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Performance Appraisal and Total Quality Management:  
an Investigation of User Preferences

AYMAN GHALI

A Thesis

in

The Faculty of Commerce and Administration

Presented in partial fulfilment of the requirements  
for the Degree of Master of Science  
Concordia University  
Montreal, Quebec, Canada

April 1994

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## ABSTRACT

### **Performance Appraisal and Total Quality Management: an Investigation of User Preferences**

AYMAN GHALI

This study conceptualizes and measures user preferences with regard to traditional performance management (PM) systems versus those designed to be compatible with total quality management. Aspects of individual users, their work design, and current appraisal context were used to predict preferences. Results showed some degree of support for the proposed structure of PM system preferences, and that they could be significantly predicted. Discussion explores the aspect of fit between an organization's strategic intent and existing PA preferences. The implications of some uses for the measurement of PA preferences are mentioned. Suggestions for future research are offered concerning the need to examine a broad range of users at different hierarchical levels, contrast perspectives of different types of users, and to measure actual PM system design features and their effectiveness.

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## **Introduction**

Performance appraisal (PA) is an integral part of any human resource system. Appraisal processes have, therefore, commanded a high degree of research attention (Bretz, Milkovich, & Read, 1992). Research has tended to focus on psychometrics and the mechanics of PA processes including instrumentation, rater accuracy and internal cognition, and rater training (Latham, Irvine, Skarlicki, & Seigel, 1993). Latham (1986) discussed the lack of research on the conceptual aspects or underlying theory of appraisal system design within organizational contexts. This causes doubt about the applicability of many prior research efforts to the actual design of effective PA. Perhaps even more important, it is not clear as to how a focus on psychometrics and related issues can help make PA a strategic tool which might be used by managers to continually improve their organizations. It is not surprising that managers tend to perceive no consequences, either good or bad, from conducting performance appraisals and see little practical value in pursuing such activities (Napier & Latham, 1986).

There are three major reasons research has attempted to improve the psychometrics of PA. First, it is in response to how the courts and the law view PA, i.e., the administration of PA is looked upon as an employment test

that must be free from bias and discrimination (Barrett & Kernan, 1987). Second, PA attempts to serve a multitude of purposes. Surveys show that PA is used for administrative as well as developmental decisions, such as identifying training needs, reviewing past performance, salary and promotion decisions, and setting future performance objectives (Locher & Teel, 1988; Long, 1986; Eichel & Bender, 1984). Along these lines, numerous studies have attempted to derive the sources of rater bias (halo, leniency, central tendency, recency/primacy effect), to determine the most accurate scale format (BARS, BOS, mixed standard, trait scales), and to measure the reliability and validity of existing methods. Third, there has been a growth of minorities and women in the labour force, and this trend will continue, making it important to reduce discrimination and bias in appraisal (Jackson & Schuler, 1990; Glickman, 1982).

To focus mainly on psychometric improvements while underestimating conceptual aspects of PA results in undervaluing its importance in achieving organizational objectives; at the risk of sounding extreme, to concentrate on psychometrics is to look at the symptoms not the cause of the "problem".

Performance management (PM) is a concept that can both help place appraisal within organizational contexts and allow it to take on more strategic significance. Dobbins, Cardy, and Carson (1991) and Waldman (in press) referred to PM in terms broader than appraisal by including performance planning and development, feedback, associated reward processes, and a group- as well as individual-level focus.

By extending the appraisal concept in these terms, research may begin to emphasize an understanding of the social context of appraisal (Murphy & Cleveland, 1991). For example, this would include a better understanding of user reactions and preferences concerning the various facets of a PM system. Users are defined here as either recipients of the PM process (e.g., those receiving appraisal feedback) or those whose job it is to administer the process (e.g., managers). In addition, the role of PM in the context of total quality management (TQM) implementation is an evolving concern for researchers as well as practitioners. Numerous authors have concluded that the effective implementation of TQM, or related forms of high involvement organization, hinge somewhat on the appropriate design of PM systems (Blackburn & Rosen, 1993; Bowen & Lawler, 1992; Prince, 1994; Waldman, in press). The current study seeks to better understand how to



maximize PM system design. Specifically, I address the issue of user preferences with regard to PM system design within a framework that includes traditional as well as TQM-oriented features.

### **PA Reactions versus Preferences**

In their review of the PA research over approximately the past decade, Latham et al. (1993) and Latham (1986) noted an increasing shift in appraisal research away from instrumentation/ accuracy issues and more toward an understanding of user reactions to various aspects of a PM system. Landy, Barnes, and Murphy (1978) were among the first researchers to attempt to measure perceptions and attitudes toward PA and others have followed their lead (Landy, Barnes, & Cleveland, 1980; Greenberg, 1986; Pooyan & Eberhardt, 1989). Some of the factors identified as affecting satisfaction or attitudes toward PA have included frequency of appraisal, supervisor's familiarity with the employee's performance, ability to challenge the evaluation, supervisor's goal setting behaviour, and identification of performance weaknesses.

There has frequently been a call for conducting more reactions research (Bernardin & Kane, 1980; Bernardin & Beatty, 1984; Latham et al., 1993). A possible limitation with reactions research, however, is that reactions

represent an attempt to gauge beliefs and attitudes after the fact. That is, reactions deal with perceptions or degree of satisfaction with an existing system. Bernardin and Kane (1980) noted that by including future raters in the development of an appraisal system, its acceptance and quality could be improved. Bernardin and Beatty (1984) stated that criteria, such as the degree to which actors/observers believe in the fairness, equity, and utility of appraisal, represent better predictors of rating validity than do psychometric errors such as halo and leniency. Latham et al. (1993) support this position and believe that there should be less importance placed on rater accuracy and more so on that of ratee perceptions of fairness.

More recently, Bretz et al. (1992) were critical of the fact that appraisal procedures are typically designed by personnel specialists with little or no input from users. Appraisal researchers and personnel specialists may be able to achieve a degree of psychometric accuracy or freedom from bias by using their expertise to design procedures. However, regardless of the accuracy or freedom from bias a procedure achieves, it will not be used as intended if there is resistance by the users (ratees/raters). Bretz et al. (1992) suggested that research efforts be increasingly geared toward identifying

the needs and preferences of users. Along similar lines, Mohrman, Resnick-West, and Lawler (1990) argued that the best way to ensure the acceptability of PM system design is to let users participate in creating it.

Lawler, Renwick, and Bullock (1981) presented data that suggests that employees want more influence in hiring, firing, and promotion decisions, and in the making of organizational policy. Cummings (1973), for instance, confirmed that an appraisal system in which employees participated actively in its development was perceived by ratees as superior to a management-developed system. Greenberg (1986) demonstrated that employees who are included in the design process are more satisfied and more readily accept the resulting PA system.

Lawler and Mohrman (1989) offered more specific suggestions on how to involve employees in an effort towards achieving a high-involvement management style in the context of PM, such as allowing them a great deal of input in the design of a PM system, seeking their opinions about newly implemented ideas, acting on their suggestions, and providing them with the opportunity to receive feedback directly from their customers.

Moreover, there is precedence for looking at preferences as a research issue in human resources management. For example, preferences have been examined in the area of compensation benefits plans, i.e., cafeteria style benefits plans (Glueck, 1978).

The focus of the present research is the direct assessment of user preferences for PM system design features or options (to be described below). Three key advantages can be associated with the identification of user preferences. First, a focus on preferences signifies a shift in PM research and practice toward involving people in the system design. Asking users what they prefer to see included in PM system design is in line with high involvement organization and participative management theories (Lawler, 1986; Mohrman et al., 1990).

Second, the identification of user preferences provides an example of how the human resources function could become more customer-focused. Bowen and Lawler (1992) stressed the need to involve internal customers in the design of human resources services and systems. In contrast, the human resources function has traditionally been more "production-oriented" or driven by design based upon specialized expertise and "pet programs" (Bowen & Lawler, 1992: 33).

Third, as compared to reactions-oriented research, a focus on preferences represents a more proactive model of high involvement, customer-based human resources management. An assessment of user reactions to a current PM system only addresses the status quo and is inherently limited to what that system is offering. In contrast, preferences allow for the study of broader design issues and possibilities.

### **Dimensions of Performance Management Systems**

Theoretical conceptualization of the domain of PM systems has not been well established (Bretz et al., 1992; Dobbins et al., 1991). The existing literature can be considered as somewhat disjointed. This has resulted in deficiencies in terms of PM system typologies (Bernardin & Beatty, 1984). Additional clarity in this area would contribute greatly to research efforts. For example, a classification scheme is necessary to better understand the types of design options that could potentially determine the makeup of a PM system. Through an extensive literature review, it is evident that there are three main issues that surround PA. I, therefore, propose the following three dimensions to encompass key design options: (1) level of focus, (2) purpose, and (3) input sources. One last dimension was measured is the frequency with which respondents want their PA to be conducted; this

item does not fall into the three dimensions but is believed to be a critical issue in PA (see Figure 1).

Level of Focus pertains to the target of PM efforts. Traditional PM has been driven by a paradigm that is heavily based on the management of individuals. For example, the techniques and processes for appraising individuals have been the predominant focus of PA research (Bernardin & Beatty, 1984; Dobbins et al., 1991). Similarly, the individual performer has been the focus of attention in the area of goal setting (Locke & Latham, 1990). An alternative level of focus is the group (Prince, 1994; Waldman, in press). At this level, the appraisal or rewarding of a group as a whole can either substitute or supplement individual-level appraisal and rewards. For example, gainsharing plans at the group level can be used as a substitute for individual, appraisal-based pay (Lawler, 1981). The contextual appropriateness of individual versus group approaches will be considered below.

