
Article:
van Dierendonck, D., Haynes, C., Borrill, C. et al. (1 more author) (2007) Effects of upward feedback on leadership behaviour toward subordinates. Journal of Management Development, 26 (3). pp. 228-238. ISSN 0262-1711

https://doi.org/10.1108/02621710710732137

Leadership Behaviour and Upward Feedback: Findings from a Longitudinal Intervention

Dirk van Dierendonck, Clare Haynes, Carol Borrill and Chris Stride

ERIM REPORT SERIES *RESEARCH IN MANAGEMENT*	
ERIM Report Series reference number	ERS-2007-003-ORG
Publication	January 2007
Number of pages	28
Persistent paper URL	
Email address corresponding author	dvandierendonck@rsm.nl
Address	Erasmus Research Institute of Management (ERIM) RSM Erasmus University / Erasmus School of Economics Erasmus Universiteit Rotterdam P.O.Box 1738 3000 DR Rotterdam, The Netherlands Phone: + 31 10 408 1182 Fax: + 31 10 408 9640 Email: info@erim.eur.nl Internet: www.erim.eur.nl

Bibliographic data and classifications of all the ERIM reports are also available on the ERIM website: www.erim.eur.nl

ERASMUS **R**ESEARCH **I**NSTITUTE OF **M**ANAGEMENT

REPORT SERIES

RESEARCH IN MANAGEMENT

ABSTRACT AND KEYWORDS	
Abstract	A sample of 48 managers and 308 staff members of a community health care organization took part in a study to investigate the influence of participating in an upward feedback program on leadership behaviour, both as indicated be self-ratings and subordinates' ratings. The research design consisted of three measurement points within one year. The intervention included managers receiving upward feedback and a management skills workshop. The results showed a negative effect of the program on leadership behaviour as rated by the staff. Furthermore, managers reduced their self-ratings in the condition where they participated in both a feedback session and an management skills workshop.
Free Keywords	Leadership Behaviour, Upward Feedback, Management, Self-rating
Availability	
Classifications	

Leadership behaviour and upward feedback:

Findings from a longitudinal intervention

Dirk van Dierendonck

RSM Erasmus University

The Netherlands

Clare Haynes

JPMorganChase, London

Great Britain

Carol Borrill

Aston Business School, Birmingham

Great Britain

Chris Stride

University of Sheffield

Great Britain

Work in progress, Version January 2006

The research was financed by the Economic & Social Research Council (ESRC). This article is partly based on the doctoral thesis of Clare Haynes. The data was collected while Clare Haynes and Carol Borrill were employed by the Institute of Work Psychology, University of Sheffield, Sheffield, Great Britain.
Correspondence may be sent to Dirk van Dierendonck, RSM Erasmus University, Burg Oudlaan 50, 3062 PA, Rotterdam, The Netherlands

Abstract

A sample of 48 managers and 308 staff members of a community health care organization took part in a study to investigate the influence of participating in an upward feedback program on leadership behaviour, both as indicated be self-ratings and subordinates' ratings. The research design consisted of three measurement points within one year. The intervention included managers receiving upward feedback and a management skills workshop. The results showed a negative effect of the program on leadership behaviour as rated by the staff. Furthermore, managers reduced their self-ratings in the condition where they participated in both a feedback session and an management skills workshop.

Leadership behaviour and upward feedback:
Findings from a longitudinal intervention

Appraisal on performance or for development purposes is common practice in many organizations today (Graddick & Lane, 1998; Timmreck, 1995). Feedback from multisources (e.g., managers, peers, subordinates) and upward feedback can be a valuable source of information on performance. In fact, the use of subordinate appraisals in the performance appraisal process is increasing (Bernardin, Dahmus, & Redmon, 1993; Graddick & Lane, 1998). Fortune magazine's annual survey of 32 industries showed that approximately two-thirds (n=20) of the most respected companies in the United States used some form of upward feedback (Smith, 1993). Upward feedback refers to the process of subordinates anonymously (in most cases) evaluating their supervisor's performance. The information is averaged and fed back to the supervisor and possibly to the next higher level of management, for the purposes of development and/or performance evaluation. The current situation is that upward feedback and multisource systems are being implemented at an unprecedented rate in the UK and the US. Unfortunately, however, the same cannot be said of empirical research in this area (Fletcher & Baldry, 1999).

Upward appraisal can be particularly valuable in attempts to develop leaders (Walker & Smither, 1999). According to a number of researchers (e.g., Latham & Wexley, 1994; Smither et al, 1995; Tsui & Ohlott, 1988), the increasing use of upward feedback reflects the recognition that establishing directions for development and making decisions about managers can benefit from having input from subordinates. The subordinate's perspective is important given that manager/subordinate relationships are

an important part of managing – in many cases, the key relationship for the manager. As Bernardin (1986) and others (e.g., Hall, Leidecker, & Dimarco, 1996) note, by the very nature of their working relationship, subordinates are often in closer contact with their manager than their manager's line manager and are, therefore, in a better position to directly observe and rate accurately many managerial behaviours. Subordinates are directly affected by the supervisor's behaviour and so provide feedback to the supervisor about his or her leadership from first-hand experience. These staff appraisals can provide information to the manager about their perceptions of his/her strengths and weaknesses.

