the interaction was significant on the following dependent variables on Table Eighteen below:-

TABLE FIFTEEN
MANOVA ON PART A - AGE BY CONFORMITY

	F Value	Sign. of F
Knowledge (Q.1)	6.12	.018
Dependable (Q.4)	9.53	.004
Team (Q.9)	5.48	.025
Logical (Q.14)	14.16	.001
Adaptable (Q.15)	17.37	.000
Flexible (Q.16)	5.29	.027
Innovative (Q.17)	4.91	.033
Initiative (Q.18)	7.48	.010
Overall (Q.19)	5.34	.027

The main effect for conformity for Part A was not significant, Wilks multivariate $F(19,18) = 2.11$, $p < .060$.

The main effect for age for Part A was not significant, Wilks multivariate $F(19,18) = 2.03$, $p < .069$.

Multianalysis of variance on Part B revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,18) = 6.11$, $p < .000$. Univariate F tests with $F(1,36)$ d.f. showed that the interaction was significant on the following dependent variables on Table Nineteen below:

TABLE SIXTEEN
MANOVA ON PART B - AGE BY CONFORMITY

	F Value	Sign. of F
Adaptable	11.59	.000
Dependable	6.22	.002
Flexible	7.69	.000
Initiative	19.49	.000
Innovative	47.84	.000
Reliable	4.18	.048

The main effect for conformity on Part B was not significant, Wilks multivariate $F(19,18) = 1.84$, $p < .100$.

The main effect for age on Part B was not significant, Wilks multivariate $F(19,18) = 1.36$, $p < .260$.

RESULTS FROM FEMALE RESPONDENTS ONLY

Multianalysis of variance on Part A only revealed that the interaction of age by conformity was not significant, Wilks multivariate $F(19,17) = 2.16, p < .058$.

The main effect for conformity for Part A was significant, Wilks multivariate $F(19,17) = 2.60, p < .027$. Univariate F tests with $F(1,35)$ d.f. showed that the following dependent variables in Table Twenty below were significantly dependent on conformity:-

TABLE SEVENTEEN
MANOVA ON PART A - CONFORMITY

	F Value	Sign. of F
Efficiency (Q.5)	8.98	.005

The main effect for age on Part A was not significant, Wilks multivariate $F(19,17) = 1.51, p < .200$.

Multianalysis of variance on Part B only revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,17) = 3.25, p < .009$. Univariate F tests with $F(1,35)$ d.f. showed that the interaction was significant on the following dependent variables on Table Twenty One below:-

TABLE EIGHTEEN
MANOVA ON PART B - AGE BY CONFORMITY

	F Value	Sign. of F
Adaptable	5.72	.022
Co-operative	5.20	.029
Dependable	7.58	.009
Flexible	12.22	.001
Innovative	7.54	.009
Reliable	11.09	.002

The main effect for conformity on Part B was not significant, Wilks multivariate $F(19,17) = .63$, $p < .834$.

The main effect for age on Part B was not significant, Wilks multivariate $F(19,17) = 1.24$, $p < .332$.

RESULTS FOR PUBLIC SECTOR RESPONDENTS ONLY

Multianalysis of variance on Part A only revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,12) = 4.43$, $p < .006$. Univariate F tests with $F(1,30)$ d.f. revealed that the interaction was significant on the following dependent variables on Table Twenty Two below:-

TABLE NINETEEN
MANOVA ON PART A - AGE BY CONFORMITY

	F Value	Sign. of F
Knowledge	11.36	.002
Dependable	16.85	.000
Co-operative	8.73	.006
Adaptable	9.98	.004

The main effect for conformity for Part A was not significant, Wilks multivariate $F(19,12) = 1.76$, $p < .160$.

The main effect for age on Part A was not significant, Wilks multivariate $F(19,12) = 1.35$, $p < .301$.

