An exploratory study of goal setting in theory and practice: A motivational technique that works?

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Although goal setting is a common organizational practice, studies concerning goal setting have almost exclusively been carried out in experimental settings. It may therefore be erroneous to assume that the relationships found to exist in controlled settings will hold true within organizations. Goal difficulty and participation in the goal setting process were examined as they related to goal performance. Participants were 132 scientists and professional staff, and 27 of their supervisors. The positive linear relationship between goal difficulty and performance typically found in controlled settings was not replicated. Consistent with some previous studies, a modest but significant relationship between participation and performance was found. The results of this research have implications for practitioners, researchers conducting goal setting studies within applied settings, and for goal setting theory in general.

Goal setting as a managerial tool

Goal setting is a motivational technique used extensively in organizations. As a method of directing individuals’ efforts at work and providing a standard against which performance can be assessed, it is fundamental to many performance appraisal schemes. It is also frequently linked to company reward systems, and found in many training and development programmes such as time management, stress management and supervisory skill training. A survey of 1331 British organizations found that 79 per cent used some form of objective setting (Institute of Personnel Management, 1992).

Goal setting theory

Goal setting is a cognitive theory of motivation based on the premise that people have needs that can be thought of as specific outcomes or goals they hope to obtain (Locke,

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1968). It makes the assumption that human behaviour is purposeful (Locke & Latham, 1990), and that goals direct and sustain (Ryan, 1970) individuals' energies towards performing a particular action.

Goals have two primary attributes or dimensions: content and intensity (Locke & Latham, 1990). Goal content refers to the features of the goals themselves (e.g. the difficulty and specificity of the goal). Goal intensity is the process by which a goal is set and accomplished (Lee, Locke & Latham, 1989; Locke & Latham, 1990). It relates to factors such as individual commitment, and the cognitive processes involved in attaining and setting goals.

Goal difficulty and performance

Most of the research on goal content has focused on the relationship between goal difficulty and performance, predicting that given an adequate level of ability and commitment, harder goals will lead to greater effort and performance than easier goals. In a meta-analysis by Wood, Mento & Locke (1987), 175 of the 192 laboratory and experimental field studies found full or partial support for the predicted linear relationship. In other words, most studies have found that performance increases with the level of goal difficulty, providing the individual working to attain the goal is committed to achieving it and has the ability to do so. In laboratory based studies, goal difficulty is typically determined by running trials of the task and setting standardized levels of goal difficulty below or above a norm established in trial sessions (Earley & Erez, 1991; Gellatly & Meyer, 1992; Tubbs, Boehne & Dahl, 1993).

Participation and performance

Another well-researched area, but one producing less consistent findings, is that of participation in the goal setting process and its effect on performance. While some investigators have found significant relationships between these variables (Earley, 1985; Earley & Kanfer, 1985; Erez, 1986; Erez & Arad, 1986; Erez, Earley & Hulin, 1985; Hollenbeck, Williams & Klein, 1989; Lichtman & Lane, 1983), others have found little or none (Ivancevich, 1976, 1977; Latham, Mitchell & Dossett, 1978; Latham & Saari, 1979; Latham, Steele & Saari, 1982; Latham & Yukl, 1976; Schulte & Bonge, 1979; Vanderslice, Rice & Julian, 1987). Researchers who have found a positive relationship hypothesized that allowing participation in the goal setting process increases an individual's perception of control and fairness (Erez & Kanfer, 1983), which subsequently leads to greater goal performance. However, this suggestion has been challenged by researchers who believe that if a goal is difficult, and an individual has the ability and is committed to achieving it, then higher levels of performance will result regardless of the level of participation involved in setting the goal (Latham & Marshall, 1982; Latham & Yukl, 1976; Latham et al., 1978, 1982).

As with studies of goal difficulty and performance, much of this work has been conducted in the laboratory (Earley & Kanfer, 1985; Erez & Arad, 1986; Hollenbeck et al., 1989; Latham & Saari, 1979; Latham et al., 1982). The measures of participation used in such studies vary greatly, and may be one of the reasons
for inconsistencies amongst findings. For example, in a study by Ivancevich (1977), the criterion measure was the attendance of supervisors and job holders at a workshop on participative goal setting. Other researchers, stressing the importance of the employees’ perceptions of the process, asked subjects whether they felt they had influenced the type of goal set (Latham & Marshall, 1982; Latham et al., 1978).