The Purpose of PM may also be dichotomized. A common purpose of PM practices is to evaluate and then reward/punish in accordance with evaluation (Bernardin & Beatty, 1984). Rewards can be monetary, involve promotion opportunities, or alternatively, involve less tangible

things such as recognition. Evaluation may also be for punitive reasons as when it is used to determine who should be released from a position. Another purpose of PM, perhaps receiving less attention in both research and practice, is human resources development. Most commonly, development has been considered with regard to individually-based performance counselling and problem solving, as well as career planning (Mohrman et al., 1990). However, development can also be conceived in relation to the improvement of work processes and systems (Waldman, in press).

A third dimension of PM involves potential Input Sources. PM practices are based on the attainment of performance information which can be used for the various purposes outlined above. This information can be generated from a variety of sources. The supervisor is a common source of performance information, and indeed, often the only formal source in a PM system (Bernardin & Beatty, 1984; Latham et al., 1993). Along similar lines, hierarchically-attained information can be gathered from other managers, e.g., the supervisor's peers and/or boss.

The notion of 360 degree feedback represents an alternative to the exclusive use of performance information attained hierarchically. Performance data may

be derived from a number of other input sources including self, subordinates, peers, and customers or clients (Mohrman et al., 1990). I now examine two possible forms of PM system design based on different combinations of level of focus, purpose, and input source design options.

### **Traditional and Total Quality PM**

Traditional PM has been the predominant focus of organizations (Bernardin & Beatty, 1984; Latham et al., 1993). As such, the following characteristics seem to be common: (1) Individual level of focus, (2) emphasis on Evaluation and contingent rewarding, and (3) Hierarchically-derived input sources. Traditional PM has concentrated on individual performers such that high and low performers are differentiated, i.e., differentially recognized for assessed performance levels. Traditional PM has also tended to emphasize evaluation and associated contingent reward processes, despite the lip service that is often given to the use of PM for developmental purposes (Latham et al., 1993). Finally, traditional PM emphasizes hierarchically-based input of performance information. The supervisor often maintains primary, if not sole, input into PA processes. The supervisor's superior may also be asked to provide a final review before results are fed back to an employee. A key barrier to the systematic involvement of sources other than those higher in the



organization (e.g., peers or subordinates) is what Murphy and Cleveland (1991: 108) referred to as the "universal principle of hierarchical organization."

Surveys conducted in the area of PA tend to support the pervasiveness of traditional type systems (Lazer & Wikstrom, 1977; Eichel & Bender, 1984; Long, 1986). Lazer and Wikstrom (1977) found, for example, that 90% of their sample conducted a yearly appraisal, and that the supervisor was responsible for it in 95% of organizations. Eichel and Bender (1984) found that 96% of their ratee sample claimed that the immediate supervisor was the only source of input, feedback is supplied by the appraiser 93% of the time, and 74% of organizations claim to conduct a performance review on an annual basis. In a similar survey in Great Britain (Long, 1986), 36% of the sample stated that some or all of the performance review was not disclosed to the ratee, and the immediate supervisor was the only source of input in 93% of the organizations.

Many organizations are finding that traditional PM does not seem to fit well within evolving strategies toward generating teamwork to continuously improve efforts to satisfy customers, e.g., TQM efforts. Indeed, champions of the TQM movement have very few favourable comments, at least in relation to how PA has been

traditionally conceived and operationalized. Champions of the TQM movement have been extremely critical of PA (Deming, 1986; Scholtes, 1987; Walton, 1986). Deming (1986) referred to PA as one of seven "deadly diseases" plaguing Western management. His recommendation was to simply abolish such practices.

A closer look at Deming's (1986) criticisms reveals that the underlying goals of PM, to control and improve performance, are not in question. Rather, Deming was concerned with the emphasis in traditional PM on maintaining an individual orientation in the attribution, appraising, and rewarding of performance. An alternative approach may be necessary for three reasons. First, performance variation may be largely attributable to system factors beyond most individuals' control, such as the availability of resources, nature of supervision or leadership received, and variations in human resources practices including training received (Deming, 1986; Dobbins et al., 1991; Waldman, in press). Second, Carson, Cardy, and Dobbins (1991) argued that it is a difficult, if not impossible, task for raters to accurately distinguish individual causes of performance from system causes. Because of its non-differentiating nature traditional PA assumes that variance in performance is due, to a great extent, to individual factors. System

factors believed to contribute to performance variance include lack of material, time, and support. The assumption is that supervisors either cannot or will not effectively deal with system influences when differentiating between individuals (Carson et al., 1991; Longenecker, Sims, & Gioia, 1987; Waldman & Kenett, 1990). Third, the nature of work-related problems and increasing customer demands may require teamwork and/or team-based job design.

It would then follow that a PM system consistent with total quality management would take on more of a group-level orientation with an emphasis on the continuous development of both individuals and work systems (Prince, 1994; Waldman, in press; Waldman & Kenett, 1990). Furthermore, multiple input sources would be encouraged and utilized in PM processes. For example, when teamwork is being stressed, peer input would represent a logical source of important performance information. In line with a central thesis of TQM, measures of performance would also be largely directed toward customers' inputs. These could include customers either internal or external to the organization. It should be noted that most of the design features characterized above in terms of total quality PM could also be associated with PM in high involvement organizations. Mohrman et al. (1990) discussed how group-

level performance measurement and multiple input sources are highly characteristic of appropriate PM in such settings.

### **The Present Research**

The present research represents an initial attempt to assess user preferences for the types of PM system design features outlined above (Figure 1).

It seems that corporate culture signals the values which employees should adopt (Daft, 1989) and, in turn, these should determine preferences. The organization's existing PA system should, therefore, influence an employee's schema, or overall picture, of PM strategies which fit together. If, for instance, an organization has a traditional PA system, then the set of PA strategies (i.e., level of focus, purpose and input sources) that are part of this traditional system should form an employee's schema. The same rationale can be applied to an organization which is involved in TQM and employs a non traditional PA system. This leads to the first hypothesis stated below.

The first hypothesis concerned the interrelationships among preferences for design features. Individual level of focus, evaluation purpose, and hierarchical input

sources were conceived to represent preferences for traditional PM. Preferences for group level of focus and the use of peer and customer input sources should go together to form TQM-oriented PM; although because this type of PM system is not widely used, this may be a less developed schema in respondent's minds. Development/continuous improvement and self as input source represent design features that might conceivably be viewed as relevant to both traditional and TQM-oriented PM. As stated above, although traditional PM practices have tended to deemphasize development, users would likely still view it as desirable and complementing the other aspects of traditional design. Likewise, self-derived input has also been viewed as a way for traditional PM to gain ratee acceptance by complementing hierarchical input (Meyer, 1991). Purpose was not included in the non-traditional PA components because the logical purpose of PA, development, can conceptually span both traditional and non-traditional PA. In sum, I hypothesized that:

**Hypothesis 1:** Preference for Individual level of focus, Evaluation purpose, and Hierarchical input source will correlate more highly with one another than with preferences for Group level of focus and Peer and Customer input sources.

#### **Predictors of PM Preferences**

In addition to analysing the interrelationships among PM preferences, a second purpose of this study was to

determine whether variables associated with users as persons, users' work design, and the users' current PM system would predict preferences (Figure 1). Work-related values were incorporated as potentially key factors associated with the users themselves. Values were chosen because they, as opposed to needs, influence choices and attributions as well as other cognitively guided behaviour (McClelland, 1985). Ravlin and Meglino (1989) stated that they had found substantial consistency in value-related choices and that this provided a solid basis on which to conduct future research in terms of values and work place behaviours. Work values used here were from a measure designed by Meglino, Ravlin, and Adkins (1989), described in detail below. In their study, Meglino et al. (1989) found that congruence between workers' values and those of their supervisor resulted in positive organizational outcomes, that is, higher job satisfaction and commitment.

I also examined the extent to which users perceived the appraisals resulting from their current PM system to be fair and their overall satisfaction with that system. Finally, the extent to which users viewed their work as being part of a team effort was assessed as a key work design variable (Figure 1).

The study hypotheses, which are summarized in Table 1

and 7 (Appendix B for Table 7), have been included to provide a better understanding of why employees may prefer various PM system design features. Because of lack of a theoretical rationale and the large number of possible permutations, not all predictors were paired with the four possible dimensions (i.e., level of focus, PA purpose, input sources, PA frequency). In fact, input source was not covered as in depth as the other dimensions but should be covered in future research.

In their research on corporate culture and people's value congruence, Meglino et al. (1989) chose four values: value for Achievement, Helping and concern for others, fairness, and Honesty. These values were chosen based on an open-ended survey distributed to over 40 U.S. organizations which lead to the analysis of 966 critical incidents. This analysis lead to 6 behavioural statements for each of the four values and then these were arranged into the forced choice format (See Appendix A). This results in a hierarchically ordered set of values which is consistent with theories conceptualizing them (Locke, 1976, 1982; Rokeach, 1973). This scale was chosen because, while it limits analysis due to its ipsative nature, it was designed to control for sex bias, social desirability, and the extent to which each statement represented its specific value (Meglino et al., 1989). The scale's

extensive development is discussed in Ravlin et al. (1987) as well as Meglino et al. (1989).

With regard to these values, I propose that those who value achievement are driven to meet and surpass their personally set goals and will, therefore, prefer to be individually recognized for their accomplishments and differentiated from others (McClelland, 1985). Carson et al. (1991) also discussed the fact that high performers may be unhappy with a lack of differentiation and may experience lower motivation. It follows that users of this sort would prefer an individually-based PM system that distinguishes between and recognizes individuals. Conversely, those who value helping and concern for others will feel more comfortable within a group-based PM system. These individuals would not have as much of a need for individual recognition or competitiveness. Instead, they would prefer that performance be managed at a group level where collective efforts could be assessed. In sum,

**Hypothesis 2:** A high value for Achievement will be positively associated with PM preferences for an Individual level of focus, while being negatively associated with preferences for a Group level of focus.

**Hypothesis 3:** A high value for Helping and concern for others will be positively associated with PM preferences for a Group level of focus, while being negatively associated with preferences for an Individual level of focus.