Multianalysis of variance on Part B only revealed that the

interaction of age by conformity was significant. Wilks multivariate $F(19,12) = 2.92$, $p < .031$. Univariate F tests with $F(1,30)$ d.f. showed that the interaction was significant on the following dependent variables on Table Twenty Three below:-

TABLE TWENTY
MANOVA ON PART B - AGE BY CONFORMITY

	F Value	Sign. of F
Adaptable	17.00	.000
Dependable	21.69	.000
Flexible	18.52	.000
Initiative	9.19	.005
Innovative	16.45	.000

The main effect for conformity on Part B was not significant, Wilks multivariate $F(19,12) = 1.75$, $p < .162$.

The main effect for age on Part B was significant, Wilks multivariate $F(19,12) = 2.64$, $p < .044$. Univariate F tests with $F(1,30)$ d.f. showed that the following dependent variable in Table Twenty Four below was significantly dependent on age:-

TABLE TWENTY ONE

MANOVA ON PART B - AGE

	F Value	Sign. of F
Efficiency	5.65	.024

RESULTS FOR PRIVATE SECTOR RESPONDENTS ONLY

Multianalysis of variance on Part A only revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,24) = 2.53$, $p < .016$. Univariate F tests with $F(1,42)$ d.f. showed that the interaction was significant on the following dependent variables on Table Twenty Five below:-

TABLE TWENTY TWO

MANOVA ON PART A AGE BY CONFORMITY

	F Value	Sign. of F
Dependable (Q.4)	7.23	.010
Logical (Q.14)	28.98	.000
Adaptable (Q.15)	7.28	.010
Flexible (Q.16)	4.95	.032
Initiative (Q.18)	5.05	.030

The main effect for conformity on Part A was not significant, Wilks multivariate $F(19,24) = .77$, $p < .713$.

The main effect for age on Part A was not significant, Wilks multivariate $F(19,24) = 1.48$, $p < .180$.

Multianalysis of variance on Part B only revealed that the interaction of age by conformity was significant. Wilks multivariate $F(19,24) = 3.85$, $p < .001$. Univariate F tests with

F(1.42) d.f. showed that the interaction was significant on the following dependent variables on Table Twenty Six below:-

TABLE TWENTY THREE
MANOVA ON PART B - AGE BY CONFORMITY

	F Value	Sign. of F
Adaptable	6.31	.016
Dependable	7.07	.011
Flexible	13.18	.001
Initiative	7.82	.008
Innovative	20.78	.000
Reliable	8.54	.006

The main effect for conformity on Part B was not significant, Wilks multivariate $F(19,24) = .66$, $p < .823$.

The main effect for age on Part B was not significant, Wilks multivariate $F(19,24) = 1.57$, $p < .147$.

MEANS FOR VARIABLES WITH SIGNIFICANT DIFFERENCES

RESPONDENTS UNDER 40 YEARS

TABLE TWENTY FOUR

	<u>33</u>	<u>61</u>	
<u>PART A</u>			
DEPENDABLE (Q.4)	3.90	5.36	CONFORM
Sign. Age x Conf.	5.25	4.00	NONCONFORM
LOGICAL (Q.14)	5.86	4.72	CONFORM
Sign. Age x Conf.	4.00	5.80	NONCONFORM

TABLE TWENTY FIVE

<u>PART B</u>			
ADAPTABLE	4.00	3.00	CONFORM
Sign. Age x Conf.	3.00	3.90	NONCONFORM
DEPENDABLE	4.09	4.64	CONFORM
Sign. Age x Conf.	4.50	3.29	NONCONFORM
FLEXIBLE	3.90	3.09	CONFORM
Sign. Age x Conf.	2.92	3.81	NONCONFORM

INITIATIVE	4.09	3.36	CONFORM
Sign. Age x Conf.	3.48	4.00	NONCONFORM
INNOVATIVE	3.90	3.18	CONFORM
Sign. Age x Conf.	3.00	3.85	NONCONFORM
RELIABLE	4.09	4.63	CONFORM
Sign. Age X Conf.	4.25	3.57	NONCONFORM

