Effects of Supervisory Feedback Skills on Performance and Job Satisfaction

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EFFECTS OF SUPERVISORY FEEDBACK SKILLS ON PERFORMANCE AND JOB SATISFACTION

by

Kenneth Wayne Barnes

A Thesis Submitted to the Faculty of The Graduate College in partial fulfillment of the requirements for the Degree of Master of Arts Department of Psychology

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And special thanks to my wife, Mary, for her excellent typing skills and years of patience.

Kenneth Wayne Barnes
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CHAPTER I
INTRODUCTION

Obtaining high levels of performance from subordinates has always been a relevant concern. Two factors that have been associated with good performance are leader behaviors and feedback to the worker about his/her performance (Fleishman and Harris, 1962; Vroom, 1964). The first of these, leadership, has been defined as exerting positive influence over others to change their behavior. When studying leadership it was first thought that the leader's personality traits were of major importance. It was found that a leader's effectiveness could not be positively and consistently attributed to such items as height, weight, personality or a person's abilities (Stogdill, 1948). Next researchers began to study leader's behaviors rather than their traits. Since there are many behaviors that are displayed by a leader, categories of behaviors were developed. Some of the most important studies conducted at Ohio State University utilized two categories of behaviors: a) consideration and b) initiating structure (Fleishman and Harris, 1962).

Consideration is the amount of concern or support that a leader shows toward subordinates while initiating
structure is the amount of definition and structure of both leader and subordinate roles in the attainment of group goals. When these role expectations are unclear or vague, subordinates are more likely to be dissatisfied with their jobs (House and Rizzo, 1972).

The second issue, feedback, is defined as information about past performance being used to guide one's future performance (Brethower, 1972). When trying to motivate individuals, it has been theorized that two types of factors are involved: hygiene factors and motivators (Herzberg, 1966). These motivators are responsible work, independence of action and recognition of accomplishment of tasks. Thus, feedback to workers on how well they are meeting their goals and in particular, positive feedback on meeting difficult goals should lead to higher motivational levels. Vroom (1964) also supports this view of feedback. He states that the cue function of feedback (i.e., how one is performing at the time of the performance) can contribute to good performance on repetitive tasks. Also, some form of feedback after the task has been performed is necessary if the task is to improve (Vroom, 1964) or subordinate levels of satisfaction are to be increased (Evans, 1970).

Based on this information, the present study will deal with each of these issues by determining whether feedback, along with specific leader behaviors, will lead
to long-term levels of production. It takes into account the factors of initiating structure and feedback and combines them in an effort to see their effects on productivity and job satisfaction as defined by the Quality of Work Life in General Motors questionnaire (1976). That is, for a supervisor to be able to get good performance from his/her subordinates, that person must initiate structure so workers understand group goals and their role in attaining these goals; he/she must also give feedback to the workers on how well they are attaining each goal. Supervisors will be observed in their working environment and rated on a checklist of behaviors dealing with the amount of initiating structure used in clarifying goals for departments and individuals and the amount of feedback given to and received by workers about these goals. The experiment will test to see if there is a relationship between these combined factors and production efficiency and job satisfaction. The experiment hypothesizes that supervisors who rate highly on the checklist factors of initiating structure and feedback will have higher production efficiencies than those supervisors who rate lower. This should also hold true in the area of job satisfaction as deduced from Fleishman's (1957) study at Ohio State University and Herzberg's (1966) and Vroom's (1964) ideas on feedback. Most extraneous variables that would affect production will be
held constant or accounted for by the experimental design. Thus, the hypothesis specifically states that there is a positive relationship between the extent to which a supervisor performs according to the list of guidelines and 1) the overall production efficiency of the area supervised and 2) the level of employee satisfaction.
CHAPTER II

METHOD

Subjects

Five supervisors from a midwestern manufacturing plant served as subjects. Each subject supervised approximately 20 to 40 workers. While the set of workers was different for each supervisor, the machines used were the same for all subjects. Although three different shifts were involved, the supervisors did not continuously work a particular time segment. No supervisors at the plant were omitted.

Materials

A checklist of supervisory behaviors and two surveys of 10 questions each were used. One, the attitude questionnaire (see Appendix A), included general employee satisfaction questions chosen from the Quality of Work Life in General Motors questionnaire (1976). All four questions from the job satisfaction dimension were used while six additional questions were chosen from other relevant areas.

The second survey of 10 questions comprising the feedback questionnaire (see Appendix B) was developed to
examine an employee's view of his/her supervisor and the supervisor's means of giving feedback to the employee. Five of the questions were answered by specifying frequencies of behaviors, while five were answered in a more general way (e.g., sometimes or never). Six questions were directly related to behaviors on the checklist; checklist items one, two, six and seven examined issues for which worker observations could not be provided (i.e., tracking department output measures) and were therefore not covered on the feedback questionnaire.