The nature of past research

The wide use of goals and the extensive application of goal setting theory in organizations does not, however, stem from a wealth of research evidence confirming their utility. While much work has been done examining the effects of difficulty and the level of participation on goal performance in controlled studies, few researchers have investigated the nature of these relationships in the context of an operational goal setting programme. Experimental studies are not able to consider the multitude of individual, supervisory, peer and other organizational factors that are likely to influence the relationships shown to exist in controlled settings. It is critical for both organizational theorists and practitioners to increase their understanding of these relationships over time and in complex organizational contexts.

The need for replication in naturalistic settings

There are many reasons why it cannot simply be assumed that the relationships found in laboratory or experimental field studies will hold perfectly in the organizational context. These reasons include the subjectivity associated with goal properties in organizational settings, and the complexity and fluidity of the environment within which the goals are to be achieved. Controlled studies typically use objective measures of goal difficulty and performance, which are difficult to standardize in real organizations. A large number of jobs virtually preclude such measurements altogether. How, for example, can the difficulty of a personnel manager’s goals be objectively assessed?

In terms of goal performance in controlled settings, goals are usually straightforward, in that it is generally clear what is required to achieve them. Individuals will often be able to gauge their performance and know when they have successfully completed a goal. In organizations tasks are typically complex, and the process by which a goal is to be achieved is often unclear. In some cases it may not be evident whether the goal can be achieved at all. It is also very likely to be a matter of some debate as to how well a goal has been performed. Given that approximately 78 per cent of jobs in the UK are in the service industry (Programa de las Naciones Unidas para el Desarrollo, 1991), problems associated with objectively assessing goal performance will be apparent in the wide range of jobs where goal setting is used.

Lastly, goals set in controlled studies are typically single specific tasks that can be completed in a short, strictly limited, time period. In contrast, employees in organizations are often trying to achieve multiple goals simultaneously, in the midst of many other distractions, and over an extended period of time. In a recent Institute of Personnel Management (1992) report, 54 per cent of organizations surveyed set performance requirements over a six- to 12-month period. Over a span of time of this length, it is likely
that the requirements of the goal or the circumstances under which the goal is being attempted will change.

**Aims of the study**

While goal setting theory has been tested extensively in controlled settings, there is a dearth of research which attempts to replicate it in the environments in which it is so commonly used.

This study explores two central relationships of goal setting theory in the complex and dynamic organizational setting in which its principles are often practised. Goal difficulty and the level of participation in goal setting are both considered as they relate to measures of goal performance over time. The paper explores the extent to which findings from previous research in controlled studies can be replicated in an organizational context, and considers the conditions under which the relationships suggested by goal setting theory are most likely to be found.

**Method**

**Organization and sample**

The study was conducted at a research centre of a large multinational company. Goal setting had been implemented across the organization approximately three years prior to the study. Three goals, or targets, representing highly technical tasks that were specific to each individual's job, were set each year as part of employees' annual performance appraisal review. This review took place at the same time for all employees in the organization. The majority of the goals had been set five months prior to the collection of the questionnaire data. Information given to all supervisors encouraged them to involve job holders in the goal setting process by either jointly setting goals, or having job holders set their own goals. There was, however, no formal policy regarding the degree of job holder participation in the goal setting process. At the time the programme was introduced all supervisors had received training on how to set goals. However, due to changes in staff over the three years the programme had been in operation, 56 per cent of the supervisors who participated in the study had not received such training. Also, the training 44 per cent of the supervisors had received was minimal. The training had involved a one-day session on the organization's newly implemented bonus scheme, and specific training in how to set goals comprised approximately one hour of this session. None of the supervisors involved in the study had received training at any other organization. Approximately 12 months after the goals had been set, a bonus reflecting one of five separate levels of achievement was awarded to each individual by their supervisor based on performance of the three goals collectively.

Participants were from a population of 345 scientists and professional staff and 55 of their supervisors. Although all members of staff were asked to participate, the sample consisted of 132 employees (approximately 38 per cent of the population), and 27 of their supervisors (approximately 49 per cent of the population). Most of the work carried out by the job holders was scientific and highly specialized, and the majority possessed postgraduate degrees.