Upward feedback is supposed to work because the degree to which managers perceptions of their own leadership behaviour matches those of their staff, provides valuable information for development purposes. Both Goal-Setting Theory (Latham & Locke, 1991) and Control Theory (Carver & Scheier, 1981) regard behaviors as goal-directed. To achieve goals or standards, people use feedback to evaluate their performance relative to their goals (or standards). Leadership behaviour that is viewed as important for successful performance include, among others, coaching, communication, providing feedback, and empowerment. By being included in the upward feedback survey, such behaviors are emphasized as key elements of good leadership. What's more, by completing a self-rating, individuals become aware of behaviour desired by the organization and could presumably set goals accordingly, and in this sense, self-ratings represent the standard against which managers compare themselves (Ashford, 1989).

The ratings of managerial jobs in any type of appraisal system is by its very nature, a complex process, since for many managerial jobs outputs are difficult to measure and performance standards may be ambiguous (Lombardo & McCall, 1982). In

addition, with an increasing orientation toward responsibility and flexibility, managerial jobs are becoming more complex and fluid (Funderburg & Levy, 1997). Perhaps it is not too surprising, therefore, that upward feedback systems vary in the criteria being appraised. For example, Rowson (1998) discusses an instrument that focuses on specific job-related skills, which include coaching, corporate citizenship and display organizational savvy, as well as more traditional managerial skills. The rating instrument used by Johnson and Ferstl (1998) included four broad performance categories identified as important by leaders in the accounting firm, and these were, leadership, people management (coaching, evaluation, counseling), people development and communications. This study focuses the upward feedback process on similar leadership competencies believed to be crucial for managers to run their departments, hereby following the approach of Smither et al. (1995).

Despite increasing interest and uptake by organisations, there has been a regretfully small amount of research on the effects of upward feedback on changes in managerial behaviour. Several studies (Atwater, Roush, & Fischthal, 1995; Smither et al, 1995; Reilly, Smither, & Vasilopoulos, 1996, Walker & Smither, 1999) have shown the value of upward feedback in positively affecting the supervisor's behaviour. The studies of Reilly et al. (1996) and Walker and Smither (1999) are especially valuable in that these examine the effects of upward feedback on supervisor's behaviour over 2.5 and 5 years, respectively. Results suggest that the continued administration of an upward feedback program can result in sustained positive behaviour change over a fairly long period of time. These findings indicate that upward feedback is enduring. However, a major weakness in these studies is that they lack control groups; and for this reason possible

history effects cannot be excluded. The performance improvements could have been influenced by other events occuring within the organisation. In 1996, Kluger and Denisi published the results of a comprehensive meta-analysis. They found that feedback intervention studies, generally, have not shown consistent improvement in performance. Specifically, they found that feedback interventions (i.e. giving feedback on an individual's performance or behaviour) not always improve performance. While it is true to say that, on average, feedback was associated with enhanced performance, about one-third of the effects found were negative; that is to say, feedback actually detracted from performance.

On the basis of such findings from the general feedback literature, it is likely, that in some instances, under certain conditions, an upward feedback program will result in improvement in performance, whereas in others it will not. A more recent study on upward feedback (Atwater, Waldman, Atwater, Cartier, 2000) that included a control group could not replicate the earlier positive findings on leadership performance. They did, however, show that self-ratings of those who received feedback lowered at subsequent self-rating measurement points. A similar finding was reported by Johnson and Ferstl (1999). Self-ratings tended to decrease for over raters (i.e. those who had rated their own behaviour more positively than others had rated them) and increase for under raters (i.e. those who had rated their own behaviour less positively than others had rated them). It is suggested that managers strive to decrease the discrepancy between their self-ratings and the ratings of their subordinates by either improving their performance, or by decreasing the cognitive imbalance by readjusting their self-image. This is in accordance with self-consistency theory which suggests that a manager will seek to minimize the

discrepancy between their self-rating and feedback from others , similar to predictions made by goal-setting and control theories (Korsgaard, 1996). Specific attention will, therefore, be given to the extent that the self-ratings of the managers change as a result of the feedback from their subordinates and the discrepancy of these ratings with their own ratings.

In order to enhance the possible positive effect of the upward feedback program, a management skill workshop was included in our project. Given the inconclusive results of earlier feedback intervention studies, it was hypothesized that managers might not be able to initiate changes on the basis of the feedback report alone. Managers might have been keen to change in a particular area, but uncertain how to achieve this. The workshop was introduced in an attempt to address this concern. To evaluate the effects of the workshop, one third of the managers group received upward feedback and attended the workshop (see Table 1 for full research design).

