Supervisory behaviour and team performance amongst police patrol sergeants

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This study examined the generality of Komaki's operant model of supervision (Komaki, 1986; Komaki, Zlotnik & Jensen 1986; Komaki, Desselles & Bowman, 1989) in an organizational setting characterized by a formal chain of command. Ratings of subordinate performance were used to index supervisory effectiveness. Using the Operant Supervisory Taxonomy and Index, measures of supervisory behaviour were obtained from 20 police patrol sergeants over a period of several months. Compared with supervisors in other settings, police sergeants spent less time providing antecedents (i.e. instructions, rules, goals) and consequences (i.e. feedback), and more time monitoring subordinates' performance. Sergeants of higher performing teams spent more time monitoring performance and providing neutral performance consequences. In contrast with earlier findings, monitoring via work sampling was not related to subordinate performance. Performance was, however, related to the time supervisors spent soliciting self-reports from subordinates, and the time they allocated to those solitary activities which provided more opportunities for monitoring subordinates' performance. The findings were consistent with Komaki et al.'s (1986) operant conceptualization of how supervisors motivate their subordinates.

A key function of individuals in supervisory roles is to promote the accomplishment of organizational goals by their subordinates. Although researchers have approached the problem of clarifying the nature of effective supervision from different perspectives (cf. Bass & Stogdill, 1990), a central concern has been to elucidate behavioural characteristics of effective leaders, as in the early Ohio and Michigan studies which highlighted the importance of the independent behavioural dimensions of initiating structure or task-oriented behaviour and consideration or relationship-oriented behaviour (e.g. Fleishman, 1953; Likert, 1967). Emphasis on similar behavioural categories, often moderated by situational variables, is still clearly discernible in contemporary models of leadership (cf. Yukl, 1989).

Much previous research has relied on retrospective questionnaires and interview techniques to elucidate behaviours (and related situational variables) associated with effective leadership. Despite the limitations of such measures (Luthans, Rosenkrantz & Hennessey, 1985; Yukl, 1989), few studies (e.g. Kotter, 1982; Luthans et al., 1985; Mintzberg, 1973)

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have focused directly on behavioural characteristics of managers or leaders. Recently, however, Komaki and her colleagues (Komaki, 1986, 1988; Komaki et al., 1986, 1989) have systematically examined behavioural characteristics associated with supervisory effectiveness. They have been concerned specifically with how leaders influence subordinates, that is with supervisory (and not managerial) components of leadership. They have employed behaviour recording protocols which are much more rigorous in terms of the operationalization of behaviours, sampling procedures, and evaluations of reliability and representativeness of data than those used in previous observational studies. Further, their approach is based on well-established theoretical principles which suggest how one individual (e.g. a supervisor) may influence the behaviour of another (e.g. a subordinate).

Specifically, Komaki et al. (1986) developed operant conditioning principles (Skinner, 1953) to sharpen the conceptualization of how supervisors influence their subordinates. Guided by the role assigned to antecedents and consequences in operant theorizing, Komaki et al. (1986) argued that effective supervisors would be more likely to make their expectations of subordinates clear, and to provide appropriate consequences contingent on subordinate performance (cf. Podsakoff, Todor & Skov, 1982). Further, since providing contingent consequences is dependent upon accurate information on performance, it was argued that effective supervisors would be more likely to collect information on subordinate performance (i.e. monitor performance) in a systematic manner. Based on this framework, Komaki et al. (1986) developed the Operant Supervisory Taxonomy and Index (OSTI), an instrument for categorizing supervisory behaviours.

The OSTI's central focus is on performance antecedents (i.e. instructions, rules, goals), monitoring (i.e. sampling subordinates' work, soliciting self-reports from subordinates, accessing information from archival records or from some third party) and consequences (i.e. positive recognition, feedback, encouragement, reprimands), those behaviours directly associated with influencing subordinate performance. All other supervisory behaviours not concerned directly with subordinate performance are categorized into other categories and subcategories: work related, solitary, non-work related, and own performance. These categories and subcategories encompass different types of behaviour and distinguish between various ways of enacting those behaviours (detailed protocols for the classification of the various behaviour categories may be found in Komaki, 1988 and Komaki et al., 1986). Leaving aside the fact that Komaki's approach has focused on supervisory processes (i.e. how leaders influence their subordinates) and not on the broader managerial role, Komaki's differentiation of behaviours is similar to other models of effective leadership behaviour, although the organization of behaviours within her model is different and the operationalization of behaviours more precise.