RESPONDENTS OVER 40 YEARS OLD

TABLE TWENTY SIX

<u>PART A</u>			
DEPENDABLE (Q.4)	4.56	5.38	CONFORM
Sign. Age x Conf.	4.22	3.54	NONCONFORM
Sign. Age			
LOGICAL (Q.14)	5.78	4.22	CONFORM
Sign. Age x Conf.	3.63	5.15	NONCONFORM
ADAPTABLE (Q.15)	5.89	4.56	CONFORM
Sign. Age x Conf.	3.38	5.23	NONCONFORM
FLEXIBLE (Q.16)	5.89	5.22	CONFORM
Sign. Age x Conf.	3.50	4.77	NONCONFORM
INITIATIVE (Q.18)	5.18	4.20	CONFORM
Sign. Age x Conf.	4.00	4.60	NONCONFORM
TEAM (Q.9)	5.00	5.56	CONFORM
Sign. Age	4.50	6.15	NONCONFORM
COMMUNICATION (Q.12)	3.56	2.67	CONFORM
Sign. Age	3.75	2.54	NONCONFORM

TABLE TWENTY SEVEN

PART B

ADAPTABLE	4.11	3.06	CONFORM
Sign. Age x Conf.	3.08	4.00	NONCONFORM
DEPENDABLE	3.78	4.78	CONFORM
Sign. Age x Conf.	4.13	3.85	NONCONFORM
FLEXIBLE	3.89	2.89	CONFORM
Sign. Age x Conf.	2.63	4.00	NONCONFORM
INITIATIVE	4.33	3.67	CONFORM
Sign. Age x Conf.	3.13	4.08	NONCONFORM
INNOVATIVE	4.44	3.22	CONFORM
Sign. Age x Conf.	2.63	3.93	NONCONFORM
RELIABLE	4.00	4.67	CONFORM
Sign. Age x Conf.	4.25	3.83	NONCONFORM

MALE RESPONDENTS

TABLE TWENTY EIGHT

PART A

KNOWLEDGE (Q.1)	6.36	5.88	CONFORM
Sign. Age x Conf.	5.78	6.25	NONCONFORM
DEPENDABLE (Q.4)	4.00	4.88	CONFORM
Sign. Age x Conf.	5.31	3.75	NONCONFORM
TEAM (Q.9)	5.28	6.00	CONFORM
Sign. Age x Conf.	3.78	6.00	NONCONFORM
LOGICAL (Q.14)	5.55	4.75	CONFORM
Sign. Age x Conf.	3.78	5.42	NONCONFORM
ADAPTABLE (Q.15)	5.55	4.63	CONFORM
Sign. Age x Conf.	3.22	5.08	NONCONFORM
FLEXIBLE (Q.16)	5.45	5.13	CONFORM
Sign. Age x Conf.	3.67	5.08	NONCONFORM
INNOVATIVE (Q.17)	4.37	4.38	CONFORM
Sign. Age x Conf.	3.22	4.83	NONCONFORM

INITIATIVE (Q.18)	5.20	4.12	CONFORM
Sign. Age x Conf.	4.00	5.00	NONCONFORM
OVERALL (Q.19)	5.45	5.00	CONFORM
Sign. Age x Conf.	4.56	5.08	NONCONFORM

TABLE TWENTY NINE

PART B

ADAPTABLE	4.00	2.88	CONFORM
Sign. Age x Conf.	2.78	3.83	NONCONFORM
DEPENDABLE	4.00	4.88	CONFORM
Sign. Age x Conf.	4.22	3.50	NONCONFORM
FLEXIBLE	3.82	3.38	CONFORM
Sign. Age x Conf.	2.67	4.00	NONCONFORM
INITIATIVE	4.27	3.38	CONFORM
Sign. Age x Conf.	3.22	4.17	NONCONFORM
INNOVATIVE	4.09	3.00	CONFORM
Sign. Age x Conf.	2.44	3.92	NONCONFORM
RELIABLE	4.00	4.88	CONFORM
Sign. Age x Conf.	3.78	3.83	NONCONFORM