Previous studies on the effectiveness of upward feedback programs assume that managers have a kind of “average leadership style”, that is: (s)he behaves in the same way to all of his or her subordinates. This is reflected in the statistical analysis used in these studies that focus on the averaged scores received by each manager. Leadership behaviour can, however, also be conceptualized in another way, as proposed by the leader member exchange (LMX) theory (earlier called the “Vertical Dyad Linkage” model; Dansereau, Graen, & Haga, 1975). This theory describes how managers develop a unique relationship, the so-called LMX relationship with each of their subordinates. Moreover, it shows that a leader’s behaviour can vary between different dyads of leader and subordinate. It emphasizes that managers work with their subordinate on an one-on-one

basis to develop a different relationship with each of them (Graen & Uhl-Bien, 1995). In order to capture the full range of possible effects of the upward feedback program - in line with the idea of the manager-subordinate as a unique vertical dyad - the effects are examined both on staff level and on managerial level.

In conclusion, using a research design that included two experimental groups and one control group, the research reported in this paper investigated the influence of participating in an upward feedback program on leadership behaviour, both as indicated by self-ratings and subordinates' ratings.

Method

Participants

Middle/first-line managers working in the British National Health Service, were invited to participate. They were based in two Community Trusts, health care organizations that provide a range of community based services that meet the health needs of people in their local communities. The managers received a letter explaining the rationale and design of what was called the 'Management Development Initiative', and were contacted by the lead researcher to discuss this further. Following agreement to participate, managers were asked to brief their staff on the aims of the initiative and to explain the importance of a high response rate to the survey. To be included in the study at least 4 staff members of a team had to respond to the first survey.

The research project included a total of five measurement points, and a range of interventions. In this article we focus on the first three measurement points as this allowed us to test three conditions against each other: a no intervention (control) group,

an upward feedback only group, and an upward feedback plus Management skills workshop (a description of these conditions is detailed later). An additional argument for focusing on the first three measurement points was that during the 18 month course of the study, turnover was quite high among both managers and staff (i.e. movement internally within the Trust, and people leaving the job to take up a position outside of the Trust). Focusing on data from the first three time points enabled us to compare the three conditions, while maximizing the number of observations for managers and staff. In addition we combined the data from the two sites. The number of managers in each of the three groups was as follows: control 19, feedback only 21, and feedback plus skills workshop 8, (this included 67 % of the managers employed in the two sites). Among the managers, 34 percent were male and 66 percent female. Their mean age was 40.7 years (*SD* = 8.5) with 16.1 years (*SD* = 7.1) of work experience at the organization and 3.4 years (*SD* = 3.5) at their management position.

To gather as much information as possible from subordinates, at each time point surveys were sent to all of the staff members who were being managed by the managers participating in the study. Thus additional subordinate respondents were included in the research at T2 and T3, while some staff respondents left between measurement points. At T1 (February/March 1996) 262 staff participated, at T2 (July/August 1996) the *N* was 277, at T3 (December 1996 / January 1997) the *N* was 244. The results reported in this paper are from staff who completed the survey at least twice. The resulting staff sample included 308 staff members (29 % of the staff employed at the two sites). There were between 2 and 17 staff members working for each manager. The biographical characteristics of the staff were similar across measurement points. Twenty percent were

male and 80 percent female. The mean age was 40.1 years (*SD* = 10.0) with 11.8 years (*SD* = 8.6) of work experience at their organization and 4.4 years (*SD* = 5.2) at their present position.

Design

As Table 1 illustrates, the managers were randomly divided into three groups. Two months following a measurement point, some of the managers received either upward feedback or a Management skills workshop. The managers of group 1 received upward feedback after T1 and a workshop after T2. The managers of group 2 received upward feedback after T2. The managers of group 3 were included as control group.

Intervention

Upward Feedback. The Feedback Reports had three sections. The first section was an introduction explaining the process and showing examples and interpretations of the type of information the managers would have in their report. Section two was the manager's personal, individual feedback, presented graphically. The leadership dimensions were illustrated with a separate graph for each dimension, showing self-ratings and averaged staff ratings. The final section provided advice and worksheets to help managers develop area's of weakness and build on strengths. The managers received their reports after a 2-hour workshop in which they learned how to interpret and use the Feedback Report. Having read their reports, the managers attended a one-to-one session (45 minutes) with one of the researchers. These sessions were an opportunity for managers to discuss their feedback reports in a confidential and supportive environment.