A similar rationale can be derived with regard to the purposes of PM systems proposed above. Individuals with a high value for achievement would prefer a PM system that stresses evaluation and the contingent rewarding of performance. In contrast, those who value helping and concern for others would prefer systems that focus on the development of individuals and the continuous improvement of work systems. In short,

**Hypothesis 4:** A high value for Achievement will be associated with preferences for a PM system that stresses Evaluation.

**Hypothesis 5:** A high value for Helping and concern for others will be associated with preferences for a PM system that stresses Development and continuous improvement.

Because of lack of theoretical rationale, no a priori predictions were made for fairness and honesty values as they relate to any of the three PA dimensions. Nor were any predictions made for achievement and helping values as they relate to input source.

Shifting from personal variables as predictors, the next two hypotheses deal with situational variables. The two samples in this research were from organizations that were both taking steps to implement TQM. Along these lines, HRM specialists in both companies were considering plans to eventually shift PM processes toward the TQM mode, or non traditional PA, described earlier.

Nevertheless, at the time of the study, both still had traditional appraisal systems in place characterized by individually differentiated ratings and clear procedures for converting ratings into rewards. If users perceive that recent appraisals received are fair and accurate and that overall, they were satisfied with the current traditional system, it follows that they would prefer to maintain that system. In sum,

**Hypothesis 6:** Higher perceptions of fairness and Satisfaction with regard to the current, traditional system will result in preferences for a PM system with an Individual level of focus, Hierarchical input and one that stresses Evaluation.

Latham et al. (1993) were critical of how PM research has tended to neglect the changing nature of the design and structure of modern jobs and groups of jobs. Group processes and organizational behaviour literature contain abundant examples of the increasing interrelatedness of positions and jobs (Latham et al., 1993; Mohrman et al., 1990). PM as well as goal setting research, has largely been based upon simple tasks that are not related or dependent on other tasks or jobs. This is in contrast to real-world settings where more jobs have become interrelated involving teamwork on the part of individuals (Berwald, 1992).

Bettenhausen (1991) reviewed 250 studies published between 1986 and 1989 on the subject of small groups, and stresses the importance of group dynamics in management research. Further, and in relation to this study, is the question of group dynamics and PA. He mentions that certain studies (see Kernis, Grannemenn, Richies & Hart, 1988) show that when a person acts in a group, self-awareness is lowered and group-awareness heightened. Furthermore, he states, "The group's common goal provides a sense of purpose for the group member...". There is, therefore, strong identity with the group norms and attitudes. Worker preferences should, therefore, be influenced by these dynamics.

I propose that when individuals perceive that they are operating in a teamwork mode to solve problems and improve performance, they would concomitantly prefer a PM system with a team or group level of focus. In addition, they would want those who are most familiar with their performance to be a source of input; their team members. It follows from the above that,

**Hypothesis 7:** The more one perceives one's work to fit into a team effort with others, the more one will prefer a PM system with a Group level of focus and Peer input.

Ashford (1986) explored two biographical factors, job tenure and organizational tenure, in her research on

feedback-seeking behaviour. She found a highly significant negative correlation between both independent variables, job tenure and organizational tenure, and the dependent variable, active feedback seeking behaviour. This first points to the idea that employees who have greater tenure will be more familiar with their jobs and will not require much guidance or frequent feedback with regard to performance. Second, since active feedback seeking is reduced due to tenure, peer feedback may be less preferred. Finally, because tenured workers are more confident in their ability to perform their jobs well they may wish to be evaluated separately from any group effort, knowing that they can reap more recognition and reward for their performance. In sum,

**Hypothesis 8:** Employees with greater job Tenure will prefer lower Frequency of appraisal, the least amount of Peer input, Individual and Evaluative PA.

In sum, the proposed research seeks to determine preferences in the PM process as well as the relationships with such preferences (See Appendix B - Table 7 for a summary of hypotheses and Table 1 above for summary of the results of relationships between predictors and preferences). Determining preferences seems to be the next logical step in PA research. Finally, the proposed research makes an effort to further the development of a framework for PM research by exploring the concepts of the

traditional and non-traditional types of PA; the framework discussed in this research is presented in Figure 1 and discussed in detail further on.

Table 1  
Overall Relationships Between Predictors and Preferences

Predictors	Level of Focus	Purpose	Input Source
Value for Achievement	Individual (+) Group (-)	Evaluate(+)	No Prediction
Value for Fairness	No Prediction	No Prediction	No Prediction
Value for Honesty	No Prediction	No Prediction	No Prediction
Value for Helping	Individual (-) Group (+)	Develop(+)	No Prediction
PA satisfaction	Individual(+)	Evaluate(+)	Hierarchical(+)
Job Tenure	Individual(+)	Evaluate(+)	Peer(-)
Teamwork	Group (+)	No Prediction	Peer(+)

Two separate data collections were conducted. The first was used solely for the development of the scales. The scale development phase involved two separate samples which were collected sequentially. Reliability analysis and changes to the scales are reported with the principal analysis being conducted on the full study. This methodology was used due to the fact that many of scales were newly developed and were not previously tested; in order to improve the quality of the full study it was

decided that the reliability of the scales should be established. Extensive reliability analysis and modifications to the scales were, therefore, conducted on these two samples until satisfactory reliabilities resulted for use in the full study.

## SCALE DEVELOPMENT PHASE

### METHOD

#### **Summary of scale development samples**

Two large organizations were used sequentially in this part of this study: (1) a large Canadian utility company, and (2) a large Canadian transportation company. In the first company, 80 participants were involved who belonged to a large department engaged primarily in engineering work. In the second company, 71 participants represented a mixture of individuals in staff positions, such as human resources and public relations. All data were collected anonymously. Participants were told that the data would be used to provide company officials with information to help redesign PM systems at their respective companies. Results were summarized and fed back to participants. Internal consistency and factor analytic procedures were used on the data from these two samples to derive reliable measures that were subsequently incorporated into the present study.

## **Sample 1**

### **METHOD**

#### **Research Site, Participants, and Procedure**

Data were collected in a large Canadian utility company. A few years prior to the study, the company had officially engaged in a TQM program based on the work of Deming (1986). Participants belonged to a large department engaged primarily in engineering work, consisting of over 500 employees. Within this department there were 13 groups of employees, each group being comprised of between four and 12 employees. A secretary from the department randomly distributed the questionnaires within each group. Questionnaires were brought back to the secretary's desk within the next week and then collected by an employee in the sample organization. Out of 110 questionnaires distributed, 80 were returned, for a response rate of 73%. Nine of the questionnaires were discarded because they were filled out from the perspective of the supervisor/rater of a PA; this was an original part of the study but inaccurate instructions caused their removal. In addition, the perspective of supervisor was later removed altogether because of a desire to focus on the employees' perspective. All data was kept anonymous at the individual level. The mode level of education was a Bachelor degree with 62% holding such degrees.

## **Measures**

The questionnaire used in this phase contained items that aimed at measuring both preferences in the PM process, in terms of what employees would like to see implemented for appraisal, and predictors of these preferences (See Appendix A and Figure 1). Both preferences and predictors, except for the values, were measured using one of two 5-point Likert-type scales, depending on the wording of the question. In one scale, a rating of 1 was "strongly disagree" and a rating of 5 was "strongly agree". In the other scale, a rating of 1 was "not at all" and a rating of 5 was "to a great extent".

The survey items for sources of input information, previous ratings, biographical factors, and frequency of discussion were adapted from a questionnaire designed by Prince (based on a survey conducted for BOEING). Items for focus of appraisal (i.e., group versus individual) were designed based on a framework as presented in Waldman and Kenett (1992). Finally, the scales for purpose of evaluation (i.e., development versus evaluate) were developed based on studies conducted by Carson et al. (1991).



## Preferences

Reliability analyses (Cronbach alpha) of the preferences resulted in the following: individual (.73), group (.67), customer (.60), distinguish (.46), hierarchical input (.58) and peer (.50).

The first scale is composed of four items and represents a preference for being appraised on an individual basis. Respondents were asked to state the degree to which they agreed with each item (Appendix A). The next two scales represent preferences more in line with a TQM orientation. The group scale has three items which attempted to gauge the respondent's preference for a team-oriented TQM approach to appraisal. The customer scale is made up of two items which attempted to get at a preference for customer input into the appraisal process. The distinguish scale was made up of two items attempting to measure respondent preference for being compared to and distinguished from others. Finally, three scales which attempted to gauge the respondent's preference for certain sources of input into their PA were included. The first scale asked about hierarchical or top level input and was composed of three items. The second source of input scale was about peers and was made up of two items. The last two items, scales relating to self input and frequency of appraisal, were made up of only one item and alpha

reliability could not be computed.

### **Predictors**

The first predictor used in this study involved work values (Ravlin & Meglino, 1987). Ravlin and Meglino (1987) examined the effects of work values on perception and decision-making tasks. The work values consist of Honesty, Fairness, Achievement, and Helping, and were measured using a forced-choice format. The four values are assessed using 24 paired comparisons, rather than Likert scaling in order to reduce the effects of social desirability. Since the items for the four values were mostly positively worded, it would may have resulted in respondents rating themselves highly. Forced-choice worked in such a way as to reduce this possibility of excessively positive rating; each time a respondent checked off one value from a pair, a point was given for that value; this resulted in scoring 0 to 12 on each value.

The second predictor was perceptions of rating fairness and accuracy associated with the current system. A three item scale, for which the alpha was .88, was developed.

The last predictors, organizational and job tenure, were each measured by an open-ended question. The average

organizational tenure was 13.6 years, and the average tenure in the job type was 4.5 years.

The reliabilities for the scale development phase as well as for the hypothesis testing study, are reported in Table 2 (Appendix B). With the exception of the distinguish (.46) and peer input (.50) scales, the alphas were respectable, but further attempts to improve all scales was deemed necessary.

## **Sample 2**

Following the results of the first collection of data, parts of the questionnaire were redesigned. In order to strive for improved reliability some sections were streamlined, some new items were added, some items were deleted, and the wording was clarified on yet other items. The changes to the questionnaires described below were based on the reliability analysis conducted with the first sample above.