Based on interviews with job holders and their supervisors, the somewhat low response rate (38 per cent) was thought to be due in part to the sensitivity of the issues involved (e.g. job performance and compensatory rewards). A chi-square test was carried out to determine whether the sample of job holders was significantly different from the population, based on the performance-related bonuses which occurred at a fixed rate within the population. The chi-square was tabulated on 123 cases as nine observations were missing. Based on bonus levels, the sample was not found to be significantly different from the population ($\chi^2 = 5.40, p = .25$).

**Procedure**

One questionnaire was distributed to job holders and one to their supervisors. The job holders’ questionnaire instructed respondents to indicate the extent to which they agreed or disagreed with statements relating to
each of the three goals they were expected to achieve over the coming year, and had been working on for the past five months. For every person, each of the three goals was different and represented key aspects of the employee’s job. Job holders were asked to assess each goal in terms of its difficulty, the degree to which they felt they had participated in setting the goal, and their perceptions of their performance of the goal to date.

Supervisors were asked to complete similar questionnaires asking them to indicate the extent to which they agreed or disagreed with statements relating to each of the three job-related goals of the individuals whom they supervised. As with job holders, supervisors were asked to assess each goal in terms of difficulty, level of job holder participation in setting the goal, and their own perceptions of how well the employee was performing the goal to date.

Supervisors completed a questionnaire for every job holder in the study whose performance they appraised, with some supervisors completing more than one questionnaire. The number of job holders rated by a single supervisor ranged from one to seven, and the median number of individuals rated by a single supervisor was three. The supervisors were provided with a copy of the employees’ goals to ensure that in completing the questionnaire supervisors and job holders referred to the same goal.

Measures

Questionnaire items used the word ‘target’ as opposed to ‘goal’ as this was the term used within the organization.

Because the study was conducted in a naturalistic setting and involved complex scientific research jobs, subjective ratings of goal difficulty, participation and performance were used, and were similar to those used in other studies (Latham & Marshall, 1982; Latham et al., 1978; Yukl & Latham, 1978).

Difficulty. Goal difficulty was measured for both job holders and supervisors using the following items: (a) ‘This target will be easy to achieve’; (b) ‘This target is very challenging’; (c) ‘Attaining this target will demand a great deal of effort’. A five-point Likert format (1 = strongly disagree, 5 = strongly agree) was used. Item (a) was reverse scored so that a high score was indicative of high goal difficulty.

Participation. One item was used to assess job holders’ perceptions of the degree to which they felt they had participated in setting their goals: ‘I participated to a great extent in setting this target’. Supervisors’ questionnaires contained a similar item: ‘This individual participated to a great extent in setting this target’. A five-point Likert format (1 = strongly disagree, 5 = strongly agree) was used with a high score indicative of high goal participation.

Performance. Self-ratings: Job holders responded to three items assessing their performance of their goals. The items were as follows: (a) ‘Based on my performance to date, it is likely that by the end of the year I will have met or exceeded the requirements of this target’; (b) ‘To date, I am not very pleased with my performance on this target’; (c) ‘I am dissatisfied with the progress I am making towards meeting this target’. A five-point Likert format (1 = strongly disagree, 5 = strongly agree) was used. Items (b) and (c) were reverse scored so that a high score reflected high goal performance.

Supervisors’ ratings: Supervisors were asked to rate job holders’ goal performance using the following three items: (a) ‘Based on this person’s performance to date, it is likely that by the end of the year the requirements of this target will be met or exceeded’; (b) ‘To date, this person’s performance on this target has not met my expectations’; (c) ‘I am dissatisfied with the progress this individual is making/has made towards meeting this target’. A five-point Likert format (1 = strongly disagree, 5 = strongly agree) was used. Scores on items (b) and (c) were reverse scored so that a high score was indicative of high goal performance.