Management Skills Workshop. The Management Skills workshop focused on those areas identified from the Feedback Reports of all managers as having the greatest

discrepancy between staff and manager ratings. These areas were Feedback to staff, Communication and Coaching/Support. The workshop explored these areas in some depth and the managers had the opportunity to discuss a number of scenarios and how they would deal with these. Specific attention was given to resistance to changing behaviour patterns. The managers were also given the opportunity to reflect on their current practice in these areas and devise action plans on how they would behave differently in the future.

Measures

Leadership Behaviour. Nine subscales of leadership were included originating from two measures of leadership. The first subscale focused on 'Presenting feedback' (Fandt, 1994). The other eight subscales focused on: 'Coaching/support', 'Commitment to quality', 'Communication', 'Fairness', 'Integrity & respect', 'Participation and empowerment', 'Providing feedback, and 'Valuing diversity' (Smither et al., 1995). All the above subscales have a five-point scale, ranging from 1 (not at all) to 5 (to a very great extent). Following Smither et al. (1995), the items were combined into one composite measure. Smither et al. decided on this procedure based on the high mean intercorrelations between the subscales (r = .76) and a very high internal consistency of the composite measure of all items (α = .98). In our study, similar values were found. The mean intercorrelation was .72 and the internal consistency of this composite measure was .98 for staff ratings and .93 for self-ratings. An added advantage of this procedure was that by combining all items into one measure, we reduced the possible effects of error and change on our results.

Analysis

Our analysis combined the panel analysis approach with the structural equation modeling approach to analyze data from experimental studies as described by Russell, Kahn, Altmaier, and Spoth (1998). This approach has the advantage over the traditional ANOVA approach in that it allows for removing biasing effects of random and correlated measurement error on the outcomes of the intervention. This increases the power of our analysis. In this model, the predicted variables were controlled for by their baseline levels. The Time 2 Leadership behaviour latent variable was regressed on itself on Time 1 and the Time 3 Leadership behaviour latent variable was regressed on itself on Time 2. Zapf et al. (1996) argued that third variable effects like occasion factors and background variables are controlled for by partialling out the baseline level of a variable.

Analysis at staff level. Figure 1 shows our model. The operationalization of the leadership behaviour latent variables was based on item parcels. We divided the items into three groups, or parcels, and calculated their mean value. The items of the nine subscales were hereby equally divided over the three parcels. The intervention groups were represented in the latent model by including two dummy variables, reflecting group membership. Following the example of Russell, et al. (1998) two modifications were added to our model with the analysis at staff level. First, in order to correct for the influence of correlated measurement error across time, we allowed the error term of the manifest variables that were measured repeatedly over time to correlate. For example, the error term of the first parcel at Time 1 was allowed to correlate with the error term of the same parcel at Time 2 and with the error term of this parcel at Time 3. Second, to ensure that the nature of the latent variables being measured over time remained stable, the

loading of the measured variables on the latent variables were constrained to be equal. For example, the loading of the first item parcel on leadership behaviour at Time 1 was constrained to the loading of that same item parcel on leadership behaviour on Time 2 and on Time 3.

Analysis at management level. Multilevel modeling is becoming a more and more common way to analyze clustered data. Heck & Thomas (2000) showed how to take this one step further by introducing multilevel structural equation modeling. Their approach combines the advantages of structural equation modeling with multilevel modeling. It is not our purpose to go into a full explanation of their approach (see Heck & Thomas, 2000 for an elaborate explanation with examples). Basically, their approach uses the multi-group option of LISREL. First the population covariance matrix is decomposed into separate within-group and between-group covariance matrices. Next, a two-group specification of the model in Figure 1 becomes possible. In group 1 (within group, staff level), only the three leadership behaviour variables across time are specified. In group 2 (between group, managerial level), both intervention options, as mentioned in figure 1, are also specified. This allows for the testing of the effects of the upward feedback program specifically on managerial level. It should be noted that in this model, the two interventions dummy variables have no variance available at staff level.

Results

Leadership behaviour, analysis at staff level

The first step in our SEM analyses focused on the effect of the upward feedback intervention at staff level. In other words, the extent that subordinates whose managers

received an upward feedback reported more (or less) changes in the leadership behaviour of their managers, compared those that did not receive anything and those that received both a report and a workshop. With these staff level analysis, each manager-subordinate is seen as an unique vertical dyad.