Using the OSTI, Komaki (1986) found that effective supervisors spent significantly more time monitoring subordinates' performance, and were more likely to do so by sampling the work or work products directly. Subsequently, Komaki et al. (1989) reported significant correlations between sailing boat skippers' performance monitoring and their use of consequences and an objective measure of team performance, the series standing of the skippers boats at the end of a regatta. Thus, Komaki and colleagues have produced promising evidence of relationships between supervisory effectiveness and one or more of the specific behavioural categories of performance monitoring, monitoring via work sampling, and performance consequences.
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Given the limited evidence available, however, and the variations reported between studies, a broader data base is required before we can claim to have identified the invariants of an effective supervisor's dealings with subordinates. Komaki (1986; Komaki et al., 1989) emphasized the need for further work encompassing different settings, supervisors spanning the range of effectiveness, alternative measures of supervisory effectiveness (e.g. objective measures, rating scales, subordinate assessments), different types of teams and teams of extended tenure.

Here we extended this data base, examining the generality of Komaki et al.'s (1986) model of effective supervision in a police force, an organization characterized by a rigid and formal chain of command. The target supervisory level was that of patrol sergeant, the first major supervisory level within the organization. Supervisory effectiveness was indexed by independent performance ratings of each sergeant's team of subordinates. Supervisory behaviour was measured by the OSTI. Following the theorizing and findings of Komaki and colleagues, positive correlations between subordinate performance and time spent by supervisors monitoring performance, monitoring performance via work sampling, and providing performance consequences were predicted. Time spent by supervisors on the other OSTI categories was not expected to be predictive of team performance. However, certain characteristics of an organization such as a police force provide for an interesting test of the generality of Komaki's model. In this context we might expect supervisory personnel to rely heavily on performance antecedents (i.e. instructions, rules, etc.) rather than consequences, and to supervise subordinates closely (cf. Jermier & Berkes, 1979). That is, when compared with supervisors from elsewhere, frequencies of antecedents and monitoring would be expected to be uniformly high, and frequency of consequences low. It was of interest, therefore, to see whether or not performance monitoring and consequences discriminated effective and not-so-effective supervisors in an organizational context where supervisors typically keep a close watch on subordinates and expect them to adhere (without encouragement or cajoling) to formal prescriptions regarding performance.

Method

Setting

The study's focus was the supervisory level of patrol sergeant within an Australian police force (4000 officers), and was set in a major city (population one million). The area was organized into 16 divisions, each of which rostered five patrol sergeants with one on duty in each eight-hour shift. Each sergeant supervised a stable team of officers. Teams included five–fourteen members, although most comprised five to seven of varying age, experience and gender. Most officers spent three or more years early in their career under a patrol sergeant's supervision. The sergeant's main functions included deployment, supervision and training of subordinates, paperwork (crime reports, court briefs, etc.), office and cell duties, and community policing.

Design

Two measures were obtained for participants for correlational analysis. One was a measure of supervisory effectiveness provided by a superior officer's ratings of the performance of each patrol sergeant's team of subordinates. The other, the OSTI (Komaki et al., 1986), indexed supervisory behaviours.

Measurement of supervisory effectiveness and sample selection

An inspector (the patrol sergeant's supervisor) at each division completed a confidential performance rating for each sergeant's team under his command; these provided the basis for sample selection. Using a seven-
point scale ranging from very poor to outstanding, each sergeant's team was rated across 12 dimensions: efficiency in dealing with tasks (i.e., speed, accuracy); field reports; local knowledge (i.e., area, residents, criminals); legal/procedural knowledge; convictions: arrest ratio; arrest/report quality; citizen complaints; radio protocol; care/maintenance of equipment, property; concern for occupational safety issues; absenteeism; evidence of principled behaviour. Instructions to raters emphasized confidentiality, use of the entire scale, and team performance as the focus of the rating process. The performance dimensions were generated by a panel including patrol officer, patrol sergeant, commanding officer of police operations, and first author. Dimensions were listed by each panel member and, subsequently, edited and revised until the minimum number of non-overlapping dimensions remained.