Bonus levels: Employees’ performance-related bonuses were also used as an indicator of goal performance. Bonuses were based on supervisors’ perceptions of job holders’ performance of the three goals collectively. Bonuses were awarded approximately one year after the goals had been assigned, and at which time it was expected that the goals would be completed. The bonuses covered five levels, each level relating to a percentage of an employee’s salary. For example, the highest bonus an employee could receive was a level 1, which equalled 12 per cent of the employee’s salary, and the lowest was a level 5, which was actually no bonus at all as it equalled 0 per cent of the employee’s salary. The percentage increase represented by each level was predetermined by the organization. Supervisors were responsible for assigning bonuses to the employees whom they supervised. Job holders did not participate in the process of determining which level of bonus they received. In the study, bonus levels were reverse scored so that a high score reflected a large bonus. Bonuses were assigned approximately seven months after the collection of questionnaire data was completed.
Results

Statistical analyses

Two sets of analyses were performed on the data. The first set was carried out at the level of single goals, and the second was carried out at the level of employee. In other words the first set of analyses used the goals as cases, while the second used individual employees as cases. The first analysis was undertaken to test the theoretical relationships between goal difficulty and goal performance, and between participation in setting goals and goal performance. Because each participant rated multiple goals, steps were taken to help control for variations that could occur as a result of individual patterns of responding. To help control for this type of potential error, pooled within-person analysis, as described by West & Hepworth (1991), was utilized by computing residual scores for goal difficulty, participation in setting goals and goal performance. This was achieved by taking each subject’s mean score over the three goals and subtracting individual goal scores from this mean. The number of cases for goal level analyses was as follows: job holders’ ratings $N = 346$, supervisors’ ratings $N = 210$.

A second set of analyses was carried out at the individual level in order to determine how overall ratings of difficulty, participation and performance related to the performance-related bonuses job holders were awarded seven months after the questionnaires were completed. Individual level analyses were achieved by obtaining a mean for each employee based on variable ratings over the three goals. The number of cases for analyses based on differences between individuals was as follows: job holders’ ratings $N = 119$, supervisors’ ratings $N = 78$. Table 1 gives the means, standard deviations based on goal and individual level analyses, and the alpha values for all scales. Estimates of internal consistency reliability ranged from .75 to .88.

The relationship between difficulty and performance

As stated previously, high levels of goal difficulty were predicted to be associated with high goal performance. As shown in Table 2, it was found that based on goal-level analy-

<table>
<thead>
<tr>
<th>Variable</th>
<th>Administered to:</th>
<th>Mean</th>
<th>SD goal level*</th>
<th>SD individual level*</th>
<th>Cronbach’s alpha</th>
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<td>Supervisors</td>
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<td>1.02</td>
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<tr>
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<td>Job holders</td>
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<td>.83</td>
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<td>Supervisors</td>
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<td>.85</td>
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<td>.81</td>
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<tr>
<td>Bonus</td>
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<td>2.63</td>
<td>–</td>
<td>1.24</td>
<td>–</td>
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*Job holders: $N = 119$, supervisors: $N = 78$. 

Table 1. Means, standard deviations and alpha values for scales used in analyses
Table 2. Intercorrelation matrix—goal dimensions and goal performance as rated by job holders and supervisors based on goal level

<table>
<thead>
<tr>
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<th>1</th>
<th>2</th>
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<tbody>
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<td>1. Job holder ratings of difficulty</td>
<td></td>
<td></td>
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<tr>
<td>2. Supervisor ratings of difficulty</td>
<td>.36**</td>
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<tr>
<td>3. Job holder ratings of participation</td>
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<td>-.08</td>
<td></td>
<td></td>
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<tr>
<td>4. Supervisor ratings of participation</td>
<td>.12</td>
<td>.08</td>
<td>.31**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Job holder ratings of performance</td>
<td>-.44**</td>
<td>-.21**</td>
<td>.12*</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>6. Supervisor ratings of performance</td>
<td>-.02</td>
<td>-.28**</td>
<td>.01</td>
<td>.15*</td>
<td>.29**</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01 (job holders: N = 346; supervisors: N = 210).