Given the number of missing values in our dataset, we choose to estimate the covariance matrices with the EM algorithm that is part of LISREL 8.5. The EM algoritm (Dempster, Laird & Rubin, 1977) is a useful technique for handling missing data problems. There is a growing consensus that the resulting covariance matrix reflects the population values more adequately than those provided by the pairwise or listwise handling of missing data. LISREL 8.5 provides in this sort of analysis two global goodness of fit statistics to determine the adequacy of a model: the Full Information ML Chi-Square and the Root Mean Square Error of Approximation (RMSEA). An RMSEA value close to .06 is considered as indicative of a good fit (Hu & Bentler, 1998)

In the model tested the relevant paths between both dummy intervention variables on the one hand and leadership behaviour on the other hand had been set free to be estimated (see figure 1, arrows E). The fit of this model was acceptable ($\chi^2_{(34)} = 79.03$, $p < .001$, RMSEA = .066). We now checked the significance of these paths. Regretfully only one of the three paths was significant. We fixed the nonsignificant paths at zero. The fit of the resulting model was not significantly reduced due to these adjustments ($\chi^2_{(36)} = 80.85$, $p < .001$, RMSEA = .064; $\Delta\chi^2_{(2)} = 1.82$, $p = .403$). The modification indices provided by LISREL suggested a further improvement in the model, that is a direct relation between leadership behaviour at Time 1 to leadership behaviour at Time 3. This last model has an acceptable fit ($\chi2(35) = 66.28$, $p = .054$, RMSEA = .001, ($\Delta\chi^2_{(1)} =$

14.57, $p < .001$). In the final model, the standardized stability coefficients were .74 (Time 1 / Time 2), .52 (Time 2 / Time 3), and .25 (Time 1 / Time 3). We could only show a direct negative (!) effect (path coefficient = -.11) of the Feedback-only intervention on leadership behaviour at Time 3.

Upward feedback intervention effect, management level. The next step is analyzing the possible effects of our upward feedback program on management level. The model of figure 1 was tested with multilevel structural equation modeling. This resulted in a low fit (($\chi^2_{(74)} = 319{,}38$, $p < .001$, RMSEA = .15). All three dummy intervention coefficients were nonsignificant. For the first intervention group the standardized coefficients were .10 and -.13; for intervention group 2 this coefficient was -.13. Despite this nonsignificant result, it should be noted that similar as in the results at staff level, the relations of both interventions on leadership behaviour at Time 3 were again negative.

To further explore possible effects of the intervention, a repeated measures ANOVA focused at changes in the self-ratings of the managers. Table 3 shows the levels of leadership behaviour, both as mean levels as assessed by their staff and in self-ratings. The change in self-ratings approached significance (Group x Time: $F(90,4) = 2.18$, $p = .08$). Moreover, if only those managers who overestimated their skills at Time 1 were kept in the analysis, this interaction effect became significant (Group x Time: $F(72,4) = 2.67$, $p = .04$). The results suggest a drop in self-ratings among the managers in the Feedback and Management skills workshop group after the start of the program.

Discussion

In this paper we explored the impact of an upward feedback program on leadership behaviour. We aimed to determine the influence on managers of participating in an upward feedback program on leadership behaviour, both as rated by their subordinates and as self-rated. Our study showed two results. First a small negative effect was found of the upward feedback program on the leadership behaviour as rated by their staff. Second, the self-ratings reduced among those managers in the condition were they participated in both a feedback session and a management skills workshop who beforehand overestimated their skills as a manager.

These limited, and partly counterintuitive, outcomes to the research questions are not uncommon in feedback research. Such results are largely in accordance with the earlier study of Atwater et al. (2000). It resonates with the conclusions in the meta-analysis of Kluger & DeNisi (1996) that feedback is a double-edged sword. Their meta-analysis also showed that feedback reduced performance in one third of the cases. The reduction in self-ratings among managers who over rated themselves is in line with other studies where those managers improved who originally over rated themselves (e.g., Johnson & Ferstl, 1999; Walker & Smither, 1999). This effect can be understood with Self-consistency theory, which assumes that people prefer feedback which is consistent with their self-image. This suggests that managers with negative discrepancies may increase effort or reduce their-self-ratings to reduce the discrepancy. It seems that managers did decrease their self-ratings, but did not increase their efforts. This provides a possible explanation of negative effects of the intervention. It suggests that managers who decreased their self-ratings, at the same time and maybe as a result of this lowered self-image, also decreased their supportive behaviour towards their staff. Being

confronted with the fact that one is doing worse than one thinks may be demotivating. It can be speculated to what extent the upward feedback resulted in a lowered self-concept and less self-efficacy as a manager. An extensive meta-analysis by Judge and Bono (2001) showed that a positive self-concept (i.e. self-esteem, generalized self-efficacy, locus of control, emotional stability) is an important predictor of job performance. Therefore, it should come as no surprise that a drop in positive feelings about one's performance is related to less positive managerial behaviour.

One could of course argue that a multi-source approach (360-degree feedback) might have resulted in stronger results. However, current research provides little empirical proof for its effectiveness above and beyond upward feedback (Waldman, Atwater, & Antonioni. 1998). It seems that despite its intuitive appeal, feedback has only a limited effect in enhancing supportive leadership behaviour. More research is needed to develop an understanding of the conditions under which feedback leads to positive behaviour change. Perhaps we also need to consider the research about the source of the feedback – the more valued the source the more likely someone is to attend to it. Previous research has shown that subordinates are a valued source of feedback. Our research suggests that the managers *did* attend to this source of feedback – and reappraised their behaviour accordingly**.** This reappraisal could possibly lead to changes in behaviour on the long term. Managers who provided accurate self-ratings have been found to be better performers than those who provided inaccurate self-rating (Atwater & Yammarino, 1992; Fletcher, 1997).