An overall rating for each sergeant's team was obtained by assigning scores of 1 (very poor) to 7 (outstanding) to the rating of each dimension and aggregating scores across dimensions. Two indices of reliability were obtained for this measure. Internal consistency was indicated by a coefficient alpha of .94. Inter-rater reliability was assessed by correlating the inspector's ratings with those obtained from another superior (the station senior sergeant) at each division ($r = .63$).

Overall ratings were available for 67 sergeants; they ranged from 37 to 73 ($M = 58.4$, $SD = 6.7$). Based on this measure, and ensuring that participants were spread evenly across the 16 divisions, a representative sample of 20 participants was selected. Overall performance ratings for the sample ranged from 37 to 71 ($M = 57.8$, $SD = 7.9$). Seventy per cent of the sample fell within a standard deviation of the population mean, with 20 and 10 per cent of the sample more than one standard deviation below and above the population mean, respectively. Two other individuals selected from the upper score range were unable to participate because of leave commitments.

Sample

The 20 participants were males, aged from 40 to 50 years ($M = 46$, $SD = 4$). Their tenure ranged from 19 to 33 years ($M = 29$, $SD = 3$). All but one rated themselves as good/average in terms of supervisory effectiveness and position knowledge/expertise. All but one participant had received supervisory training in a departmental training course. Prospective participants were informed by mail of the study, the confidentiality protocols, and the official endorsement of the police union. After sample selection, the first author individually invited each sergeant to participate. All participants signed a consent form acknowledging the nature of the study, confidentiality of the data collected, right to withdraw participation, and debriefing procedures to be used at the study's completion.

Measurement of supervisory behaviour

Supervisory behaviour was measured with the OSTI (Komaki et al., 1986). The OSTI provides seven broad categories into which all observed behaviours can be categorized. Five categories are further differentiated into subcategories. The nature of these categories was reviewed earlier in the paper. Full definitions of each category/subcategory, and examples of each, are provided in Komaki (1988) and Komaki et al. (1986).

Observational procedures. OSTI protocols were provided by the OSTI Training Guide (Komaki, 1988). Practice was conducted over several weeks until two observers (research assistants) consistently agreed on 90 per cent or more of observations in each category. One observer conducted all observation sessions; another conducted all reliability observations. Neither were aware of the performance ratings of the individual participants' teams.

The observer sat or stood as unobtrusively as possible within hearing distance of the supervisor. As the supervisor moved about, the observer followed. Participants did not know in advance when they would be observed and the importance of not rearranging work activities to accommodate the observer was emphasized. If a participant was out of the station when the observer arrived, the observer met him at the job site. An observation session lasted 30 minutes and was divided into 30 one-minute sampling intervals. Each sampling interval was broken into a 10-second observation period, a 40-second period for recording exactly what the supervisor said and did and for coding the behaviour, and a 10-second period to establish the context of the next observation interval. If more than one supervisory behaviour category occurred in an observation interval, or if a single statement could be coded in more than one category, only one behaviour was coded, with priority following the order indicated earlier (i.e., consequences, monitors, etc.). For example, if a supervisor was typing (solitary activity) for part of a sampling interval and stopped to ask a subordinate about the
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progress of a particular job (monitors: self-report), the latter activity would be the one coded for that interval. When any doubt existed as to who had said what, or exactly what was said, the behaviour was categorized as 'didn't hear' and the interval was excluded from subsequent analyses. 'Didn't hear' codings represented only 1 per cent of all observations.

Twenty observation sessions per supervisor were evenly scheduled over a three-to-four-month period. Previous research has shown that 20 sessions provided acceptably representative information (based on variance accounted for and error of measurement) on a supervisor's behaviour for the relatively low frequency categories of consequences, monitors and antecedents (Komaki et al., 1986). Observation periods were evenly distributed across all hours of the three eight-hour shifts over which all participants were rostered during a five-week period, with all participants observed across all shifts.

Seventeen of the 20 participants reported that they felt at ease with the observer present within one session, two within two sessions, and the other within three to four sessions. None considered that their behaviour changed when the observer was present. Confidential questionnaires were also completed by subordinates to assess supervisors' reactions to the observer. One participant's subordinates reported increased monitoring behaviour on his part; his team's performance rating was in the bottom quartile. All other participants' subordinates considered their supervisor's behaviour was unaffected by the observer's presence.