In both questionnaires the most positive responses (e.g., strongly agree or always) were assigned a point value of four points, the next lower response alternate was assigned a weight of three and so on until the least positive answers (e.g., never) were assigned zeros. Depending upon the wording of the question, this assignment of values was made to keep a value of four points with the most positive answer (e.g., "never" in Table 2, Question 7 would be assigned a four).

The behavioral checklist (see Appendix C) was based upon the number of behaviors that the supervisor displayed. One checklist was used for each half hour of observation. Each item was checked either "yes" or "no" for that half hour. The items on the checklist were based upon Herzberg's (1966) feedback theory and Fleishman's (1957) work at Ohio State University.
Procedures

First baseline data were taken for each supervisor on the production efficiency measure. This efficiency measure compared how long it took to produce a given number of objects and how long it should have taken as determined by an industrial engineer. This measure accounted for change-overs between products, a low amount of down time for minor repairs and for the machine to be run at its maximum efficient speed. Thus, when a high number of parts was produced in an 8-hour day, a higher than 100% efficiency rating would be given. If a low number of parts was produced, the efficiency rating would be less than 100%. Baseline efficiency data were first obtained for supervisors A, B and C for an 8-week period prior to the beginning of the study. Next production efficiency data were gathered for each of the supervisors for a 3-week period during which the experimenter made regular visits to the plant, then for a 2-week period during which the experimenter was not present and finally for a 2-week period during which the supervisors' behaviors were recorded on the checklist. The production efficiency for supervisor D was taken for a 4-week period without the experimenter present and then for a 2-week period with the experimenter present and using the checklist (pre-training). Finally the checklist was used for
an additional 4-week period after the training program was implemented. Supervisor E, due to job reassignment, was only available for data collection for a 2-week period during which the experimenter was present followed by a 2-week period during which the experimenter was present and using the checklist. The gathering of production data with and without the experimenter present was used to insure that the experimenter was not affecting the production efficiency.

It must be noted that before any observations were made (with or without the checklist), the supervisors were told the purpose of the experiment and the procedures that would be used (including showing them the checklist); they were also informed that they as individuals might, without prejudice to him/her, withdraw, cease participation and/or have his/her data destroyed at any point of his/her choosing. Finally, supervisors were told that information obtained by the observer would not be used in any way to affect the status, pay or treatment of themselves or their workers. Examples of items on the checklist were also given to prevent possible misinterpretations of them by the supervisors. Informed consent forms were signed prior to the experiment (see Appendix D).

Observations of behaviors were recorded on the
checklist in half hour intervals. A check was made in the "yes" column if that behavior was emitted and in the "no" column if it was not emitted within that time interval. Observations of each supervisor were made during time periods of approximately 2 hours. Although these 2-hour blocks were randomized, each supervisor ultimately was observed for 16 hours throughout a 2-week period (i.e., for two full 8-hour shifts). Other factors that might have affected productivity were also noted on the checklist forms. In a randomly assigned week, another observer who was unfamiliar with observation techniques was trained to use the checklist to establish the reliability of the original observations.

Supervisor D, due to a low production efficiency rating, was chosen and asked to participate in a 1-day training program. The program consisted of examples of good and poor executions of items on the checklist, particularly those dealing with feedback. Once the supervisor knew examples of good feedback, he/she was asked to use it with his/her workers; this was done to obtain pre- and post-study information on the usage of feedback techniques other than that derived from the simple observation method. The observer noted that the supervisor did indeed begin using the feedback techniques outlined in the training program. None of the other supervisors participated in this training, nor were they told about
any of the procedures (see Appendix E).

Near the end of the observations, the two questionnaires were administered to all workers. While the workers themselves were anonymous, all workers' records were maintained in accordance with their respective supervisors. The questionnaires were administered on breaks and lunch periods while the persons were at work. Although their supervisor was in the plant, that supervisor was not in the room while the workers were answering questions. Again, all of the workers were notified that they would be kept anonymous and that their supervisor would not see the individual results from the questionnaire (see Appendix F). Both questionnaires were used only after the training of feedback techniques had occurred, since the organization did not want multiple measurements.
CHAPTER III

RESULTS

At the end of the experiment, production efficiency ratings were averaged for each of the five supervisors. No statistically significant differences were found between the mean levels of production efficiency of each supervisor (α = 0.05, df = 4, F > 1.53). Thus, since production efficiency means only ranged from 96% to 103%, the supervisors did not vary greatly in the area of production efficiency. Table 1 is a summary of weekly production efficiencies for the supervisors and the supervisors' rank according to their position relative to the other supervisors. Only the positions first, second and third were used since only three shift positions were possible each week. As noted in Figure 1 and Table 1, supervisor D is most frequently in the third position while supervisor B is usually in the first position. Appendix G also shows that while supervisor E has only 4 weeks of production efficiency data, the weekly summaries are representative of his/her daily production efficiency.