## **Changes to questionnaire**

There were several changes to the scales, the most important will be described here. First, an option for the question asking to what extent certain components should be part of recognition of performance and division of rewards was split into two. The item originally read

"reject rate, error rate, and/or number of complaints". This option was divided into "each employee's reject rate, error rate, and/or number of complaints" and "reject rate, error rate, and number of complaints for the team as a whole". The items were intended for loading onto the individual preference and group preference scales respectively.

Second, the item inquiring about preferences for certain sources of input was reworded in order to make it easier to get into the frame of mind of a rater. The question asked to what extent should certain sources be used in the appraisal and gave options, for instance, such as "your supervisor" and "yourself". These options, as well as the others, were reworded to "my supervisor" and "myself"; it was believed that this would give the respondent a more accurate frame of reference.

In an attempt to improve the reliability of the customer scale, three options were added to this question which said "anyone inside the company who is affected by my work" and "anyone outside the company who is affected by my work". These items were added to represent the TQM concepts of internal and external customers, respectively. The third item asked to what extent would "customer survey information" contribute to a fair and accurate appraisal.

Third, two new scales were added to the questionnaire in an attempt to gauge more PA preferences. The scales attempted to measure preferences for a developmental PA versus an evaluative PA. The developmental scale consisted of four items and the evaluative scale had five items which will be described in detail later.

Finally, there were two items in the first questionnaire, about degree of distinction between employees, which showed low reliability (.46). An item was added in an attempt to strengthen this scale; the item read "comparing my performance to that of my co-workers is necessary".

This new questionnaire, as reported in Appendix A, was then distributed to a second sample in order to obtain more data for one last reliability analysis.

## **METHOD**

### **Research site, Participants, and Procedure**

The second data collection in this phase was conducted at a large railway company. Participants were mainly from the human resources department. At the time of the study, TQM was not a concern and the organization was going through large scale labour negotiations and major layoffs. The 120 questionnaires were handed out randomly

and collected anonymously by a contact person who worked as a labour relations agent in the organization. Seventy one usable questionnaires were collected for a response rate of 59%. The average education of the sample was bimodal between CEGEP and a bachelor degree. The average work group size for the sample was approximately 7; this is a new demographic item that was added.

### **Measures**

As in sample 1, the questionnaire used with this second sample attempted to measure both preferences in the PA process and predictors of these preferences (See Appendix A). Both preferences and predictors used the same two 5 point Likert-type scales, depending on the wording of the question, except for the values.

### **Preferences**

Reliability analysis (Cronbach alpha) showed that the scales continued to be reliable. The preference scales that resulted were a 5 item individual scale (.60), a 4 item group scale (.80), a 3 item distinguish scale (.65), a 5 item customer scale (.79), a 4 item developmental scale (.62), a 5 item evaluative scale (.76), a 3 item hierarchical level input scale (.58), a 3 item peer level input scale (.69) and self as input source.

## **Predictors**

The first predictor used were the four work values (Ravlin and Meglino, 1987). The work values consist of Honesty, Fairness, Achievement, and Helping, and were measured using a forced-choice format as in sample 1.

The second predictor was perceptions of rating fairness and accuracy associated with the current system. The three item scale used in the pre study remained unchanged. The alpha for this sample was .91.

As in sample 1 the last predictors, organizational and job tenure, were each measured by an open-ended question. The average organizational tenure was 13.3 years, and the average tenure in the job type was 10.3 years.

Based on sample 2 in the previous scale development phase, the questionnaire was once again changed in an attempt to further improve the reliabilities and also to test previously mentioned hypotheses.

## **Changes to questionnaire**

The majority of changes in this final iteration of the study involved mostly minor wording changes except for the following changes.

First, three items, which had formed the distinguish scale, were combined with the individual preference scale. It was believed that these items were conceptually similar to the construct that was attempting to be measured. Reliability analysis seems to support this assumption; separately, the individual and distinguish scales had reliabilities of .60 and .65, respectively while together they achieved a reliability of .87 (Appendix B - Table 2, column 3). The items added to the individual scale consisted of: " a performance appraisal system should, with great detail, differentiate between my performance and that of my coworkers/team members", "it is important to maintain distinctions between team members based on their performance" and "comparing my performance with that of my coworkers is necessary' .

Second, the customer scale was strengthened by adding questions on internal and external clients as well as rewording existing questions.

Third, one question was added to the preference for development scale which asked agreement to "improving the way work is done". In addition, one double barreled question, which had read "helping to achieve job/career goals", was divided into two separate questions.



Fourth, one item in the evaluate scale which had read, "to determine who should be discharged/fired" was removed. This was done for two reasons. First, it was decided that this may be worded in an overly threatening way. Second, conceptually speaking, it seemed that this item went beyond the 'evaluative' meaning of the scale.

Fifth, one item in the scale which inquired about perceptions of fairness was removed. This item which stated, "my supervisor did not take into account factors beyond my control in my last rating" was removed. This item was worded based on TQM theory which discusses system versus individual causes of performance; it was believed that this was too narrow a focus. A new question was added to the survey which attempted to get at reactions to the present PA system; it was worded in the following way, "overall, I am satisfied with the current performance appraisal system".

Finally, theoretical reconsideration suggested that a scale attempting to measure the degree of teamwork which existed for respondents be added. In the original questionnaire, a scale which attempted to measure the degree of interdependence was included but reliabilities were weak. It seemed more relevant to inquire directly about the degree of teamwork that existed. A three item

scale was, therefore, added to the full study for this purpose.

## HYPOTHESES TESTING PHASE

### METHOD

#### **Research Sites, Participants, and Procedure**

Data for the present analyses were obtained from two subsidiaries of a larger Canadian conglomerate involved primarily in telecommunications services and products. Surveys were distributed within each of the subsidiaries by respective company representatives using internal mail systems (See Appendix A). Survey packets contained cover letters signed by the representatives outlining the purpose of the study (i.e., to form a better understanding of PM system preferences) and requesting participation. All surveys and cover letters were translated into both English and French, so that respondents could fill out the questionnaire in their language of choice. Surveyed individuals were randomly chosen from groups involved in either engineering, customer service, or sales activities. A total of 160 surveys were anonymously distributed with 76 being returned directly by mail to the researcher (35 and 41 from respective subsidiaries) for an overall response rate of 48 percent. Males composed 53 percent of the sample. Thirty percent had high school or technical training, 54 percent had bachelors degrees, and 16 percent possessed post-graduate degrees. The average tenure in

their jobs was 7.6 years.

### **Existing TQM Efforts and Performance Management Systems**

Three years prior to the study, both subsidiaries had officially embarked on a TQM strategy characterized by extensive employee training, analyses of key processes, and activities designed to better meet customer requirements and improve service. Concomitantly, the existing PM systems could be considered largely traditional in nature at both subsidiaries at the time of the study. For example, at one of the subsidiaries, PA continued to be conducted once a year. A form was used to evaluate an employee, outlining how well the employee met his/her objectives, the training activities that were carried out during the year, and to establish the employee's expectations for the future. Overall performance was rated by the employee's supervisor on a 5-point scale. According to company policy, on average, 25% of employees should be rated as outstanding or exceeding expected standards (ratings of 1 or 2), 60% should be rated as performing according to expectations (rating of 3), and 15% should be below expectations or face dismissal (ratings of 4 or 5). The performance ratings were used as the basis for making decisions regarding merit bonuses, or dismissal in the case of the lowest possible rating. Performance appraisal and rewarding were conducted in a

similar manner at the second subsidiary. No procedures were in place at either subsidiary to assess or reward performance at the group level, or to systematically include peer or customer input sources into the PA process.

### **Measures**

Both preferences and predictors, except for the values, were measured using one of two 5-point Likert scales, depending on the wording of the questionnaire items. For the first scaling, a rating of 1 was "strongly disagree" and a rating of 5 was "strongly agree". For the second scaling, a rating of 1 was "not at all" and a rating of 5 was "to a very great extent".

### **Preferences**

The first PA preference scale, individual preference, was composed of eight items ( $\alpha=.87$ ) and represents a preference for an individualized approach to PM.

Respondents rated the following items:

1. individual contribution to organizational success should be considered in evaluating performance;
2. individual initiative, ambition, and conscientiousness should be considered in evaluating performance;
3. each employee's error rate and/or number of complaints should be considered in evaluating performance;
4. a performance appraisal system should put emphasis on improving individual performance;
5. rewards and recognition should be distributed based

- on how each individual performs;
6. a performance appraisal system should, with great detail, differentiate between my performance and that of my coworkers/team members;
7. it is important to maintain distinctions between team members based on their performance; and
8. comparing my performance with that of my coworkers is necessary.

Group preference was assessed with four items

(alpha=.69). Respondents rated the following items:

1. team contribution to organizational success should be considered in evaluating performance;
2. error rate and/or number of complaints for the team as a whole should be considered in evaluating performance;
3. rewards and recognition should be based on what the group as a whole accomplishes; and
4. a performance appraisal system should put emphasis on improving team performance.

Preference for evaluation was assessed by four items (alpha=.72) included in a list of possible purposes for a PM system. Respondents were asked to rate "to what extent should a performance appraisal system be used for each of the following purposes?" The evaluation preference items included:

1. making promotion decisions;
2. making decisions on who is competent and who is not
3. determining who should be released; and
4. judging performance

Included in the above list were six items (alpha=.71) used to assess development preference:

1. analysing and improving performance;
2. helping to achieve current job goals;
3. helping to achieve career goals;
4. helping to identify training needs;
5. providing feedback on performance; and
6. improving the way work is done.