Reliability. To measure reliability, a second observer attended 8 per cent of the observation sessions and independently coded supervisory behaviours. The two observers' codings for each interval were compared and a percentage agreement score was calculated (i.e. number of agreements/number of intervals observed × 100), with an agreement defined as an interval in which the two observers coded the same category. Agreement scores (see Table 1) for the various categories were consistently high. To determine the proportion of agreement between observers about the occurrence or non-occurrence of the various behaviours, corrected for chance agreement, Cohen's kappa (Cohen, 1960) was calculated for each coding category. Kappa values for the various categories also indicate impressive reliability (see Table 1).

Results

The frequency with which each category/subcategory was coded for each participant was summed across observation sessions and expressed as a percentage of the total number of observation intervals (excluding those intervals coded as 'didn't hear'). Data summaries and analyses reported were carried out on the percentage of observation intervals spent by individual supervisors on each category. Table 1 shows how supervisors distributed their time between the categories.

Table 1. Percentage of time spent by police sergeants and inter-observer reliability for OSTI categories

<table>
<thead>
<tr>
<th>OSTI category</th>
<th>Reliability</th>
<th>Percentage of time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% agreement</td>
<td>Cohen's kappa</td>
</tr>
<tr>
<td>Monitors</td>
<td>98</td>
<td>.86</td>
</tr>
<tr>
<td>Consequences</td>
<td>86</td>
<td>.78</td>
</tr>
<tr>
<td>Antecedents</td>
<td>91</td>
<td>.77</td>
</tr>
<tr>
<td>Own performance</td>
<td>96</td>
<td>.85</td>
</tr>
<tr>
<td>Work-related</td>
<td>90</td>
<td>.89</td>
</tr>
<tr>
<td>Non-work</td>
<td>95</td>
<td>.94</td>
</tr>
<tr>
<td>Solitary</td>
<td>98</td>
<td>.96</td>
</tr>
</tbody>
</table>

*Includes 2.6 per cent meal breaks.
Comparisons of police sergeants and other supervisors

Table 2 contrasts the percentage of time spent by police sergeants on performance categories of antecedents, monitors and consequences with comparable data (i.e. from the OSTI) reported for supervisors in other jobs (Komaki, 1986; Komaki et al., 1986, 1989). Police sergeants spent only about half as much time as other supervisors providing antecedents (i.e. instructions, rules, goals). Given the quasi-military structure that characterizes police forces, the direction and magnitude of this discrepancy were unexpected. Presumably, factors such as the structured training, the heavy emphasis on policies and procedures, and the reactive nature of much patrol work shape the perception among police supervisors that their subordinates should know what is expected of them or should glean such information from their more experienced peers.

As expected, police sergeants spent considerably more time (53 per cent or more) monitoring subordinates' performance than supervisors in the insurance, newspaper and bank settings. A post hoc examination revealed that a substantial proportion (45 per cent) of monitoring involved vetting crime/arrest reports and court briefs that had been prepared by subordinates for other sections of the force (e.g. criminal investigation, prosecution). A smaller, though still sizeable, proportion (26 per cent) was spent monitoring patrol activities, although less than 5 per cent of all monitoring actually involved direct observation of subordinates' patrol performance. Participants' reports suggested that this latter statistic reflected a strong, informal organizational constraint on direct monitoring of patrol work.

Table 2. Percentage of time spent by police sergeants and other supervisors on performance categories of the OSTI

<table>
<thead>
<tr>
<th></th>
<th>Antecedents</th>
<th>Monitors</th>
<th>Consequences</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police sergeants</td>
<td>2.5</td>
<td>6.6</td>
<td>3.4</td>
<td>12.5</td>
</tr>
<tr>
<td>Insurance managers*</td>
<td>4.8</td>
<td>2.6</td>
<td>6.0</td>
<td>13.4</td>
</tr>
<tr>
<td>Newspaper managers*</td>
<td>4.9</td>
<td>4.1</td>
<td>4.8</td>
<td>13.8</td>
</tr>
<tr>
<td>Bank managers*</td>
<td>5.8</td>
<td>4.3</td>
<td>4.9</td>
<td>15.0</td>
</tr>
<tr>
<td>Theatre managers*</td>
<td>11.1</td>
<td>11.3</td>
<td>5.3</td>
<td>27.7</td>
</tr>
</tbody>
</table>

*From Komaki (1986).