Results of the supervisors' behavioral checklists were established by tallying the marks on the checklists.
Table 1: Summary of weekly production efficiencies and the supervisors' rank in relation to the other supervisors.
<table>
<thead>
<tr>
<th>Week</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>95.62 (2)</td>
<td>96.99 (1)</td>
<td>61.69 (3)</td>
<td>110.75 (3)</td>
<td>106.30 (3)</td>
</tr>
<tr>
<td>2</td>
<td>120.94 (1)</td>
<td>113.93 (2)</td>
<td>109.81 (2)</td>
<td>87.89 (3)</td>
<td>92.96 (3)</td>
</tr>
<tr>
<td>3</td>
<td>111.80 (1)</td>
<td>97.15 (1)</td>
<td>106.24 (1)</td>
<td>92.96 (3)</td>
<td>106.51 (3)</td>
</tr>
<tr>
<td>4</td>
<td>95.43 (2)</td>
<td>110.93 (1)</td>
<td>82.60 (3)</td>
<td>93.79 (2)</td>
<td>103.75 (2)</td>
</tr>
<tr>
<td>5</td>
<td>108.06 (2)</td>
<td>95.94 (3)</td>
<td>108.66 (2)</td>
<td>105.25 (3)</td>
<td>107.13 (2)</td>
</tr>
<tr>
<td>6</td>
<td>108.36 (1)</td>
<td>96.89 (1)</td>
<td>109.48 (1)</td>
<td>109.53 (2)</td>
<td>92.12 (2)</td>
</tr>
<tr>
<td>7</td>
<td>117.01 (1)</td>
<td>113.13 (1)</td>
<td>92.83 (1)</td>
<td>100.46 (1)</td>
<td>94.82 (3)</td>
</tr>
<tr>
<td>8</td>
<td>104.04 (3)</td>
<td>95.02 (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 1

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<table>
<thead>
<tr>
<th>Week</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>107.39 (1)</td>
<td>103.04 (2)</td>
<td>89.93 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>94.20 (2)</td>
<td>113.83 (1)</td>
<td>86.26 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>122.22 (1)</td>
<td>112.83 (2)</td>
<td>110.11 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>113.56 (1)</td>
<td>107.92 (2)</td>
<td>105.11 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>102.65 (1)</td>
<td>94.81 (2)</td>
<td>93.52 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>90.97 (2)</td>
<td>94.97 (1)</td>
<td>83.09 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>91.92 (2)</td>
<td>93.53 (1)</td>
<td>90.54 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>94.13 (2)</td>
<td>98.82 (1)</td>
<td>89.18 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>99.84 (1)</td>
<td>87.28 (3)</td>
<td>89.90 (2)</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
<td>100.38 (1)</td>
<td>98.61 (2)</td>
<td>92.79 (3)</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>101.61 (2)</td>
<td>99.12 (3)</td>
<td>102.39 (1)</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>105.22 (2)</td>
<td>104.99 (3)</td>
<td>105.82 (1)</td>
<td></td>
</tr>
</tbody>
</table>
Figure 1: Percentage of supervisor production position rankings.
Percentage of third place rankings

Percentage of second place rankings

Percentage of first place rankings

Supervisor

Figure 1
for each supervisor. Items six and seven were not included in the checklist rating since all supervisors were required by their jobs to perform these items. A percentage rating derived from the number of items marked on the checklist for each supervisor is shown in Figure 2. It also shows the observations of supervisor D both before and after training. It should be noted that most of the supervisors differed in the areas of clarifying goals and guiding workers toward these goals.

The two sets of worker questionnaires were tallied using the assigned weight for each response. Thus, for each supervisor's set of subordinates, the mean ratings for each questionnaire could range from 40 to zero. For comparison purposes, Figure 2 also shows the subordinates' ratings on the job attitude measure. A Spearman rank correlation coefficient of +0.90 was found between the ranking of the percentage of checklist items observed and the rank order for mean attitude ratings for the five supervisors. Table 2 shows the mean attitude rating per item on the attitude questionnaire for the subordinates of each supervisor. Note that in both Figure 2 and Table 2, supervisors B and D have significantly higher ratings.