Preferences were also assessed for various input sources. Respondents were asked to rate "to what extent do you feel each of the following sources should be used in the assessment of your performance?" Hierarchical input ( $\alpha=.61$ ) included four items measuring the extent to which respondents preferred to have people above them in the organizational hierarchy used as appraisal sources. These included:

1. my supervisor;
2. my supervisor's supervisor;
3. other managers at my supervisor's level; and
4. committee of managers to judge whether extreme ratings (good or bad) are deserved.

Self input was determined using a single item:

"myself". Peer input ( $\alpha=.69$ ) included three items:

1. co-workers in my work group;
2. co-workers outside my work group; and
3. committee of peers/co-workers to judge whether extreme ratings (good or bad) are deserved.

Customer preference was composed of seven items ( $\alpha=.77$ ) which assessed preferences for customer input into the PM process. Customers included those both internal and external to the organization. It should be noted that the term "client" was viewed as a generically appropriate and equivalent alternative by representatives at the two subsidiaries. The items used to assess this preference were:

1. clients internal to the company should be considered in evaluating performance; and

2. clients external to the company should be considered in evaluating performance.

In addition, from the list of possible input sources mentioned above, respondents rated their preferences for:

3. my clients;
4. anyone inside the company who is affected by my work;
5. anyone outside the company who is affected by my work;
6. opinions obtained directly from clients internal to the company; and
7. opinions obtained directly from clients external to the company.

Finally, the frequency for appraisal question read,

1. How frequently should your supervisor discuss your performance with you? Response categories were:

Daily, Weekly, Monthly, Quarterly, or Annually

### **Predictors**

Work values were measured as possible predictors of PM preferences. The Meglino et al. (1989) measures of Achievement, Helping, Honesty, and Fairness were included. These values are measured using the forced-choice format of 24 paired comparisons. The paired comparisons have been recommended by Meglino et al., as mentioned previously, as a means of reducing the effects of social desirability when measuring values. In the current study, each time a respondent checked off one value from a pair, a point was given for that value; this resulted in a

scoring range of 0 to 12 for each value. Although no relationships were predicted for either Honesty or Fairness values, they were still assessed and reported for exploratory purposes. Sample items for the four work values include:

Achievement -- "taking on additional tasks to get ahead in an organization";  
Helping -- "trying to help a fellow worker through a difficult time";  
Honesty -- "refusing to tell a lie to make yourself look good"; and  
Fairness -- "providing fair treatment for all employees"

Appraisal satisfaction included three survey items ( $\alpha=.94$ ) using the previously mentioned Likert-type scaling to assess satisfaction with the current appraisal system at respective subsidiaries. The items were:

1. my last rating was an accurate assessment of my performance;
2. I feel my last rating was fair; and
3. overall, I am satisfied with the current performance appraisal system.

A three-item teamwork scale ( $\alpha=.80$ ) was devised to measure the degree to which respondents perceived themselves as working together as part of a team to solve problems and improve performance. The items were:

1. when problems arise, everyone in my team works together to solve them;
2. the team I work with is continually assessing its progress; and
3. the team I work with regularly discusses ways to improve its performance.

Finally participant tenure in their respective jobs



was included in the analyses. Tenure in Job was measured in years and months by an open-ended question.

## **Analyses**

### **Factor structure**

I proposed that preferences primarily represented either traditional PM (individual level of focus, evaluation purpose, and hierarchical input source) or TQM-oriented PM (group level of focus, and peer and customer input sources). An exploratory, principal components factor analysis with Varimax rotation was conducted, on the final sample in the full study, to examine this proposition. Individuals' scores for the above six scales were inputted into the factor analysis. An exploratory, as opposed to confirmatory, procedure was used for two reasons. First, theory and empirical testing remain at an early stage of development with regard to understanding the structure of PM systems, especially when considering user preferences. Second, the current sample size may be too small for commonly-used confirmatory procedures such as LISREL (Harris & Schaubroeck, 1990; Joreskog & Sorbom, 1989).

### **Relationships among predictors and preferences.**

Pearson correlations were computed among all variables. To provide additional evidence regarding hypotheses,

hierarchical and stepwise regression analyses were employed. Each of these regressions involved a single work value. B. M. Meglino (personal communication, January 11, 1994) stated that incorporating a single work value into a regression analysis should not be problematic. Difficulties would occur if more than one value were to be included because of how the values are ipsatively measured. He also cautioned against attempts to interpret correlations among the work values. Because of their ipsative scoring, these correlations will be artifactually negative.

## RESULTS

Means, standard deviations, and intercorrelations are presented in Table 3 (Appendix B). A number of findings are noteworthy with regard to mean levels of PM preferences. First, the mean levels of individual and group preferences are approximately equivalent. Second, as might be expected, there is a substantially stronger desire for development as opposed to evaluation ( $t=6.89$ ,  $p<.01$ ). Third, self input is the highest rated source, significantly higher than customer input ( $t=4.76$ ,  $p<.01$ ). Customer input is significantly higher than hierarchical input ( $t=4.02$ ,  $p<.01$ ) which, in turn, is significantly higher than peer input ( $t=2.66$ ,  $p<.05$ ). The relatively

large mean scores for group preference and customer input may reflect the fact that respondents are cognizant that their companies are attempting to make the transition toward TQM, although the current appraisal system is still traditional in nature.

Results of the factor analysis of PM preferences are shown in Table 4 (Appendix B). As predicted by Hypothesis 1, two factors were extracted with eigen values greater than 1. Together these two factors accounted for 64 percent of the variance. The factor loadings in Table 4 (Appendix B) clearly show how the first factor is represented by the three measures conceived to depict traditional PM: individual preference, evaluative, and hierarchical input. The second factor is represented by the three measures conceived to be more in line with TQM-oriented PM systems: group preference, peer input, and customer input. Further analyses revealed that the average correlation within the two clusters of measures is .44 and .35, respectively. Furthermore, the average correlation between clusters is only .05. However, it should be noted that as shown in Table 3 (Appendix B), customer input is significantly correlated with both individual preference and hierarchical input.

The correlations shown in Table 3 (Appendix B) can be used to address Hypotheses 2 through 8. Confirming Hypothesis 2, Achievement Value is positively associated with individual preference ( $r=.39$ ,  $p<.01$ ), while being negatively correlated with group preference ( $r=-.25$ ,  $p<.05$ ). Only mixed support was found for Hypothesis 3 in that Helping Value is negatively associated with individual preference ( $r=-.38$ ,  $p<.01$ ), but not significantly correlated with group preference ( $r=.16$ , not significant). No support was found for either Hypothesis 4 or 5 in that Achievement Value is not significantly correlated with evaluative ( $r=.13$ , not significant), and Helping Value is not significantly associated with development ( $r=.19$ ), although both are in the predicted direction.

Hypotheses 6 and 7 pertained to possible relationships between users' current PM system, work design, and PM preferences. Hypothesis 6 was partially confirmed in that appraisal satisfaction is positively associated with individual preference ( $r=.28$ ,  $p<.05$ ), but not at all correlated with evaluative or hierarchical. As predicted by Hypothesis 7, a positive relationship was obtained between teamwork and group preference ( $r=.30$ ,  $p<.01$ ).

Finally hypothesis 8 was supported. Job tenure was positively correlated with preference for individual ( $r=.23, p<.05$ ), as well as negatively with peer input ( $r=-.36, p<.01$ ) and frequency of appraisal ( $r=-.27, p<.05$ ). This indicates that as individuals gain tenure in their jobs, they tend to have more of a preference for PM with an individual level of focus emphasizing evaluation, but not desiring peer input into the process.

Hierarchical regression analyses were performed to confirm the unique contribution of variables found to be predictive of individual and group preferences (Appendix B - Table 5). Correlations in Table 3 (Appendix B) revealed some degree of multicollinearity among these variables, thus raising suspicions of their unique contribution. Variables used to predict individual preference were Achievement and Helping Values, tenure in job, and appraisal satisfaction. group preference was regressed on Achievement Value and teamwork. For regressions involving individual preference, the order of entry was one of the two values, followed by tenure in job, and appraisal satisfaction. This ordering reflects a temporal sequencing in that an individual's values tend to be deep-rooted, tenure accrues in one's recent past, and satisfaction with appraisal processes reflects one's current situation (c.f., Cohen & Cohen, 1983). Similarly,

in the prediction of group preference, Achievement Value was initially entered followed by teamwork in one's current work context.

Results are shown in Table 5 (Appendix B) confirming the unique contribution of predictors and demonstrating how a total of 27 percent of the variance could be accounted for in individual preference, and 16 percent in group preference.

Stepwise regression analyses were also performed to provide additional support for the hypotheses. Each one of nine dependent variables (individual, group, evaluative, developmental, hierarchical input, self input, peer input, customer, PA frequency) was regressed on to three independent variables (appraisal satisfaction, teamwork, job tenure) and alternately one value (Fairness, Achievement, Honesty, Helping). There was, therefore, four separate regressions for each dependent variable. Table 6 (Appendix B) presents the results of these regressions which are related to the hypotheses of this study. Due to the number of regressions performed, only the regressions which were significant are reported. In addition those findings which deserve mention but were not hypothesized are included. Table 6 (Appendix B) only reports the final step in each regression. The results show divergent and

convergent validity in that predicted relationships were supported by the remaining variables in each stepwise regression.

### **Post-Hoc Results**

There were a few results, as apparent in the correlation matrix, that were not hypothesized but are worth mentioning.

First, there is a highly significant positive correlation (.37,  $p < .01$ ) between develop and evaluate. The first possibility for this relationship is that respondents feel that these Purposes can and should both be included in a PA; contrary to possible intuition, users may see no inherent contradiction between the two purposes. They may prefer to see some balance between them included in their PA. Another possibility is that respondents' preferences may be in transit from evaluate to develop purpose. Since evaluative has traditionally been part of PA as well as organizational culture, it may be that respondents want developmental PA but cannot divorce themselves from an evaluative PA. As was mentioned previously, the organizations used in this sample were in the process of implementing TQM; if this is having an effect on employee preferences in terms of PA design, then it would be worthy of exploring this phenomenon.