There are a number of limitations to the present research. One limitation is the small number of managers that participated in this research. With only 48 managers, the

power of testing possible effects of our intervention on management level was low. Previous studies included sometimes as many as 978 or more leaders (e.g. Atwater et al, 1995; Johnson & Kerstl, 1999). These numbers allowed for a more thorough analysis at the management level. We also chose a design that enabled two experimental conditions to be tested against a control group, which put practical limits on our design.

Another limitation are the missing values. There is always a loss of information when some people do not fill out all surveys. In order to compensate for this problem, we used sophisticated SEM analytic techniques to get the most of our data. The use of the EM routine allowed for a full use of the information in our data.

Further, one could argue that changes might have taken place on specific leadership behaviour dimensions and not on others, specifically the three dimensions that were targeted in the management skill workshop. The high intercorrelations between the dimensions make this unlikely. To be sure, the data was checked for such a possibility. No significant difference was found for these three dimensions.

Despite these limitations, the strength of this study should not be overlooked. A major strength is our inclusion of a control group. To our knowledge, this has only been done in one other upward feedback study (Atwater et al. 2000). In addition, the test of the intervention with SEM has the advantage of removing biasing effects of random and correlated measurement error on the outcomes, and therewith increasing power (Russel et al., 1998).

In conclusion, it is often taken for granted that discrepancies between self-ratings and subordinate ratings raise self-awareness, highlight gaps between goals and job perfomance and suggest areas of improvements (London & Smither, 1995; Tornow,

1993). Users of upward feedback programs hope, or expect, that managers will respond to these insights by actually taking steps to improve performance. Our results and that of earlier studies suggest that that is not always the case. It stresses the need for more research into the specific conditions under which upward feedback does and does not work.

References

Ashford, S. J. (1989). Self-assessment in organizations: A literature review and integrative model. In L.L Cummings, B.M. Staw, (Eds.), *Research in organizational behaviour* (Vol. 11, pp. 133-174), Greenwich, CT: JAI Press.

Atwater, L., Roush, P., & Fischthal, A. (1995). The influence of upward feedback on self- and follower ratings of leadership. *Personnel Psychology*, *51*, 577-598.

Atwater, L.E., Waldman, D.A., Atwater, D., & Cartier, P. (2000). An upward feedback field experiment: supervisors; cynicism, reactions, and commitment to subordinates. *Personnel Psychology*, *53*, 275-297.

Atwater, L. E. & Yammarino, F. J. (1992). Does self-other agreement on leadership perceptions moderate the validity of leadership and performance predictions?. *Personnel Psychology*, *45*, 141-164.

Bernardin, H. J. (1986). Subordinate appraisal: A valuable source of information about managers. *Human Resource Management*, *25*, 421-439.

Bernardin, H. J., Dahmus, S. A., & Redmon, G. (1993). Attitudes of first-line supervisors toward subordinate appraisals. *Human Resource Management, 32*, 315-324.

Brett, J.F. & Atwater, L.E. (2001). 360^{o} Feedback: Accuracy, reactions and perceptions of usefulness. *Journal of Applied Psychology*, *86*, 930-942.

Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control theory to human behavior*. New York: Springer-Verlag.

Dansereau, F., Grean, G.B., & Haga, W. (1975). A vertical dyad linkage approach to leadership withing formal organizations: a longitudinal investigation of the role-making process. *Organizational Behaviour and Human Performance, 18*, 147-167.

Dempster, A.P., Laird, N.M., & Rubin, D.B. (1977). Maximum likelihood estimation from incomplete data via the EM algoritm. *Journal of the Royal Statistical Society, Series B39*, 1-38.

Fandt, P. M. (1994). *Management Skills. Practice and Experience.* West Publishing Company.

Fletcher, C. (1997). Self-Awareness – A Neglected Attribute in Selection and Assessment? *International Journal of Selection and Assessment. 5*, 183-187.

Fletcher, C., & Baldry, C. (1999). Multi-source feedback systems: A research perspective. In: C.L. Cooper & I.T.Robertson, *International review of industrial and organizational psychology,* Vol. 14. Wiley, London.

Funderberg, S. A., & Levy, P. E. (1997). The influence of individual and contextual variables on 360-degree feedback system attitudes. *Group & Organizational Management*, 22(2), 210-235.

Graddick, M. M., & Lane, P. (1998). Evaluating Executive Performance. In: J.W. Smither (Ed.), *Performance Appraisal: State-of-the-Art in Practice*. (p. 370-403). San Francisco: Jossey-Bass.