Figure 3 shows the percentage of checklist items in comparison to the subordinates' mean rating of the items on the feedback questionnaire. A Spearman rank correlation coefficient of +0.60 was found between the checklist
Figure 2: Supervisors' percentage of observed checklist items in comparison with the mean of subordinates' attitude ratings.
Figure 2

Mean attitude rating: -3

Graph showing percentage of observed items for supervisors A to E, with categories for observation items, pre-training, post-training, and attitude ratings.
Table 2: Supervisors' mean attitude ratings per item.


<table>
<thead>
<tr>
<th>Question</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Used to care more about work</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>2. Shown less respect at work</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>3. Feel tense, irritated, worried</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4. Changes around here work well</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>5. Decide to take the same job</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>6. Feel discriminated against</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>7. Recommend job to a friend</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>8. Satisfied with job at present</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>9. Essential to organization</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>10. Care only about getting paid</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
Figure 3: Supervisors' percentage of observed checklist items in comparison with the mean of subordinates' feedback ratings.
items observed and the mean feedback rating for the five supervisors. Also, it should be noted that an 83% agreement on checklist items was found between the experimenter and the other observer during the random week of joint observation.

Table 3 is a summary of the modal values for each supervisor's feedback questionnaire items. Appendix H presents the raw data from this questionnaire. It should be noted that supervisors B and D have higher modes than supervisors A, C and E (A mode of 4 corresponds with the highest rated answer on the questionnaire).

Evidence of the influence a supervisor has on production efficiency (i.e., the rank of the supervisor's production efficiency rating relative to those of the other supervisors) is shown in Figure 4. It illustrates both a particular shift with a succession of two different supervisors and a supervisor moving from one shift to another. Since only rankings of production efficiency are used, no statistical analysis is used in this case.

Finally, Figure 5 shows the effects of supervisor D's feedback training on production efficiency. Although all supervisors show a general trend toward improvement, supervisor D shows a greater degree of improvement after the training than do the other supervisors who were not trained in feedback procedures.
Table 3: Summary of modal values for each feedback questionnaire item. The higher values represent the more favorable answers in terms of the supervisor's use of high levels of feedback and low levels of interference.
<table>
<thead>
<tr>
<th>Question</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>1. Praise for doing right thing</td>
<td>0</td>
</tr>
<tr>
<td>2. Tell when doing good job</td>
<td>1</td>
</tr>
<tr>
<td>3. Handle people well</td>
<td>1</td>
</tr>
<tr>
<td>4. Discuss performance</td>
<td>1</td>
</tr>
<tr>
<td>5. Inform about own work</td>
<td>0</td>
</tr>
<tr>
<td>6. Inform about group work</td>
<td>1</td>
</tr>
<tr>
<td>7. Disagree if supervisor complains</td>
<td>1</td>
</tr>
<tr>
<td>8. Give ways to do job better</td>
<td>1</td>
</tr>
<tr>
<td>9. Give ideas to help correct error</td>
<td>1</td>
</tr>
<tr>
<td>10. Supervisor fixes problem on own</td>
<td>2</td>
</tr>
</tbody>
</table>
Figure 4: Illustrations of two successive supervisors' production rankings on a particular shift and the movement of a single supervisor from one shift to another.
FIGURE 4

Shift 1

Supervisor B

Shift 1

Supervisor D

Week

1st 2nd 3rd

11 12 13 14 15

16 17 18 19 20

Ranking

Supervisor B

Shift 1

Shift 2

Week

1st 2nd 3rd

11 12 13 14 15

16 17 18 19 20

Ranking

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Figure 5: Supervisor D's production efficiency rating before and after feedback training in comparison with the average of the other supervisors' production efficiencies.
FIGURE 5

Pre-training vs. Post-training Production Efficiency Percentage

- ● Supervisor D
- □□ Average of other supervisors

Week

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CHAPTER IV

DISCUSSION

As noted from discussions with supervisors and observations of the work site, factors such as variations in materials, shifts, worker groups, worker mistakes (both intentional and unintentional) and machine problems (e.g., variations in the machine settings to major breakdowns) were the main factors most likely causing variations in production. All supervisors used the same materials thereby holding that factor constant. Supervisors also changed shifts approximately every 8 weeks and two supervisors were replaced by other supervisors which allowed the experimenter to use five supervisors who did not necessarily always work the same shift or with the same subordinates throughout the experiment. In addition, because of a seniority program, the subordinates also changed shifts and areas within the work site, helping to randomize workers during the experiment. Thus, no supervisor worked on a particular shift with the same workers throughout the entire experiment and thereby eliminated any biases due to shift time or particular subordinates. Variations due to worker mistakes could have been corrected by feedback and goal
setting techniques while machine problems could have been corrected by training workers and mechanics to properly adjust machines. Major breakdowns constituted a variable that occurred randomly and happened at least once to each supervisor during the observation period. Once a machine was inoperable, official "down time" was noted and thus did not affect a supervisor's production efficiency. Small allowances were made for scrap that would be produced by variations in settings and were accounted for in the production efficiency figure as originally determined by an industrial engineer; too much scrap would cause production efficiency to drop below 100%. Thus some of the supervisors developed a behavior of "fixing the machine themselves" in order to prevent low production efficiency ratings at weekly supervisory meetings. Table 1 shows that fluctuations in overall production efficiency affected every supervisor but did not affect the ranking of the supervisors' production efficiencies.