Also, as expected, police sergeants spent only about 60–70 per cent of the time spent by other supervisors in providing consequences or feedback on subordinate performance, with these consequences evenly distributed between positive, negative and neutral subcategories. Although no research exists which helps define optimum levels of feedback, there are grounds for arguing that police sergeants provided performance consequences too sparingly. Given the lack of objective performance criteria associated with much patrol work (cf. Brief, Aldag & Wallden, 1976), relatively high levels of feedback from supervisors might be considered desirable (cf. Larson, 1984). Yet, anecdotal reports
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obtained from participants and senior officers at debriefing sessions suggested that inadequate feedback provision may characterize most supervisory levels within police organizations, with there being a broadly held perspective that subordinates should know whether or not their performance was adequate.

Correlations between supervisory behaviours and subordinate performance ratings

Examination of the correlation matrix (Pearson product moment coefficients) for the major behavioural categories and subcategories revealed several noteworthy patterns of relationships. (Excluding the first two observation sessions from analyses to control for possible reactivity of supervisors to the observer produced only minor variations in correlation coefficients and the general pattern of relationships remained as described below.) As predicted, supervisors of higher-ranked teams spent significantly more time monitoring performance \((r(18) = .40, p < .05, \text{one tail})\), although the predicted correlation between subordinate performance and monitoring via work sampling was not significant \((r = .25)\). There was, however, a significant monitoring via self-report team performance correlation \((r(18) = .47, p < .05, \text{two tails})\). Post hoc examination of those self-reports revealed that over 60 per cent of this reporting/monitoring focused on subordinates’ patrol activities. Thus, although sergeants rarely directly sampled their subordinates’ performance on patrol (as was noted earlier), those with higher-rated teams spent more time collecting verbal reports on patrol activities.

The predicted relationship between consequences (total) and performance did not reach significance \((r = .35)\). As Komaki (1986) argued, effective supervisors may not necessarily provide more consequences; rather, they may be more likely to provide contingent consequences because of their more effective monitoring. In line with this suggestion, there was a reasonably consistent pattern of significant, positive relationships between the various categories of monitoring and performance consequences\(^1\). In addition, there was a significant positive relationship between consequences (neutral) and team performance \((r(18) = .51, p < .05, \text{two tails})\). Neutral consequences tended to be of three main types: simple messages of encouragement (e.g., ‘Yep. That’s alright’, ‘Another one!’), direct instructional feedback (e.g. ‘You need a statement from the driver to complete that report’) or indirect instructional information via discussion of other officers’ performance (e.g. ‘He’s then required to log-in with the on-duty sergeant’).

The other noteworthy pattern involved the relationships between solitary activities, other supervisory behaviours, and performance. Not surprisingly, supervisors who spent more time engaged in solitary activities spent less time in interactions with subordinates, with this reflected in reduced time providing antecedents \((r = -.35)\), monitoring \((r = - .49)\), engaged in work-related discussions \((r = -.80)\) and talking about their own performance \((r = -.68)\). Time spent in solitary activity did not correlate with team performance \((r = -.11)\). There were, however, significant relationships between particular subcategories of solitary activity and performance. Stimulated by the observation made during data collection that there appeared to be substantial differences between supervisors in the amount of time they spent in their cars patrolling the streets, we partitioned the solitary activity category into subcategories of driving, doing paperwork at the sta-

\(^1\) The complete correlation matrix is available from the first author.
tion, and other solitary activity (e.g. walking around, checking equipment). Significant correlations were found between subordinate ratings and both solitary activity: driving ($r(18) = -0.45, p < 0.05, \text{two tails}$), and solitary activity: paperwork ($r(18) = 0.48, p < 0.05, \text{two tails}$). Better team performance was associated with sergeants who spent less time in their cars on patrol and more time at their desk doing paperwork. (Note: These solitary activity subcategories did not incorporate performance-related supervisory behaviour. Time spent in the car watching or listening to subordinates carrying out their duties, or time spent at the desk vetting subordinates’ paperwork, preparing written instructions, correcting reports or writing feedback reports were classified on the OSTI under the relevant performance-related categories, and the associated subcategories, of monitoring, antecedents, and consequences.) Relationships between team performance and time spent at the desk (cf. routine patrolling) may, to some degree, reflect more attention to managerial-type functions such as problem analysis and planning and, in turn, the more effective deployment of resources. Also, some of the variance in the superior officers’ performance ratings may be accounted for by their perceptions of the efficiency with which sergeants processed their paperwork. It was also the case, however, that more time spent on the road was associated with reductions in the performance-oriented behaviours of antecedents ($r(18) = -0.50, p < 0.05, \text{two tails}$), and monitoring ($r(18) = -0.65, p < 0.01, \text{two tails}$), while increased time spent on solitary paperwork was associated with increased monitoring ($r(18) = 0.54, p < 0.05, \text{two tails}$). Supervisors who spent more time at their desk had many opportunities (cf. those on the road) to solicit reports from their subordinates and to provide contingent consequences when subordinates returned to the station (e.g. to make out a report, to question/arrest an offender, to have a meal break), and this perhaps provides part of the explanation for the relationships between these subcategories of solitary activity and team performance.