Table 3. Correlations between assigned bonuses and individual levels of goal difficulty, participation and performance as rated by job holders and supervisors

<table>
<thead>
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<td>2. Supervisor ratings of difficulty</td>
<td>.16</td>
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<tr>
<td>3. Job holder ratings of participation</td>
<td>.13</td>
</tr>
<tr>
<td>4. Supervisor ratings of participation</td>
<td>.09</td>
</tr>
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<td>5. Job holder ratings of performance</td>
<td>-.01</td>
</tr>
<tr>
<td>6. Supervisor ratings of performance</td>
<td>.32**</td>
</tr>
</tbody>
</table>

**p < .01 (job holders: N = 119; supervisors: N = 78).
The relationship between participation and performance

The second issue involved the relationship between goal performance and participation in the goal setting process. As stated earlier, findings concerning this relationship have been inconclusive with studies reporting both significant and non-significant relationships. Based on goal-level analysis (Table 2) job holders' ratings of participation in setting goals were unrelated to supervisors' ratings of goal performance ($r = .01$, n.s.), and supervisors' ratings of participation in setting goals were unrelated to job holders' ratings of goal performance ($r = .12$, n.s.). Supervisors' ($r = .15, p < .05$) and job holders' ($r = .12, p < .05$) ratings of participation in setting goals were found to be significantly positively correlated with their own ratings of goal performance, although these correlations were weak.

Based on individual level analyses (Table 3), supervisors' ($r = .09, n.s.$) and job holders' ($r = .13, n.s.$) ratings of job holders' participation in setting goals were unrelated to the assigned bonuses.

Lastly, supervisors' performance ratings were significantly positively correlated with assigned bonuses ($r = .32, p < .01$), but job holders' ratings of performance were unrelated to bonuses ($r = -.01$, n.s.) (Table 3).

Additional analyses

Because subjective ratings of goal difficulty, participation and performance were used, additional analyses were carried out to examine the degree of consistency between job holders' and supervisors' ratings, and to determine whether theoretical relationships not found in the initial analyses existed when the level of agreement between job holders' and supervisors' ratings was high. This was based on the assumption that the most 'objective' measures of goal difficulty, participation and performance could be achieved by examining relationships between the variables for goals that were rated similarly by job holders and their supervisors.

In order to determine which goals had a high level of agreement between job holders' and supervisors' ratings on the independent variables, job holders' difficulty and participation ratings for each goal were subtracted from their supervisors' ratings of the same variables. As described in the previous section, ratings were made on a scale from 1 to 5. A 'high' level of agreement was defined as a resulting difference score of not more than .50 or less than −.50. Fifty-five goals met the criteria based on differences between difficulty ratings, and 128 goals met the criteria based on differences between participation ratings. As can be seen in Table 4, based on high agreement goals, job holders' ratings of goal difficulty were significantly negatively correlated with supervisors' ratings of goal performance ($r = -.29, p < .05$). Consistent with results discussed previously, supervisors' ratings of goal difficulty were significantly negatively correlated with job holders' ratings of goal performance ($r = -.35, p < .01$), and supervisors' ($r = -.40, p < .01$) and job holders' ($r = -.28, p < .05$) ratings of goal difficulty were found to be significantly negatively correlated with their own ratings of goal performance.

With regard to participation in setting goals, all correlations in the additional analyses were positive and weak (Table 5). Job-holders' ratings of participation in setting goals were significantly positively correlated with supervisors' ratings of goal perfor-
Table 4. Intercorrelation matrix—high agreement ratings of difficulty based on goal-level analyses

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<tr>
<td>3. Job holder ratings of participation</td>
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<td>-.31*</td>
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<td>4. Supervisor ratings of participation</td>
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<td>-.23</td>
<td>.26</td>
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<td>5. Job holder ratings of performance</td>
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<td>6. Supervisor ratings of performance</td>
<td>-.29*</td>
<td>-.40**</td>
<td>-.04</td>
<td>.19</td>
<td>.25</td>
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*p < .05; **p < .01 (N = 55).

Table 5. Intercorrelation matrix—high agreement ratings of participation based on goal-level analyses

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<td>6. Supervisor ratings of performance</td>
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<td>-.21*</td>
<td>.18*</td>
<td>.21*</td>
<td>.34**</td>
</tr>
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*p < .05; **p < .01 (N = 128).
Discussion

Difficulty and performance

Three of the four relevant correlations indicated moderate but significant relationships between difficulty and performance, with higher levels of perceived difficulty associated with lower levels of perceived performance. Thus the direction of this relationship was the reverse of that predicted by goal setting theory and found in many studies of goal setting and performance. This rather surprising result is open to two main interpretations: either that goal difficulty was negatively associated with performance in this setting, or that the findings were produced by a methodological artifact.