It should be noted that before checklist items were tallied and any questionnaires were administered, the experimenter noticed that certain supervisors, specifically supervisors A and C had a tendency to "do the job themselves" when machines needed repair or other problems arose. As stated earlier, since each shift had production goals to meet, some supervisors took it upon
themselves to make sure that these goals were met rather than delegating the responsibility. The difference between the "do-it-themselves" supervisors and the high checklist supervisors was that even though the former met production goals in the short-term the latter trained workers to meet production goals in the long run despite brief low production efficiency. That is, "do-it-themselves" supervisors would always have to help finish work for or with subordinates instead of training them to do it on their own. As noted in Figure 1, supervisor D had just started to use checklist items and in turn had lower production efficiency. Supervisor B on the other hand was established in using checklist items and had trained workers with feedback and reinforcement to do the job correctly. Supervisors C and E kept production efficiency fairly high (although not as high as supervisor B) by doing the work themselves but subordinates' satisfaction and attitudes were below the median.

In conclusion, the following summary statements may be made:

1. Supervisors who performed the supervisory behaviors on the checklist for longer periods (at least 2 months) tended to have workers who were higher in satisfaction than those supervisors who were low on the checklist. They also had slightly higher production efficiency than supervisors who did not follow the checklist but tended to do the work themselves.

2. The supervisor who performed the checklist
behaviors for a short period of time (less than 2 months) tended to have workers with higher attitudes than those supervisors who were low on the checklist. However, he/she did not have higher production efficiencies than the supervisors who did not follow the checklist. This may be due to the fact that the supervisor did not "do the work himself/herself" but used feedback techniques to train subordinates.

3. Supervisors who did not follow the checklist had either low or medium low attitude ratings among their workers and would probably have had low production efficiencies if the supervisors had not been "doing the work themselves."

Thus, the supervisors who used the feedback techniques outlined on the checklist had higher worker attitude ratings. However, due to the insignificant differences in the supervisors' production efficiencies, the effect of feedback techniques on productivity was unclear.

Since only five supervisors were used in this study and their production efficiency data did not differ, future studies would benefit by using subjects whose production records vary to see if any significant relationship exists between checklist behavior percentages and production. Once a relationship was found, an attitude survey could be implemented and correlated with the checklist and production data. Also, worker attitude surveys could be administered prior to and following any feedback training program to further support this study's findings that feedback and worker attitudes are positively related.
The author believes that completing more studies in this area would allow the information on the checklist to be used to select and train supervisors in any situation in which the supervisor has a significant role in controlling production. Although the short-term limitation of slightly lower production efficiency would be present, high levels of production efficiency and employee satisfaction could be the long-term results.
REFERENCES


Quality of work life in General Motors. 1976.


APPENDIX A

GENERAL ATTITUDE QUESTIONNAIRE

1. I used to care about my work more than I do now.
   a. Strongly agree   d. Disagree
   b. Agree           e. Strongly disagree
   c. Neither agree nor disagree

2. At work, I am shown less respect than I enjoy in the community where I live.
   a. Strongly agree   d. Disagree
   b. Agree           e. Strongly disagree
   c. Neither agree nor disagree

3. While at work, I feel tense, irritated, worried, short-tempered or down-hearted and blue.
   a. Strongly agree   d. Disagree
   b. Agree           e. Strongly disagree
   c. Neither agree nor disagree

4. I think that changes around here work well.
   a. Strongly agree   d. Disagree
   b. Agree           e. Strongly disagree
   c. Neither agree nor disagree

5. Knowing what I know now, if I had to decide all over again whether to take the job I have now, I would take it.
   a. Strongly agree   d. Disagree
   b. Agree           e. Strongly disagree
   c. Neither agree nor disagree

6. I feel I am being discriminated against when it comes to getting ahead around here.
   a. Strongly agree   d. Disagree
   b. Agree           e. Strongly disagree
   c. Neither agree nor disagree
7. If a good friend of mine were interested in getting a job like mine, I would recommend it.
   a. Strongly agree  d. Disagree
   b. Agree  e. Strongly disagree
   c. Neither agree nor disagree