RESULTS FROM FEMALE RESPONDENTS

The results for Part A showed a conformity effect for efficiency:

TABLE THIRTY

<u>PART B</u>			
ADAPTABLE	4.11	3.01	CONFORM
Sign. Age x Conf.	3.08	3.80	NONCONFORM
DEPENDABLE	3.90	4.75	CONFORM
Sign. Age x Conf.	4.38	3.65	NONCONFORM
FLEXIBLE	4.00	2.75	CONFORM
Sign. Age x Conf.	3.10	3.75	NONCONFORM
INNOVATIVE	4.10	3.25	CONFORM
Sign. Age x Conf.	2.80	3.85	NONCONFORM
RELIABLE	4.11	4.70	CONFORM
Sign. Age x Conf.	4.50	3.75	NONCONFORM

RESULTS FROM PUBLIC SECTOR

TABLE THIRTY ONE

PART A

KNOWLEDGE (Q.1)	6.64	5.89	CONFORM
Sign. Age x Conf.	6.00	6.14	NONCONFORM
DEPENDABLE (Q.4)	4.18	4.67	CONFORM
Sign. Age x Conf.	5.86	3.14	NONCONFORM
CO-OPERATIVE (Q.11)	5.27	4.89	CONFORM
Sign. Age x Conf.	4.14	5.43	NONCONFORM
ADAPTABLE (Q.15)	5.73	4.67	CONFORM
Sign. Age x Conf.	3.86	5.14	NONCONFORM

TABLE THIRTY TWO

<u>PART B</u>			
ADAPTABLE	4.28	2.78	CONFORM
Sign. Age x Conf.	3.00	3.57	NONCONFORM
DEPENDABLE	4.09	4.78	CONFORM
Sign. Age x Conf.	4.43	3.14	NONCONFORM
FLEXIBLE	4.09	3.25	CONFORM
Sign. Age x Conf.	2.86	3.71	NONCONFORM
INITIATIVE	4.18	3.44	CONFORM
Sign. Age x Conf.	3.43	4.29	NONCONFORM
INNOVATIVE	4.09	3.11	CONFORM
Sign. Age x Conf.	2.71	3.71	NONCONFORM

The results for public sector respondents also showed an age effect for efficiency on Part B:

RESULTS FROM PRIVATE SECTOR RESPONDENTS

TABLE THIRTY THREE

PART A

DEPENDABLE (Q.4)	4.22	5.00	CONFORM
Sign. Age x Conf.	5.00	4.00	NONCONFORM
LOGICAL (Q.14)	5.78	4.55	CONFORM
Sign. Age x Conf.	3.38	5.46	NONCONFORM
ADAPTABLE (Q.15)	5.56	4.73	CONFORM
Sign. Age x Conf.	4.08	5.23	NONCONFORM
FLEXIBLE (Q.16)	5.22	5.00	CONFORM
Sign. Age x Conf.	3.76	5.15	NONCONFORM
INITIATIVE (Q.18)	4.56	4.73	CONFORM
Sign. Age x Conf.	3.85	5.31	NONCONFORM

TABLE THIRTY FOUR

PART B

ADAPTABLE	3.78	3.28	CONFORM
Sign. Age x Conf.	3.15	3.92	NONCONFORM
DEPENDABLE	3.78	4.64	CONFORM
Sign. Age x Conf.	4.30	3.93	NONCONFORM
FLEXIBLE	3.67	3.09	CONFORM
Sign. Age x Conf.	2.77	4.00	NONCONFORM
INITIATIVE	4.22	3.54	CONFORM
Sign. Age x Conf.	3.38	3.93	NONCONFORM
INNOVATIVE	4.22	3.27	CONFORM
Sign. Age x Conf.	2.92	3.92	NONCONFORM
RELIABLE	4.00	4.64	CONFORM
Sign. Age x Conf.	4.31	3.62	NONCONFORM