According to goal setting theory, it is likely that very difficult goals, especially those which are at the limits of a person's ability, will not produce higher levels of performance (e.g. Locke & Latham, 1990). However, the theory does not suggest that a negative relationship will be found, rather that the linear function between goal difficulty and performance will level off. The tasks of the scientists and professionals who participated in this study are exceedingly more complex than those encountered in the single goal situations of controlled studies. It is possible, that faced with multiple and complex goals, people may choose to work towards and achieve higher levels of performance on less difficult goals rather than work towards more difficult and complex goals knowing that their level of performance and perceived self-efficacy are likely to be lower on such goals. This idea has also been suggested in a study of single versus multiple goals by Kernan & Lord (1990), who argue that in multiple goal environments the choice of goal is the primary concern rather than the process by which the goal is to be attained. For example, when faced with multiple and distal goals individuals may choose to invest effort in those from which they can expect to obtain more feedback (e.g. Bandura, 1986) or those where they can expect a faster rate of progress and hence experience positive rather than negative affect (Carver & Scheier, 1990). In many jobs which have multiple and complex goals it is certainly not uncommon for people to direct their efforts towards the more achievable goals of their job.

A second interpretation of these results involves the possibility that they were produced by some methodological artifact. The first and most obvious cause for concern is that perceived difficulty and perceived performance were being rated by participants relative to each other. In other words, job holders may have assessed the difficulty of a goal in terms of their level of performance. However, an alternative way of looking at this possible methodological artifact is that goal performance was being assessed relative to completion or attainment of the goal itself without taking into consideration the difficulty of the goal. In other words, goals were not being judged according to some general standard or in comparison to the relative difficulty and performance of another employee's goals, but simply in terms of the degree to which the goal had been successfully completed.

Interestingly, Locke & Latham (1990) suggest that subjective measures of difficulty are less satisfactory than objective measures. They report that subjective difficulty 'typically correlates lower with performance than objective difficulty' (p. 75, our emphasis). We might then expect the subjective measures used in this study to lower correlations between difficulty and performance, but not reverse the direction of the relationship as was
found here. In addition, it is unlikely that methodological artifacts alone were to blame for these results as both job holders and their supervisors rated difficulty and performance and the similar significant negative correlations between difficulty and performance were produced with the exception of one correlation of four (the job holder's rating of difficulty and the supervisor's rating of performance) where there was no significant relationship.

A second possible methodological artifact which may explain why the predicted result was not obtained (rather than explaining why the opposite result was found) concerns the failure to take into account the level of agreement between supervisor and job holder about levels of performance and goal difficulty. Although it is not possible to establish whose ratings are more 'objective', if the supervisor and job holder do not have a shared perception about the difficulty of or level of performance of a particular goal, this may considerably lessen the chances of obtaining the expected findings. However, even where goals which had been similarly rated were selected for analyses, the same general pattern of results was found.

**Participation and performance**

Although the theoretical predictions and findings concerning participation and performance are less clear than those for difficulty and performance, it has been suggested that in general participation makes little difference to performance (Latham & Marshall, 1982; Latham et al., 1982). The results of this study, however, show a weak but significant association between participation and performance. When those goals which were similarly rated in terms of difficulty and performance were selected, these correlations became stronger.

These results suggest that both supervisors and job holders felt that the more a job holder participated in setting the goal, the higher was the job holder's performance. Again, this could be due in part to the way in which ratings were made. If job holders participate to a greater extent in setting a goal they may be perceived by both themselves and their supervisor to be more knowledgeable about the goal and hence more able to attain a high level of performance on the goal. Contrast this to a goal setting process where the job holder has little or no participation in setting a goal. In such a situation it is likely that the job holder has been unable to participate, either because of a lack of knowledge about the goal (or what must be done to achieve it) or because the supervisor did not allow the job holder to participate. If the job holder has little knowledge it is likely that both the job holder and the supervisor will expect performance to be lower.