8. Considering everything, how satisfied are you with your job at the present time?
   a. Very dissatisfied  d. Satisfied
   b. Dissatisfied  e. Very satisfied
   c. Neither dissatisfied nor satisfied

9. I feel I am essential to this organization.
   a. Strongly agree  d. Disagree
   b. Agree  e. Strongly disagree
   c. Neither agree nor disagree

10. I could care less what happens to this organization as long as I get my paycheck.
   a. Strongly agree  d. Disagree
   b. Agree  e. Strongly disagree
   c. Neither agree nor disagree
APPENDIX B

FEEDBACK QUESTIONNAIRE

1. My supervisor praises me when I do things right.
   a. Twice per shift  
   b. Once per shift  
   c. Once a week  
   d. Twice a week  
   e. Almost never

2. My supervisor tells me if I'm doing a good job.
   a. Twice per shift  
   b. Once per shift  
   c. Once a week  
   d. Twice a week  
   e. Almost never

3. My supervisor does a good job of handling people.
   a. Always  
   b. Almost always  
   c. Sometimes  
   d. Almost never  
   e. Never

4. I discuss my performance on my job with my supervisor.
   a. Twice per shift  
   b. Once per shift  
   c. Once a week  
   d. Twice a week  
   e. Almost never

5. My supervisor provides me with information on how well I do my job.
   a. Twice per shift  
   b. Once per shift  
   c. Once a week  
   d. Twice a week  
   e. Almost never

6. My supervisor provides information on how well my co-workers and I perform on a job as a group.
   a. Twice per shift  
   b. Once per shift  
   c. Once a week  
   d. Twice a week  
   e. Almost never
7. I disagree with my supervisor because he/she complains about the way I work.
   a. Always
   b. Almost always
   c. Sometimes
   d. Almost never
   e. Never

8. My supervisor provides me and other workers with ways to help us do our jobs better.
   a. Always
   b. Almost always
   c. Sometimes
   d. Almost never
   e. Never

9. If I do something wrong, my supervisor gives me useful suggestions to help me.
   a. Always
   b. Almost always
   c. Sometimes
   d. Almost never
   e. Never

10. When I identify problems, my supervisor tries to correct the problems himself.
    a. Always
    b. Almost always
    c. Sometimes
    d. Almost never
    e. Never
## APPENDIX C

### SUPERVISORY BEHAVIOR CHECKLIST

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>1. Supervisor has some way of tracking department output measures. (counts boxes, uses CRT)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2. Using #1, supervisor knows whether or not department production is at its peak.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Using #1, supervisor knows whether or not an individual’s production is at its peak.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Supervisor clarifies individual goals so an individual knows what to do (tells worker how many boxes are needed).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Supervisor guides workers toward their goals if they are not being met.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. Gives workers feedback on their goals.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Uses successive approximations when training or correcting an individual’s work.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Uses contingent reinforcement for good work.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Supervisor follows company policy while doing the above items.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Supervisor performs other company requirements.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Supervisor gets feedback from workers in addition to giving feedback to other supervisors or appropriate individuals.</td>
</tr>
</tbody>
</table>
APPENDIX D

INFORMED CONSENT FORM

NAME: Kenneth Wayne Barnes
TITLE: Effects of Supervisory Feedback Skills on Performance and Job Satisfaction

The present project will attempt to test the hypothesis that a positive relationship exists between the extent to which a supervisor is observed to perform according to a list of guidelines (see attached sheet) and a) the overall productivity of the area supervised and b) the level of employee satisfaction as defined by the attitude questionnaire.

The procedures to be used:

1. Productivity measures will be taken and the supervisors will be observed. Supervisors will remain unnamed during the observations.
2. Feedback questionnaires will be given to workers under each supervisor. These will be used only to validate the observer's observations and then be destroyed.
3. Attitude questionnaires will be given to workers under each supervisor. No names or identification of any type will be used.
4. Results will be compiled by the observer and presented to the supervisors if desired.