A second finding relates to the value for Fairness, which was not involved in the hypothesis testing. Value for Fairness seems to be significantly negatively correlated to individual focus ( $-.22, p<.05$ ), evaluative ( $-.26, p<.05$ ) and develop ( $-.23, p<.05$ ). It is first interesting to note that value for Fairness is not positively correlated with development purpose. One possible explanation is that respondents have experienced the type of development purpose which, as mentioned previously, only gives "lip service" to developing human resources (Latham et al., 1993). In sum, it seems that those who value Fairness do not want to have anything to do with PA, especially the traditional form (i.e., individual and evaluative). In sum, Fairness Value tends to be negatively correlated with PM preferences (individual, evaluative, and developmental) suggesting some tendency for those who especially value fair treatment in work settings to be simultaneously sceptical of a variety of PM strategies. Those who had a high value for fairness did not want, for example, neither an evaluative nor a developmental appraisal.

## DISCUSSION

The topics of employee preferences/acceptability and compatibility with TQM are timely issues facing organizations attempting to redesign and implement



effective PM systems. The present study provides an example of research addressing these issues. As per the original criticisms about the lack of a framework for PM, the results of this study begin to build a basis for such a framework (see Figure 1). This study can be one of the building blocks for developing a more sophisticated framework for PM.

Figure 1 is intended to show that from a general perspective, there are at least three major dimensions of PA (Focus, Purpose, Input) as well as one last dimension (Frequency) which can be predicted by individual and context factors. Other dimensions and predictors should be added to these boxes and explored. One possibility is that preference to appraise one's supervisor could have been added; this gets to the notion of bottom-up appraisal. Employees may want, depending on the situation and their personalities to give feedback to their supervisors. The presence of unionization could have been added to the list of predictors. While not specifically measured or explored, a sample organization used in the scale development phase seems to have shown certain signs that they were completely different from the rest of the organization; at the time of the study, this organization was going through union-labour negotiations. Finally, one other predictor that could be explored, related to the

last issue, is organizational instability; if employees are experiencing job insecurity, will they want to hide their performance in a group level appraisal and also shy away from evaluative PA.

While the results are somewhat preliminary, several findings are of interest. For example, two factors were derived delineating traditional versus TQM-oriented PM systems. However, caution must be taken in interpreting these findings. Customer input was correlated with both individual preference and hierarchical input suggesting that a desire for input from customers could fit a broad range of PM systems. Development and self input also seemed to cut across factors in terms of relationships with other preferences. Another reason for caution in interpreting the generalizability of the factor analytic results is that the present study only examined preferences. An investigation of actual PM systems might reveal a somewhat different structure with regard to how design features tend to go together in reality.

Individual values were predictive of PM preferences. This suggests that people may react differently to alternative forms of PM system design in accordance with their values. These findings are in line with those who suggest the importance of person/organization fit with

regard to values (O'Reilly, Chatman, & Caldwell, 1991). For example, organizations attempting to implement group-based approaches to appraisal and rewards may need to take steps (e.g., through selection or socialization practices) to ensure that employee values are in line with such systems. Current appraisal system satisfaction and the degree of teamwork in one's job were also found to be predictive of PM preferences. In total, the present findings suggest that variance in preferences can be largely understood by accounting for differences in individuals and their work contexts. Such differences would need to be taken into account if actual PM system design decisions were to be made on the basis of preferences.

A final issue that needs to be researched further is the possibility of a balance between the levels of the dimensions, group and individual PA, for instance. Traditionally, the workplace has been very individually oriented but, as mentioned previously, this is contrary to the needs of TQM; the question is can a PA system include both group and individual appraisal. There is such an attempt at XEROX corporation (Ruddy, 1993). Ruddy (1993) proposes that different types of rewards can and should be administered through different levels of appraisal. While he states that work group performance is best when rewards

are "pure individual or group regardless of the degree of task interdependence", he feels there can be a balance if different levels of focus are used with different types of rewards. He says, for example, that monetary rewards can be based on group performance while praise and recognition can be based on individual performance (Hyatt, 1993: cited in Ruddy, 1993).

The data suggests that group and individual PA are oppositely held focuses, although the means of both are high. This suggests that while the sample saw them as opposites, they did not feel they were mutually exclusive. Most organizations have a traditional PA based on an individual culture combined with the fact that most of them want to implement changes such as TQM. Group PA is needed to support such changes, but tradition and habit makes it difficult for them to get away from individual PA. I feel that some degree of combination, between group and individual PA, as ruddy (1993) mentions can and should be incorporated into a PA system. Ultimately, organizations will need to implement pure group PA if they are to support attempts to implement TQM; this must be done with a slow transition from individual PA by using a combination of these two focuses. It is analogous to a continuum with individual PA on one end and group PA on the other. Organizations are now on the individual side of

the continuum and want to move towards the group side. Smooth transition, in my opinion, would involve first using some balance between individual and group PA, that is, the middle of the continuum. This will give the organization time to change its culture and reduce employees' shock and resistance to change. In sum, I see a balance between group and individual Pa as being possible, as Ruddy (1993) has mentioned, and necessary until the organizational culture can support a purely group PA.

### **Study Limitations**

A methodological limitation that should be noted is that the present study was limited largely to a common method with data coming from a single source. Such data collection strategies tend to inflate relationships in a positive direction due to multicollinearity. Nevertheless, a few key negative correlations were expected and found, e.g., individual in relation to group preference.

Second, I measured individual values using a forced-choice format involving paired comparisons, as opposed to Likert scaling. The reason for this was because social desirability was thought to be a threat to the results. This may have limited the analysis which could be conducted for this scale; the regression analysis could

only support one value at a time for each dependent variable. It was, therefore, not possible to explore the separate variance every value contributed to each preference.

Third, while there were 9 dependent variables, there was a limited number of predictors, or independent variables. This may have given a limited picture of what predicts preferences on certain PA components.

Fourth, the sample size was respectable, but it would have been preferable to increase it in order to increase the power of the statistics which was possible to conduct. As stated previously, it might have proven interesting to conduct a LISREL analysis to determine whether the factor structures predicted would have resulted.

Finally, the type of samples used for this research limits the generalizability of this study. The majority of respondents seemed to be professionals. There were very few clerical jobs. In addition, the study results cannot be generalized to small and medium size organizations because the organizations that formed the samples were themselves very large.

## **Implications**

The high response rates in all three data collections implies a willingness, indeed an eagerness, on the part of ratees, to participate in such a process. There may be higher response and more interest if ratees believe that the organization would actually use the elicited preferences.

The present research can be viewed as an example of the type of data collection activities that would make the HR function more exemplary of total quality principles. Preference assessment represents a means for HR specialists to stay on top of internal client/user requirements and desires. Bowen and Lawler (1992) considered such forms of data collection and went further to argue for the co-design and production of HR services involving both HR specialists and their internal clients. This raises the issue of what might happen if HR expertise would suggest a particular form of PM design, while actual preferences would suggest another. For example, perhaps an organization is attempting to make a rapid shift toward a TQM-based strategy, and HR specialists thus determine gainsharing (a group-oriented approach) to be a logical PM device. However, an assessment of preferences reveals a clear majority still favoured PM with an individual focus, perhaps reflecting long standing cultural norms and values

in the organization favouring such things as individual achievement and competition. Armed with this information, HR might attempt to work with user groups and only slowly implement gainsharing, while simultaneously maintaining a balance with more individually-oriented PM practices.

One area, which is suggested below for future research, is person-organization fit. The issue involves the degree to which employee preferences are congruent with the strategic intent or direction of the organization and the effect on organizational outcome. It may be, for example that an organization wishes to implement TQM but employee preferences are towards non-TQM PA design features. It is important to note that the research conducted here at least begins to give a tool which can be used in this assessment; this research not only says that employee preferences are important, but has shown that they can be measured and predicted to some degree. Once an organization has established an incongruency between employee preferences and the desired strategic direction, only then can a plan be drawn to attempt to bring these two factors in line. It is beyond the scope of this paper to go into detail about such resistance to change or the strategic issues involved, but this may be an excellent direction and extension for the research conducted by this study.



### **Future research**

Additional research is suggested by the present findings. First, the findings need to be replicated using other samples, in different organizations, and at various hierarchical levels within an organization. Second, additional predictors and/or preferences could be included. For example, especially for managers, preferences could be assessed regarding desire for subordinates as an input source. Third, research procedures might include collecting data in a controlled manner by instructing participants to view their PM preferences from one of two perspectives: (1) from the viewpoint of an individual **receiving** PM, and (2) from the viewpoint of an individual **administering** PM. The present research was limited to the former perspective in that survey instructions were phrased in terms of receiving PM. Obtaining an additional perspective, from the viewpoint of administering PM, would likely result in some interesting comparisons. For example, it would be of interest to compare the present factor analytic findings regarding the structure of PM preferences with findings obtained from the viewpoint of those administering PM.

A fourth area of investigation might involve the extent to which PM preferences are associated with indices of unit-level effectiveness. Perhaps performance is most

enhanced when actual PM practices are congruent with dominant PM preferences, i.e., when there is a fit between preferences and practices. Such a fit might also result in more actual usage of PM system devices, an issue of increasing concern to PA researchers and practitioners alike (c.f., Fried, Tiegs, & Bellamy, 1992).

The larger issue of fit encompasses the extent to which the congruence of organizational goals and strategies with actual PM system practices may result in enhanced performance (Bretz et al., 1992; Mohrman et al., 1990). For example, the question remains as to whether organizations attempting to implement TQM might benefit more from the type of PM practices considered above as TQM-oriented, as opposed to those considered to be more traditional in nature. Taken as a whole, a variety of interesting research issues could be framed around the assessment, design, and evaluation of PM systems.