**Limitations of the study**

In addition to the study's strengths such as obtaining ratings from both job holders and their supervisors, it also has a number of limitations. First, it was largely cross-sectional and so causality cannot be established. Although data on bonus levels at the end of the yearly goal setting period were gathered, it was not possible to obtain further ratings of difficulty and performance. A further limitation was that subjective measures of difficulty and performance were used. As suggested above, the use of subjective measures may pre-
sent particular problems when rating difficulty and performance. This issue is discussed in greater detail below.

Perhaps the most general limitation of this study was the absence of information about the context in which these goals were being set and how job holders responded or related to these goals. For example, we do not know about the way in which job holders participated in the goal setting process. Nor do we know about those factors in the job holder's work environment that may have facilitated or hindered goal completion.

Implications for theory

The theory of goal setting is a cognitive theory of motivation. One of its key assertions is that a positive linear relationship between goal difficulty and performance exists, and indeed a considerable amount of empirical evidence has been collected over the past 25 years which supports this prediction. In this study, however, a negative relationship between difficulty and performance was obtained. Certainly this single finding is not sufficient to challenge the basis of goal setting theory and, as already indicated, the results obtained may be explained by methodological artifacts. However, the theory itself does not lead to any predictions about relationships between difficulty and performance in multiple goal environments. Indeed, nearly all studies of goal setting have used single goals, and Locke & Latham (1990) acknowledge that performance with multiple goals is an area 'rich with research possibilities' (p. 54). Likewise, the theory does not make any predictions about the effects of proximal or distal goals on performance. However, the vast majority of studies have used fairly proximal goals where the goal setting period is very short indeed compared to the yearly goal setting period of job holders in this study. Here, too, Locke & Latham (1990) acknowledge that 'much more research needs to be done before firm conclusions can be drawn about the relative efficacy of proximal and distal goal setting' (p. 61). Kernan & Lord (1990) have gone so far as to suggest that 'simpler models of control theory and goal setting processes, though adequate for the typical laboratory study, may not generalize to many field settings'. In short, goal setting theory may simply not apply to multiple goal environments or where relatively distal goals are set. When faced with multiple and distal goals individuals may choose to invest effort in those from which they can expect to obtain more feedback (e.g. Bandura, 1986) or those where they can expect a faster rate of progress and hence experience positive rather than negative affect (Carver & Scheier, 1990). In other words, they may choose to work on easier goals which have obvious sub-goals within them. Whilst it is likely that having even multiple goals and distal goals will produce higher performance than having no goals at all, there are good reasons to suppose that difficulty and performance will be inversely related in such contexts. It may be that new theories need to be developed, or existing theories modified to explain the effects of complex, distal and multiple goals on the performance of employees in work environments of the type studied here.

The lack of relevance of goal setting theory to a number of organizational contexts is recognized by Smith & Locke (1990) who call for the convergence of work on micro and macro goal setting. Micro goal setting concerns single proximal goals, whereas macro goal setting concerns multiple distal goals which exist at the individual, depart-
mental or even corporate level. Macro goals are usually complex, more likely to be qualitative, sometimes in conflict, and their level of difficulty may remain unclear until attempts are made to actually reach them. It may be that work on micro and macro goals cannot simply be integrated, and that new theories need to be developed. In particular, these theories will have to be able to account for the relationships between goals and performance as they unfold over the goal setting period.

Implications for methodology

Although Locke & Latham (1990) recommend that subjective measures of difficulty are not used in goal setting studies they do acknowledge that this suggestion presents serious problems when conducting field studies. There is often simply no way of assessing the objective difficulty and performance of a goal, particularly where those goals are complex and may be more qualitative than quantitative. Given that goal setting is a cognitive theory, it could be argued that in any case it is the level of subjective difficulty that is important: if a person does not consciously know a goal is difficult how can it possibly have a motivational effect? However there are certainly problems in making subjective ratings of performance and difficulty together as in many cases one is likely to be judged in terms of the other.

There may, though, be other and more useful ways of obtaining ratings of both difficulty and performance: ratings of difficulty and performance could be made on separate occasions; co-workers with experience of the employee's tasks and performance could also be asked to make ratings; the supervisor and the employee could negotiate an agreed rating of the difficulty of goals in the appraisal meeting; more specific dimensions of both difficulty (e.g. technical, novelty) and performance (e.g. speed, quality) could be assessed.