Conditions:

1. The supervisor may, without prejudice to him/her, withdraw, cease participation and/or have his/her data destroyed at any point of his/her choosing.
2. The information obtained by the observer will not be used in any way to affect the status, pay or treatment of a supervisor or worker. It will be used solely to test the hypothesis and complete the project.
APPENDIX E

SUPERVISORY FEEDBACK TRAINING PROGRAM

Induction and Content (Domain)—

General Objectives (in terms of questions asked by supervisors):

1. What is feedback?

2. Why should I use feedback? How will it benefit me?

3. How can I use feedback?

Feedback is a way of simultaneously motivating, monitoring and controlling behavior. It provides the worker with information on how well or how poorly he/she is performing. Also, it tells him/her "where he/she is at" and allows him/her to adjust. For example, the performance of a house painter is controlled through visual and tactile feedback from the surface being painted. A driver's performance is controlled through visual, auditory and tactile feedback from the road, the motor, squealing tires, honking horns, back seat drivers, police sirens, the steering wheel, etc. Feedback should tell a performer when he/she is doing a good job as well as a bad job. Thus, constantly telling someone "That's not right" is not usually effective at improving performance.

This workshop will deal primarily with how to
implement and improve any existing feedback within your work area. It will help you to be able to provide useful feedback to your subordinates in order to improve their work production and hopefully lead to greater job satisfaction. You, as supervisors, will be presented with examples of feedback within your work setting and will later be asked to develop examples of your own. When you are through, you should be able to implement feedback systems in your own area and thereby help improve this area.

Demonstration and Guided Practice--

This area will follow "The Design of Feedback Systems to Improve and Maintain Performance" by Brethower (1967). The experimenter will selectively go through the examples presented in Brethower (1967) with the supervisors--first showing them some examples of feedback and then helping them work through problems on their own.

Demonstration of Mastery--

The supervisors will be asked to think of a job and worker in their area and to describe a form of feedback which they could use with the worker on that job. These problems will be discussed as a group so that the supervisors can work out the best possible suggestions among themselves and to demonstrate another form of feedback (i.e., from peers and/or co-workers).
APPENDIX F
INFORMATION SHEET

NAME: Kenneth Wayne Barnes
SCHOOL: Western Michigan University

I am presently working on my master's thesis and would appreciate your help by completing these two questionnaires.

1. **DO NOT** put your name of I.D. number anywhere on these pages.

2. You will **NOT** be identified in any way.

3. The information obtained by these questions will **NOT** be used in any way to affect the status, pay or treatment of a worker or his/her supervisor. (It will be used only to complete my project for school.)

4. These pages will be destroyed after I compile the data. No other worker, supervisor or person at this or any other plant will see these data.

**INSTRUCTIONS:**

1. Circle or underline the appropriate response that matches how you feel about the question. (Please be honest. Remember, you will in no way be identified.)

2. Check here if you work on one of these most of the time:
   - Vapak _____ C.T. 1 _____
   - Scor-Top _____ C.T. 2 _____

3. I am presently working on the following shift:
   - 7 - 3 _____ 3 - 11 _____ 11 - 7 _____
### APPENDIX G

SUPERVISOR E'S DAILY PRODUCTION EFFICIENCIES

<table>
<thead>
<tr>
<th>Production Efficiency</th>
<th>Week 22</th>
<th>Week 23</th>
<th>Week 24</th>
<th>Week 25</th>
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<tbody>
<tr>
<td>Day 1</td>
<td>90.24</td>
<td>102.76</td>
<td>100.65</td>
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<tr>
<td>Day 2</td>
<td>78.29</td>
<td>83.43</td>
<td>102.40</td>
<td>109.59</td>
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<tr>
<td>Day 3</td>
<td>93.15</td>
<td>95.26</td>
<td>101.66</td>
<td>106.24</td>
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<tr>
<td>Day 4</td>
<td>88.56</td>
<td>92.10</td>
<td>105.34</td>
<td>103.73</td>
</tr>
<tr>
<td>Day 5</td>
<td>99.26</td>
<td>90.40</td>
<td>101.90</td>
<td>105.62</td>
</tr>
<tr>
<td>Weekly average</td>
<td>89.90</td>
<td>92.79</td>
<td>102.39</td>
<td>105.82</td>
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## APPENDIX H

### FEEDBACK QUESTIONNAIRE ANSWER FREQUENCY

**Supervisor A**

<table>
<thead>
<tr>
<th>Question</th>
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<tbody>
<tr>
<td>1. Praises for doing right thing</td>
<td>18 7 3 0 0</td>
</tr>
<tr>
<td>2. Tell when doing good job</td>
<td>10 11 7 0 0</td>
</tr>
<tr>
<td>3. Handle people well</td>
<td>13 13 2 0 0</td>
</tr>
<tr>
<td>4. Discuss performance</td>
<td>8 15 4 0 1</td>
</tr>
<tr>
<td>5. Inform about own work</td>
<td>16 11 1 0 0</td>
</tr>
<tr>
<td>6. Inform about group work</td>
<td>11 12 4 1 0</td>
</tr>
<tr>
<td>7. Disagree if supervisor complains</td>
<td>3 22 2 1 0</td>
</tr>
<tr>
<td>8. Give way to do job better</td>
<td>2 20 3 3 0</td>
</tr>
<tr>
<td>9. Give ideas to help correct error</td>
<td>9 14 2 1 0</td>
</tr>
<tr>
<td>10. Supervisor fixes problem on own</td>
<td>3 8 17 0 0</td>
</tr>
</tbody>
</table>