Fifth, Bettenhausen (1991) seems to suggest that group dynamic variables may influence member attitudes (see Howell & Frost, 1989; cited in Bettenhausen, 1991). These variables may, therefore mediate a group member's attitudes toward PM preferences. One such variable mentioned is the time a person has been a member of a group; the conflict between self and group interest may be

the most heightened for newer group members. Additional reported studies show that when rewards were scarce performance was positively related to equality-based reward allocations; self-interest tendencies appeared when rewards were abundant. In sum, a group level analysis of preferences may be an interesting path. In this study the degree of teamwork was measured and correlated to PA preferences but the moderating effects of individual level variables, such as each team members tenure in the group, may have shown different results.

Finally, as mentioned previously, organizational level variables such as existing culture and leadership, policy and industry type should be taken into account when looking at PA preferences. Unionized organizations may, for instance, have different preferences than non-unionized organizations. It was shown in this study that teamwork, which can be considered a culturally influenced variable, was positively related to preference for a group level PA. One other variable that could be measured is the degree of competitiveness which exists in the organization; it may be that this is related to the preference for individual level PA.

In conclusion, the present findings provide some initial data regarding what users prefer in terms of their

PM systems. Comparisons were made between preferences for traditional PM versus those proposed to be in line with aspects of TQM. In addition, several variables were shown to be predictive of PM preferences. Assessing and taking action based on preferences is consistent with the notion of customer-focused human resources management. Perhaps the present study will lead to more research efforts along these lines.

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**APPENDIX      A**

## Sample 1

### INDIVIDUAL SCALE

To what extent should each of the following be considered in determining recognition of performance and division of rewards?:

- 1) individual contribution to organizational success;
  - 2) individual initiative, ambition, and conscientiousness;
  - 3) A performance appraisal system should put emphasis on improving individual performance;
  - 4) Rewards and recognition should be distributed based on how each individual performs;
- 

### DISTINGUISH SCALE

State the degree of agreement with the following:

- 1) A performance appraisal system should, with great detail, differentiate between my performance and that of my co workers/team members;
  - 2) It is important to maintain distinctions between team members based on their performance, in other words, some should be rated high, and some should be rated low.
- 

### GROUP SCALE

To what extent should each of the following be considered in determining recognition of performance and division of rewards?:

- 1) Team contribution to organizational success;
  - 2) Rewards and recognition should be based on what the Group as a whole accomplishes;
  - 3) A performance appraisal system should put emphasis on improving team performance.
- 

### CUSTOMER SCALE

- 1) To what extent should customer satisfaction be considered in determining recognition of performance and division of rewards?;
  - 2) To what extent do your customers have important information to contribute to an accurate assessment of your performance ?.
- 

#### SOURCE OF INPUT SCALE

To what extent do each of the following sources have important information to contribute to an accurate assessment of your performance ?:

##### Supervisor/Hierarchical Input

- 1) Your supervisor
- 2) Your supervisor's supervisor
- 3) Other managers

##### Peer Input

- 1) Co-workers in your work Group
- 2) Co-workers outside your work Group

##### Self Input

- 1) Yourself
- 

#### VALUES SCALE

The values scale had specific instructions reproduced from the Meglino et al. (1989) study:

INSTRUCTIONS: Sometimes people must choose between two things they feel they should do. In these choice situations they must place more emphasis on one activity over another. Below are pairs of statements which describe activities which people feel they should do. Read each statement carefully, and then place an 'X' next to the statement which you feel you should

emphasize more in your behaviour at work.

Example:

\_\_\_\_\_ Always being in control of your emotions while under stress

  X   Looking forward to the future with a positive outlook

In the above example, this particular person felt the second activity should receive more emphasis than the first. Of course another person might feel just the opposite.

Please read the following 24 pairs of statements and indicate which one in each pair you feel should receive more emphasis. Some choices will probably be difficult for you, but please do the best you can. It is important that you not leave any questions blank.

1. \_\_\_\_\_ Taking care of all loose ends on a job or project  
      \_\_\_\_\_ Being impartial in dealing with others
  
2. \_\_\_\_\_ Taking actions which represent your true feelings  
      \_\_\_\_\_ Trying to avoid hurting other people
  
3. \_\_\_\_\_ Encouraging someone who is having a difficult day  
      \_\_\_\_\_ Considering different points of view before taking action
  
4. \_\_\_\_\_ Speaking your mind even when your views may not be popular  
      \_\_\_\_\_ Working to meet job requirements even when your personal schedule must be rearranged
  
5. \_\_\_\_\_ Making decisions which are fair to all concerned  
      \_\_\_\_\_ Expressing your true opinions when asked
  
6. \_\_\_\_\_ Continuing to work on a problem until it is resolved  
      \_\_\_\_\_ Trying to help a fellow worker through a difficult time

7. \_\_\_\_\_ Trying to help reduce a friend's burden  
\_\_\_\_\_ Admitting an error and accepting the consequences
8. \_\_\_\_\_ Being impartial in judging disagreements  
\_\_\_\_\_ Helping others on difficult jobs
9. \_\_\_\_\_ Taking on additional tasks to get ahead  
\_\_\_\_\_ Admitting to making a mistake rather than covering  
it up
10. \_\_\_\_\_ Offering help to others when they are having a  
tough time  
\_\_\_\_\_ Doing whatever work is required to advance in your  
career
11. \_\_\_\_\_ Always being truthful in dealing with others  
\_\_\_\_\_ Giving everyone an equal opportunity at work
12. \_\_\_\_\_ Judging people fairly based on their abilities  
rather than only on their personalities  
\_\_\_\_\_ Seeking out all opportunities to learn new skills
13. \_\_\_\_\_ Trying to be helpful to a friend at work  
\_\_\_\_\_ Being sure that work assignments are fair to  
everyone
14. \_\_\_\_\_ Refusing to take credit for ideas of others  
\_\_\_\_\_ Maintaining the highest standard for your  
performance
15. \_\_\_\_\_ Being determined to be the best at your work  
\_\_\_\_\_ Trying not to hurt a friend's feelings
16. \_\_\_\_\_ Trying to bring about a fair solution to a dispute  
\_\_\_\_\_ Admitting responsibility for errors made
17. \_\_\_\_\_ Finishing each job you start even when others do  
not  
\_\_\_\_\_ Making sure that rewards are given in the fairest  
possible way
18. \_\_\_\_\_ Refusing to tell a lie to make yourself look good  
\_\_\_\_\_ Helping those who are worried about things at work

19. \_\_\_\_\_ Trying as hard as you can to learn as much as possible about your job  
\_\_\_\_\_ Taking a stand for what you believe in
20. \_\_\_\_\_ Sharing information and ideas which others need to do their job  
\_\_\_\_\_ Always setting high performance goals for yourself
21. \_\_\_\_\_ Refusing to do something you think is wrong  
\_\_\_\_\_ Providing fair treatment for all employees
22. \_\_\_\_\_ Allowing each employee to have an equal chance to get rewards  
\_\_\_\_\_ Taking on more responsibility to get ahead in an organization
23. \_\_\_\_\_ Correcting others' errors without embarrassing them  
\_\_\_\_\_ Holding true to your convictions
24. \_\_\_\_\_ Providing fair treatment for each employee  
\_\_\_\_\_ Lending a helping hand to someone having difficulty
- 

#### SATISFACTION/FAIR SCALE

State the degree of agreement with the following:

- 1) My last rating was an accurate assessment of my performance;
  - 2) My supervisor did not take into account factors beyond my control in my last rating;
  - 3) I feel my last rating was fair.
-

## Sample 2

### INDIVIDUAL SCALE

To what extent should each of the following be considered in determining recognition of performance and division of rewards?:

- 1) individual contribution to organizational success
  - 2) individual initiative, ambition, and conscientiousness
  - 3) Each employee's reject rate, error rate, and/or number of complaints
  - 4) A performance appraisal system should put emphasis on improving individual performance
  - 5) Rewards and recognition should be distributed based on how each individual performs
- 

### GROUP SCALE

To what extent should each of the following be considered in determining recognition of performance and division of rewards?:

- 1) Team contribution to organizational success
  - 2) Reject rate, error rate, number of complaints for the team as a whole
  - 3) A performance appraisal system should put emphasis on improving team performance
  - 4) Rewards and recognition should be based on what the Group as a whole accomplishes
- 

### DISTINGUISH SCALE

State the degree of agreement with the following items:

- 1) A performance appraisal should, with great detail, differentiate between my performance and that of my co-workers/team members
  - 2) It is important to maintain distinctions between team members based on their performance
  - 3) Comparing my performance with that of my co-workers is necessary
-



#### CUSTOMER SCALE

The question asked the respondent to rate "the extent to which each of the following sources should be involved in helping to assess your performance".

- 1) customer satisfaction
  - 2) My customers
  - 3) Anyone outside the company who is affected by my work
  - 4) Anyone inside the company who is affected by my work
  - 5) customer survey information
- 

#### DEVELOPMENTAL/EVALUATIVE SCALE

The question asked to what extent should a performance appraisal system be used for each of the following purpose:

##### Developmental:

- 1) Analyzing and improving performance
- 2) Helping to achieve job/career goals
- 3) Helping to identify training needs
- 4) Providing feedback on job performance

##### Evaluative:

- 1) Determining bonuses/pay raises
  - 2) Judging performance
  - 3) Making promotion decisions
  - 4) Making decisions on who is competent and who is not
  - 5) To determine who discharged/fired
- 

#### SOURCE OF INPUT SCALE

The question asked the respondent to rate "the extent to which each of the following sources should be involved in helping to assess your performance".