Graen, G.B. & Uhl-Bien, M. (1995). Relationship-based approach to leadership: development of leader-member exchange (LMX) theory over 25 years: applying a multilevel, multi-domain perspective. *Leadership Quarterly, 6,* 219-247.

Hall, J. L., Leidecker, J. K., & DiMarco, C. (1996). What we know about Upward Appraisals of Management: Facilitating the Future use of UPAs. *Human Resource Development Quarterly*, *7*, 209-226.

Heck, R.H. & Thomas, S.L. (2000). *An introduction to multilevel modeling techniques*. Mahway, NJ: Lawrence Erlbaum Associates, publishers.

Hu, L., & Bentler, P.M. (1998). Fit indices in covariance modeling: sensitivity to underparameterized model misspecification. *Psychological Methods, 3*, 424-453.

Johnson, J.W. & Ferstl, K. (1999). The effects of interrater and self-other agreement on performance improvement following upward feedback. *Personnel Psychology, 52*, 271-303.

Jöriskog, K. & Sörbom, D. *LISREL 8.51*. Lincolnwood: Scientific Software International Inc.

Judge, T.A. & Bono, J.E. (2001). Relationship of core self-evaluations traits-self-esteem, generalized self-efficacy, locus of control, and emotional stability-with job satisfaction and job performance: a meta-analysis. *Journal of Applied Psychology*, *86*, 80-92.

Kluger, A.N. & DeNisi, A. (1996). The effects of feedback interventions on performance: a historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin, 119*, 254-284.

Korsgaard, M. A. (1996). The impact of self-appraisals on reactions to feedback from others: The role of self-enhancement and self-consistency concerns. *Journal of Organizational Behavior*, 17, 301-311.

Latham, G. P., & Locke, E. A. (1991). Self-regulation through goal-setting. *Organizational Behavior and Human Decision Processes*, 50, 212-247.

Latham, G.P. & Wexley, K. (1994). *Increasing productivity through performance appraisal*. Reading, MA: Addison-Wesley.

Lombardo, M. M., & McCall, M. W. Jr. (1982). Leader on line: Observations from a simulation of managerial work. IN Hunt, J.G., Sekaran, U., & Schriesheim, C.A. (Eds.), *Leadership: Beyond establishment views*. Southern Illinois University Press, Carbondale, IL.

London, M., & Smither, J.W. (1995). Can multi-source feedback change perceptions of goal accomplishment, self-evaluations, and performance-related outcomes? Theory-based applications and directions for research. *Personnel Psychology*, 48, 803-838.

Reilly, R.R., Smither, J.W., & Vasilopoulos, N.L. (1996). A longitudinal study of upward feedback, *Personnel Psychology*, *49*, 599-612.

Russell, D.W., Kahn, J.H., Altmaier, E.M., & Spoth, R. (1998). Analyzing data from experimental studies: a latent variable structural equation modeling approach. *Journal of Counseling Psychology*, *45*, 18-29.

Smith, L. (1993). The executive's new coach. *Fortune*, Dec. 27th,126-134.

Smither, J.W., London, M., Vasilopoulos, N.L., Reilly, R.R., Millsap, R.E., & Salvemini, N. (1995). An examination of an upward feedback program over time. *Personnel Psychology*, *48*, 1-34.

Timmreck, C. W. (1995). Upward feedback in the trenches: Challenges and realities. In: Tornow W. W. *Upward feedback: The ups and downs of it*. Paper presented at the 10th Annual Conference of the Society for Industrial and Organizational Psychology, Orlando, FL.

Tornow, W. (1993). Perceptions or reality: Is multi-perspective measurement a means or an end? *Human Resource Management*, *32*, 221-229.

Tsui, A. S., & Ohlott, P. (1988). Mulitiple assessment of managerial effectiveness: Interrater agreement and consensus in effectiveness models. *Personnel Psychology*, *41*, 779-803.

Waldman, D.A., Atwater, L.E., & Antonioni, D. (1998). Has 360-degree feedback gone amok? *Academy of Management Executive, 12*, 86-94.

Walker, A.G. & Smither, J.W. (1999). A five-year study of upward feedback: what managers do with their results matters. *Personnel Psychology, 52*, 393-423.

Zapf, D. Dormann, C., & Frese, M. (1996). Longitudinal studies in organizational stress research: a review of the literature with reference to methodological issues. *Journal of Occupational Health Psychology*, *2*, 145-169.

Table 1
Design of the Management Development Initiative

Groups of Managers	Survey I	Intervention : Feedback	Survey II	Intervention : Feedback or Workshop	Survey III
Experimental Group 1 (n = 112)	O	F	O	W	O
Experimental Group 2 (n = 154)	O		O	F	O
Control Group 3 (n = 42)	O		O		O

Key: F = Upward Feedback Report. W = Management Skills Workshop.