\[ n = 28 \]
### Supervisor B

<table>
<thead>
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<td>0   1  2  3  4</td>
</tr>
<tr>
<td>1. Praises for doing right thing</td>
<td>0 0 10 19 4</td>
</tr>
<tr>
<td>2. Tell when doing good job</td>
<td>0 1 3 20 9</td>
</tr>
<tr>
<td>3. Handle people well</td>
<td>0 0 3 7 23</td>
</tr>
<tr>
<td>4. Discuss performance</td>
<td>0 1 10 17 5</td>
</tr>
<tr>
<td>5. Inform about own work</td>
<td>0 1 22 9 1</td>
</tr>
<tr>
<td>6. Inform about group work</td>
<td>1 2 20 4 0</td>
</tr>
<tr>
<td>7. Disagree if supervisor complains</td>
<td>0 0 0 4 29</td>
</tr>
<tr>
<td>8. Give way to do job better</td>
<td>1 4 18 10 0</td>
</tr>
<tr>
<td>9. Give ideas to help correct error</td>
<td>2 1 7 21 2</td>
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<tr>
<td>10. Supervisor fixes problem on own</td>
<td>0 0 4 10 19</td>
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n = 33
### Supervisor C

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<td>19 6 0 0 0</td>
</tr>
<tr>
<td>2. Tell when doing good job</td>
<td>20 5 0 0 0</td>
</tr>
<tr>
<td>3. Handle people well</td>
<td>16 8 1 0 0</td>
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<td>4. Discuss performance</td>
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<tr>
<td>5. Inform about own work</td>
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<td>6. Inform about group work</td>
<td>10 13 2 0 0</td>
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<tr>
<td>7. Disagree if supervisor complains</td>
<td>0 0 1 4 20</td>
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<tr>
<td>8. Give way to do job better</td>
<td>17 6 3 0 0</td>
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<tr>
<td>9. Give ideas to help correct error</td>
<td>10 9 6 0 0</td>
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<td>10. Supervisor fixes problem on own</td>
<td>2 5 16 2 0</td>
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n = 25
### Supervisor D

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<th>Question</th>
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</tr>
<tr>
<td>2. Tell when doing good job</td>
<td>0 3 7 25 2</td>
</tr>
<tr>
<td>3. Handle people well</td>
<td>0 0 0 28 9</td>
</tr>
<tr>
<td>4. Discuss performance</td>
<td>0 3 19 11 4</td>
</tr>
<tr>
<td>5. Inform about own work</td>
<td>0 0 17 18 2</td>
</tr>
<tr>
<td>6. Inform about group work</td>
<td>0 1 17 17 2</td>
</tr>
<tr>
<td>7. Disagree if supervisor complains</td>
<td>0 0 0 4 33</td>
</tr>
<tr>
<td>8. Give way to do job better</td>
<td>0 2 26 9 0</td>
</tr>
<tr>
<td>9. Give ideas to help correct error</td>
<td>0 7 21 8 1</td>
</tr>
<tr>
<td>10. Supervisor fixes problem on own</td>
<td>0 4 9 23 1</td>
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\[ n = 37 \]
## Supervisor E

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<td>15 5 1 0 0</td>
</tr>
<tr>
<td>2. Tell when doing good job</td>
<td>14 6 1 0 0</td>
</tr>
<tr>
<td>3. Handle people well</td>
<td>11 10 0 0 0</td>
</tr>
<tr>
<td>4. Discuss performance</td>
<td>12 9 0 0 0</td>
</tr>
<tr>
<td>5. Inform about own work</td>
<td>10 10 1 0 0</td>
</tr>
<tr>
<td>6. Inform about group work</td>
<td>14 6 1 0 0</td>
</tr>
<tr>
<td>7. Disagree if supervisor complains</td>
<td>0 1 6 13 1</td>
</tr>
<tr>
<td>8. Give way to do job better</td>
<td>8 13 0 0 0</td>
</tr>
<tr>
<td>9. Give ideas to help correct error</td>
<td>1 19 1 0 0</td>
</tr>
<tr>
<td>10. Supervisor fixes problem on own</td>
<td>1 4 11 5 0</td>
</tr>
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</table>

\[ n = 21 \]
BIBLIOGRAPHY