Discussion

This study tested the generality of a model of supervisory effectiveness advanced by Komaki et al. (1986) in an organization characterized by a formal (quasi-military) chain of command. Even in an environment where expectations of close monitoring and the provision of minimal feedback are considered the norm, behavioural observation using the OSTI confirmed that the supervisor’s use of performance monitoring and consequences (neutral) were strongly associated with effective team performance. The validity of these conclusions is, of course, dependent on the representativeness of the observational data. While this cannot be guaranteed, we draw attention to the following points. Komaki et al. (1986) demonstrated that the OSTI captures representative data on the various behaviours sampled. To increase the likelihood that our sample of supervisors was representative, we sampled across shifts, stations/locations, and over an extended period of time. Further, the method of sample selection prevented any deliberate selection bias being exercised.

Although these data are consistent with Komaki’s (1986) model of how supervisors influence subordinates’ behaviour, alternative causal links between monitoring, consequences and performance can be suggested. For example, high-performing subordinates may simply demand increased monitoring and consequences (cf. Lowin & Craig, 1968). Perhaps supervisors of more effective teams had to spend more time vetting the increased
paperwork associated with more productive police work. Similarly, the negative correlation between solitary activity: driving and team performance may have been due to supervisors responding to poor team performance by increased checking of their work on the road. Although we cannot definitely rule out these possibilities, several features of the data argue against them. First, monitoring via work sampling, which tapped the vetting of subordinates’ paperwork, was not correlated with team performance. Further, since time spent by supervisors vetting and correcting subordinates’ paperwork, preparing written instructions or writing evaluations were classified under the relevant performance-related categories of monitoring, antecedents or consequences, the solitary: paperwork–team performance correlation cannot be explained in terms of additional monitoring and feedback associated with the increased paperwork generated by more productive teams. It also seems unlikely that the negative correlation between solitary activity: driving and performance reflected increased monitoring of poor performers on the road since time spent in the car watching (or listening to) subordinates carrying out their duties was classified separately on the OSTI as performance monitoring.

Thus, although it remains possible that the significant correlations reported reflected the way that different levels of team performance influenced supervisory behaviour, the evidence from this study and from controlled experiments on the effects of monitoring and feedback delivery (e.g. Bergum & Lehr, 1963; Honig & Staddon, 1977; Ilgen, Fisher, & Taylor, 1979; Larson & Callahan, 1990) lead us to favour an interpretation in terms of Komaki et al’s. (1986) operant conceptualization of the motivational aspects of effective supervision. Nevertheless, there is ample scope for investigations of the complex interrelationships between the specific supervisory behaviours of performance monitoring and consequences and the performance of both individual subordinates and groups (cf. Sims & Manz, 1984). Precisely how performance monitoring impacts on performance given different task, supervisor, subordinate, organizational or structural characteristics, and how in the longer term a supervisor’s monitoring, and use of consequences, are shaped by subordinates’ responses, are issues that warrant more detailed attention in future research. Such questions are of particular interest given other findings which draw attention to potentially adverse effects of monitoring or surveillance. For example, external surveillance that is perceived as attempting to control behaviour has been found to undermine personal autonomy and intrinsic motivation (Enzle & Anderson, 1993). Exactly when such effects are likely to occur, and when the importance attached to the information gained from monitoring is considered to outweigh potential reductions in intrinsic motivation, represent important research issues.

Finally, further direct examination of the nature of the relationships between subordinate performance and those supervisory behaviours which were not correlated with performance (when time spent on the behaviour was the criterion of interest) is warranted since it is most unlikely that duration is the only dimension of behaviour which is important in determining supervisory effectiveness.

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