Table 2

Intercorrelations and descriptives of variables, staff level

	M	*SD*	1	2	3	4
1. Leadership Behaviour, T1	3.42	.81				
2. Leadership Behaviour, T2	3.37	.79	.74			
3. Leadership Behaviour, T3	3.24	.77	.63	.71		
Intervention conditions:						
4. Feedback & Workshop			-.02	-.10	-.11	
5. Feedback only			-.00	.-.08	-.15	-.76

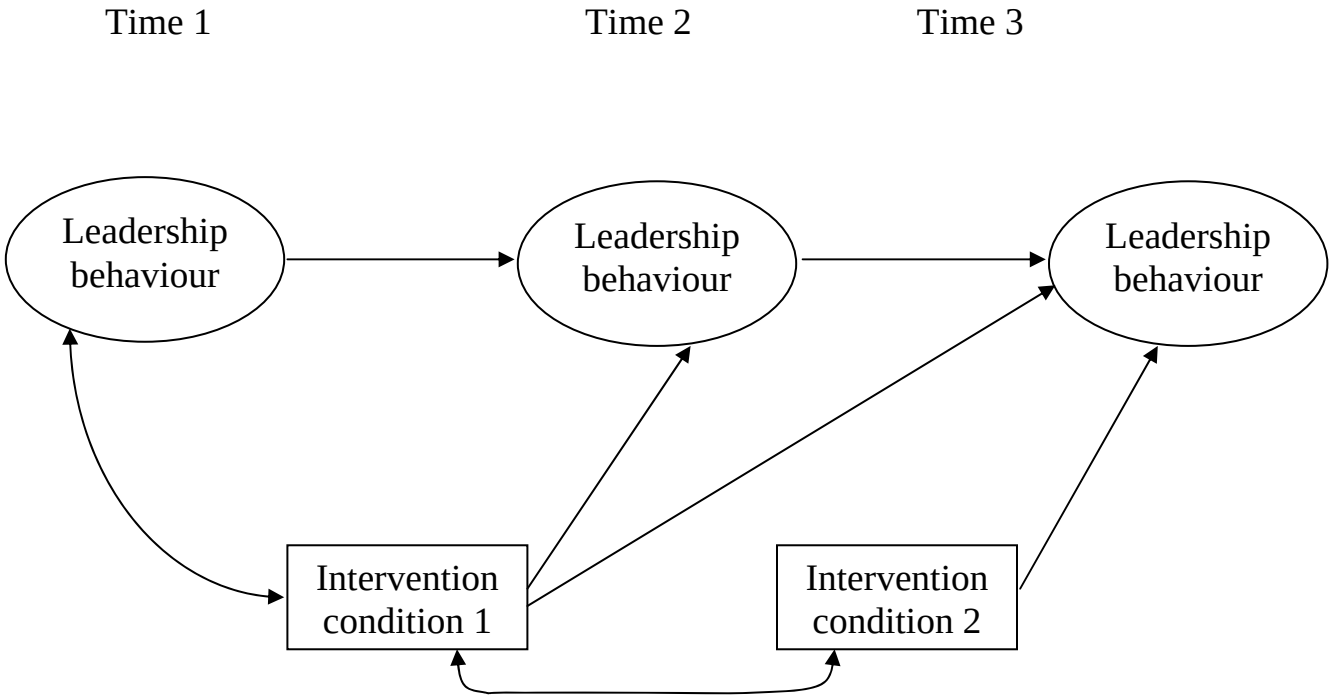
Table 3

Cell means for ratings of leadership behaviour in different experimental conditions

	Staff ratings			Self ratings		
	T1	T2	T3	T1	T2	T3
Feedback and Interpersonal skills workshop (n = 19)						
Mean	3.4	3.4	3.4	3.9	3.6	3.6
SD	.6	.4	.4	.4	.4	.4
Feedback only (n = 21)						
Mean	3.5	3.4	3.2	3.9	3.8	3.7
SD	.5	.5	.6	.4	.4	.3
No intervention (n = 8)						
Mean	3.5	3.4	3.3	4.2	4.1	4.1
SD	.5	.5	.5	.4	.4	.4

Figure 1

Latent variable model of leadership behaviour and the upward feedback interventions.



Publications in the ERIM Report Series Research* in Management

ERIM Research Program: "Organizing for Performance"

2007

Leadership Behaviour and Upward Feedback: Findings From a Longitudinal Intervention
Dirk van Dierendonck, Clare Haynes, Carol Borrill and Chris Stride
ERS-2007-003-ORG

---

* A complete overview of the ERIM Report Series Research in Management:
https://ep.eur.nl/handle/1765/1

ERIM Research Programs:
LIS Business Processes, Logistics and Information Systems
ORG Organizing for Performance
MKT Marketing
F&A Finance and Accounting
STR Strategy and Entrepreneurship