At the same time, as indicated earlier, it could be argued that ratings of difficulty and performance in more complex jobs should ideally take each employee's abilities, personal priorities and situational constraints into account. Although a challenge to achieve, difficulty should be rated in terms of the abilities of the employee, and likewise performance rated in terms of the goals the employee has chosen to prioritize and the constraints that were placed upon them. Improving measurement in field studies may therefore involve taking more objective and subjective ratings, and attempting to understand the relationships between them. It is recommended that future studies attempt to address these issues by collecting qualitative information regarding the process used in setting goals from both job holders' and supervisors' perspectives, and the job holders' perceptions of the contextual factors that affected the level of goal difficulty. However, there are no straightforward methodological solutions, and it may be that in field studies of this kind both difficulty and performance need to be conceptualized and operationalized very differently from the way they are in experimental studies.

A second major methodological implication is the need for longitudinal studies. It is likely that the effects of goals on performance will change over time as both the goal itself and the employee's perception of the goal change. Goals may, for example, actually become easier or harder over the goal setting period as a consequence of changes in the organization, or an employee may vary in the extent to which they feel committed to the goal or spend time working on the goal. Study designs must therefore be able to assess such changes over time to capture the dynamic processes involved in the relationships
between goals and performance. For example, studies could utilize repeated measure designs in which regular ratings of difficulty, performance and other dimensions of goals were made. Other designs could capitalize on naturally occurring changes in the employee's work conditions, such as changes in the level of support staff or restructuring, which may affect goal difficulty and priority, or constrain performance. Longitudinal qualitative studies which examine employee perceptions of the causes of their performance and their changing perceptions of goals would also yield valuable insights into the goal setting and performance process.

Implications for practice

The results of this study indicate that multiple distal goals may not be as effective a motivational technique as would be suggested by laboratory and field studies that have used single proximal goals. Based on these results, it may be the case that goal setting periods should be considerably reduced to perhaps a few months. Also, if given goals of varying degrees of difficulty, employees may prioritize goals that are perceived to be easier to attain. In general then, increasing the frequency of appraisals and the involvement of the appraiser would seem to offer some possibility of maximizing the benefit of goal setting. The optimum frequency of appraisals probably depends on the nature of the goals, the task environment, the abilities of the people being appraised and their preferences. The appraiser could become more involved in helping the appraisee establish priorities where goals vary in difficulty and are potentially in conflict. Discussion of the environmental constraints that could affect attainment of the goal should also be discussed between the job holder and the supervisor.

As stated previously, no relationship was found between job holders' ratings of their performance and the bonuses they subsequently received. The aim for most companies in using bonuses and other performance-related pay techniques is to reward and motivate employees. The lack of relationship found in this study between job holders' performance ratings and their bonuses throws into question the motivational properties of bonuses. This finding is supported by a survey carried out by HayGroup Inc. (1989), and may be one of the reasons why performance-related pay systems have not been as effective as their proponents may have originally hoped (Zenger, 1992).

As mentioned earlier, over half of the supervisors who rated employees had not received training in how to set goals at this or any other organization, and the training the remaining supervisors had received was minimal. This may well reflect one of the central problems with implementing a goal setting programme within an organization. Because goal setting has an intuitive appeal and appears relatively straightforward to implement, organizations may not fully appreciate the difficulty involved in setting attainable goals that are relatively objective. For example, at the time of the study, the organization did not feel it necessary to have annual training in goal setting or refresher courses on the subject. Such training may be beneficial. Also, involving job holders as well as supervisors in the training process may increase the agreement between the two in terms of the difficulty and clarity of the goals. There is certainly potential for more research examining the effects of training programmes on goal setting in organizations.
Conclusion

While goal setting has strong theoretical foundations and empirical support, the extent to which it applies or can apply in its current form to organizational goal setting programmes remains unclear. The results of this study and the well-documented gaps in our knowledge (e.g. Locke & Latham, 1990) suggest that a degree of caution must be exercised when using goal setting as a motivational technique in complex organizational contexts.

References


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