##### Supervisor/Hierarchical Input

- 1) My supervisor
- 2) My supervisor's supervisor
- 3) Other Managers at my supervisor's level

Peer Input

- 1) Co-workers in my work Group
- 2) Co-workers outside my work Group
- 3) Anyone inside the company who is affected by my work

Self Input

- 1) Myself
- 

SATISFACTION/FAIR

State the degree of agreement with the following items:

- 1) My last rating was an accurate assessment of my performance;
  - 2) My supervisor did not take into account factors beyond my control in my last rating;
  - 3) I feel my last rating was fair.
-

## Hypothesis Testing Study

### INDIVIDUAL SCALE

Respondents rated the following items:

1. individual contribution to organizational success should be considered in evaluating performance;
2. individual initiative, ambition, and conscientiousness should be considered in evaluating performance;
3. each employee's error rate and/or number of complaints should be considered in evaluating performance;
4. a performance appraisal system should put emphasis on improving individual performance;
5. rewards and recognition should be distributed based on how each individual performs;
6. a performance appraisal system should, with great detail, differentiate between my performance and that of my coworkers/team members;
7. it is important to maintain distinctions between team members based on their performance; and
8. comparing my performance with that of my coworkers is necessary.

---

### GROUP SCALE

Respondents rated the following items:

1. team contribution to organizational success should be considered in evaluating performance;
  2. error rate and/or number of complaints for the team as a whole should be considered in evaluating performance;
  3. rewards and recognition should be based on what the Group as a whole accomplishes; and
  4. a performance appraisal system should put emphasis on improving team performance.
-

## DEVELOPMENT/EVALUATIVE

### Evaluate:

1. making promotion decisions;
2. making decisions on who is competent and who is not; and
3. determining who should be released.
4. Judging performance

### Development:

1. analyzing and improving performance;
  2. helping to achieve current job goals;
  3. helping to achieve career goals;
  4. helping to identify training needs;
  5. providing feedback on performance; and
  6. improving the way work is done.
- 

## INPUT SOURCE

### Hierarchical:

1. my supervisor;
2. my supervisor's supervisor;
3. other managers at my supervisor's level; and
4. committee of managers to judge whether extreme ratings (good or bad) are deserved.

### Peer:

1. co-workers in my work Group;
2. co-workers outside my work Group; and
3. committee of peers/co-workers to judge whether extreme ratings (good or bad) are deserved.

### Self

1. Myself
-

## CUSTOMER

The question asked the respondent to rate "the extent to which each of the following sources should be involved in helping to assess your performance".

1. clients internal to the company should be considered in evaluating performance; and
2. clients external to the company should be considered in evaluating performance.
3. my clients;
4. anyone inside the company who is affected by my work;
5. anyone outside the company who is affected by my work;
6. opinions obtained directly from clients internal to the company; and
7. opinions obtained directly from clients external to the company.

## SATISFACTION/FAIR

State the degree of agreement with the following items:

1. my last rating was an accurate assessment of my performance;
  2. I feel my last rating was fair; and
  3. overall, I am satisfied with the current performance appraisal system.
- 

## TEAMWORK SCALE

State the degree of agreement with the following items:

1. when problems arise, everyone in my team works together to solve them;
2. the team I work with is continually assessing its progress; and
3. the team I work with regularly discusses ways to improve its performance.

**APPENDIX**

**B**

TABLE 2

Alpha Reliability Analysis

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Scale	Iteration 1	Iteration 2	Iteration 3
Individual	.73	.60	.87
Customer	.60	.79	.77
Group	.67	.80	.69
Hierarchical	.58	.58	.61
Self	---	---	---
Peer	.50	.69	.69
Distinguish	.46	.65	---
PA Satisfaction	.88	.91	.94
Evaluate	---	.76	.72
Develop	---	.62	.71
Teamwork	---	---	.80

---

TABLE 3

## Intercorrelations of PM Preferences and Predictor Variables

<u>Variables</u>	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Individual Preference	3.47	.70	--															
2. Group Preference	3.56	.72	-.24*	--														
3. Evaluative	3.32	.81	.52**	-.20	--													
4. Development	4.00	.51	.23*	.17	.37**	--												
5. Hierarchical Input	3.13	.62	.36**	.02	.44**	.28*	--											
6. Self Input	4.13	1.00	.23*	.10	.13	.24*	.14	--										
7. Peer Input	2.85	.79	-.05	.36**	-.01	-.05	.22	.00	--									
8. Customer Input	3.50	.67	.26*	.19	.13	.21	.29**	.10	.52**	--								
9. Achievement Value	6.64	2.75	.39**	-.25*	.13	-.08	-.14	-.07	.09	.13	--							
10. Helping Value	6.47	2.57	-.38**	.16	.04	.19	.05	.08	.09	-.08	-.63**	--						
11. Honesty Value	5.93	1.80	.15	.04	.00	.05	.14	.04	-.04	.10	-.04	-.48*	--					
12. Fairness Value	5.33	1.81	-.22*	.09	-.26*	-.23*	-.02	-.08	-.11	-.14	-.42**	-.06	-.26*	--				
13. Appraisal Satisfaction	3.38	.84	.28*	.12	.00	-.15	.16	.02	.28*	.15	.13	-.06	-.23*	.08	--			
14. Teamwork	3.49	.90	-.08	.30**	-.15	.05	-.03	-.03	.04	-.18	.05	-.08	.28*	.14	--			
15. Tenure in Job <sup>a</sup>	7.55	7.30	.23*	-.16	.28*	.12	-.01	.22	-.36**	-.13	.04	-.03	-.06	-.01	-.12	.00	--	
16. PA frequency	4.04	.77	.13	-.07	.09	-.07	-.04	-.02	-.02	.00	.14	-.11	-.03	-.02	.15	-.02	-.28*	--

<sup>a</sup> Tenure is reported in years

\* P &lt; .05 \*\* P &lt; .01



TABLE 4

Factor Loadings of Performance Management Preferences Predicted to Represent Traditional versus TOM-oriented PA Schemes

---

	<u>Factor 1</u>	<u>Factor 2</u>
Individual Preference	.82	-.08
Evaluative	.81	-.08
Hierarchical Input	.70	.26
Group Preference	-.33	.67
Peer Input	.04	.85
Customer Input	.34	.72

---

TABLE 5

Hierarchical Regression Analyses Predicting Individual and Group Preferences

	Individual Preference		Individual Preference		Group Preference	
	<u>R<sup>2</sup></u>	<u>Cum. R<sup>2</sup></u>	<u>R<sup>2</sup></u>	<u>Cum. R<sup>2</sup></u>	<u>R<sup>2</sup></u>	<u>Cum. R<sup>2</sup></u>
Achievement Value	.16**				.07**	
Helping Value			.15**			
Tenure in Job	.04*	.20**	.04*	.19**		
Appraisal Satisfaction	.07**	.27**	.08**	.27**		
Teamwork					.09**	.16**

\* p < .05 \*\* p < .01

**TABLE 6**  
**Results of Stepwise Regression analysis**

<b>HYPOTHESIS</b>	<b>PA PREFERENCE</b>	<b>PREDICTOR</b>	<b>R<sup>2</sup></b>	<b>OVERALL R<sup>2</sup></b>	<b>BETA</b>	<b>SIGNIF. F</b>
7	GROUP	Teamwork	.09	.09	.30	.01
See Post-hoc results	EVALUATE	Job Tenure Value for Fairness	.08 .06	.08 .14	.27 -.26	.02 .02
See Post-hoc results	DEVELOP	Value for Fairness	.05	.05	-.23	.05
8	PA FREQUENCY	Job Tenure	.08	.08	-.28	.01
8	PEER INPUT	Job Tenure PA Satisfaction	.13 .05	.13 .18	-.33 .24	.003 .03
3,6,8	INDIVIDUAL	Value for Helping PA Satisfaction Job Tenure	.15 .07 .07	.15 .22 .28	-.36 .29 .24	.00 .001 .02
2,6,8	INDIVIDUAL	Value for Achievement PA Satisfaction Job Tenure	.16 .06 .05	.16 .22 .27	.36 .27 .23	.00 .01 .02
6,8 See also post-hoc results.	INDIVIDUAL	PA Satisfaction Job Tenure Value for Fairness	.08 .07 .05	.08 .15 .20	.33 .25 -.24	.00 .02 .02

Note: BETA is reported for the final step of the regression. The numbers in bold presented in the 'Overall R<sup>2</sup>' column represent the total R<sup>2</sup> for that specific regression. The last column presents the significance of F for each step of the regression (i.e. change in R<sup>2</sup>).

**TABLE 7**  
**Summary of Predicted Relationships and Results**

HYPOTHESIS	PREDICTOR	PREDICTED PREFERENCE (by Dimension)	RESULTS Correlation	COMMENTS
2	Value for Achievement	F) INDIVIDUAL(+)/GROUP(-) I) No predictions P) See Hypothesis 4	.39 <sup>**</sup> / -.25 <sup>*</sup>	Hypothesis 2 fully supported.
3	Value for Helping	F) INDIVIDUAL(-)/GROUP(+) I) No predictions P) See Hypothesis 5	-.39 <sup>**</sup> / .16	Hypothesis 3 partially supported.
4	Value for Achievement	F) See Hypothesis 2 I) No predictions P) EVALUATE(+)	.13	Hypothesis 4 not supported.
5	Value for Helping	F) See Hypothesis 2 I) No predictions P) DEVELOP(+)	.19	Hypothesis 5 not supported.
6	PA Satisfaction	F) INDIVIDUAL(+) I) HIERARCHICAL(+) P) EVALUATE(+)	.28 <sup>*</sup> .16 .00	Hypothesis 6 partially supported.
7	Teamwork	F) GROUP(+) I) Peer(+) P) No predictions	.30 <sup>**</sup> .36 <sup>**</sup>	Hypothesis 7 fully supported.
8	Job Tenure	F) INDIVIDUAL(+) I) PEER(-) P) EVALUATE(+) Fr) PA FREQUENCY(-)	.23 <sup>*</sup> -.36 <sup>**</sup> .28 <sup>*</sup> -.28 <sup>*</sup>	Hypothesis 8 fully supported.

\* p < .05 ; \*\* p < .01

Note: 'F)' signifies Level of Focus, 'I)' signifies Input Source, 'P)' signifies PA Purpose, 'Fr)' signifies PA Frequency. Since the latter was a rogue dimension, it was only explored in the last hypothesis.

**APPENDIX C**

**FIGURE 1**

