

USE OF THE DELPHI METHOD FOR JOB IMPROVEMENT

by

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USE OF THE DELPHI METHOD FOR JOB IMPROVEMENT

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Recent research has shown that job enrichment, the concept of developing motivational content into jobs, has been applied successfully in an increasing number of organizations. However, the various job enrichment techniques need further development. Recent studies have concentrated on the phases which lead to the implementation of job enrichment programs. This study is a further contribution towards improving these phases. It focuses on the idea generation and idea evaluation phases and includes the participation of the workers themselves.

The technique employed is the Delphi method. It is used to elicit the participants' suggestions on how their jobs may be improved. Thereafter, two Delphi rounds are used to evaluate the suggestions and to build a consensus on the value of each suggestion.

The study includes the national sales force of one of Canada's largest meat packing companies. The effectiveness of their participation was measured by the amount of consensus formed, changed attitudes, actual measures of the participant's effectiveness on the job and their reactions to the project as obtained through questionnaires.

The research demonstrated that the Delphi method is suitable for the generation and evaluation of ideas. However, the

participants' choice of ideas confirmed prior contentions that employees primarily contribute ideas which are hygiene factors rather than motivating ideas. The study also confirmed prior research which indicated that participation in a job enrichment project by itself does not change attitudes or the effectiveness of the participants.

Being limited to the idea generation and idea evaluation phases, the study was only a partial analysis of a Job Improvement project. Hence, final evaluation awaits the complete implementation of the program. Nevertheless, the consensus produced by the successive ratings of the suggestions indicated that the Delphi technique may be a useful process. In addition, the Delphi method was shown to have the potential as an inexpensive technique for the generation and communication of ideas in a business organization.

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INTRODUCTION

Job Enrichment

A great deal of interest has been developed in "Job Enrichment" since Frederick Herzberg's "The Motivation to Work"¹ was published in 1959. In his book, Herzberg presented a theory which posits increases in both worker satisfaction and productivity by restructuring the content of a job. He called this process "Job Enrichment". The greatest appeal of this process is that it benefits both the employee as well as the firm. Myers described it as "a process for developing employees so that they think and behave like managers in managing their jobs"².

Herzberg proposed that there are two types of factors which affect work performance: (1) Hygiene factors which do not cause motivation, but the absence of which prevents motivation and (2) motivators which can lead to greater performance and satisfaction, providing hygiene factors are also present. Hygiene factors were identified as company policy and administration, supervision, working conditions, inter-personal relations and salary. Motivators were

1 Herzberg, F., Mausner, B. and Snyderman, B. The Motivation to Work, New York: John Wiley & Sons, 1959.

2 Myers, M. Scott, Every Employee a Manager, New York: McGraw-Hill, 1970.

identified as achievement, recognition, responsibility and personal growth. Herzberg suggested that in addition to providing for all the hygiene factors, management must re-structure jobs to enable workers to achieve goals that are meaningfully related to doing the job. He also maintained that workers be allowed greater autonomy in the way in which they perform their job.

In general, the results of job enrichment experiments reported in the literature have been highly successful. Typically, there has been improvement in job satisfaction, productivity and quality, and reduction in absenteeism turnover and grievances. Despite an initial decline, the usual effect on productivity has been a gradual rise to higher than previous levels. When job enrichment failed to produce positive results, no detrimental effects were reported³. But such failures often helped identify obstacles to job enrichment, thereby contributing to success elsewhere. To sum up, job enrichment has been used as a strategy for solving problems such as low morale, low productivity, worker dissatisfaction, poor productivity, high absenteeism and high turnover.

3 Hackman, J. R., Oldham, G., Janson, R. and Purdy, K., "A New Strategy for Job Enrichment", California Management Review, 1975, 17, 4, pp. 57-71.

The principles of job enrichment consist primarily of providing upward integration of a worker's tasks⁴. An "enriched" job consists of one in which the employee is given increased information and authority, the freedom to determine the tactics for achieving his objectives, and the responsibility for a whole job. Controls are removed while retaining accountability and providing the opportunity for the employee's development and growth.

Concepts of Job Improvement

Job enlargement is a method of work restructuring whereby each employee carries out more tasks. This provides variety, but provides few, if any, of the advantages of job enrichment. Similarly, job rotation provides variety for the worker as he switches from one task to the next throughout a daily, weekly or monthly cycle. Although job rotation relieves boredom, its opponents claim that some workers are not given the same opportunity to acquire expertise in a specific job, while others feel more at ease and less upset doing one specific job.

4 Butteriss, Margaret, Job Enrichment and Employee Participation - A Study, London: Institute of Personnel Management, 1971, pp. 35 and 36.

All three concepts -- job enrichment, job enlargement and job rotation -- can be classified under the heading of Job Improvement. Each claims to improve worker satisfaction as well as productivity. In some cases satisfaction precedes productivity gains. In this study, job improvement connotes improved employee effectiveness first, with personal satisfaction as a by-product.

Job improvement programs generally consist of a series of steps, including work familiarization, diagnosis of the problem areas, generation of suggestions for change, and the evaluation of these suggestions. This initial phase of the program is followed by a choice of ideas, their implementation and subsequent review. Such a program is usually carried out as a result of group brainstorming by managers and the imposition of the resultant changes onto the workers.

An alternate approach practised by many is participative job enrichment. This slightly different process allows employees to participate in the generation and evaluation of ideas. The practitioners of this approach believe that participation provides consensus and commitment while easing implementation. Herzberg, however, disagrees⁵.

5 Herzberg, F., "One More Time: How do You Motivate Employees?" Harvard Business Review, Vol. 46, No. 1, January-February 1968, pp. 53-62.

He insists that the job must be enriched only by the work itself and not by the temporary feeling of participation.

Ford disagrees with worker participation in job enrichment programs for different reasons⁶. He claims that such a program must be exclusively a management responsibility. He claims that the experiment would be impaired if supervisors were pressured into implementing suggestions that they would normally reject, while employees would limit themselves to suggesting maintenance items.

The concept of group brainstorming has been challenged as well. Dunnett, Campbell and Jaastad have found that individual brainstorming produced far more ideas than group brainstorming⁷. Research by Van de Ven and Delbecq confirmed this conclusion⁸. Group brainstorming was found to have dysfunctional psychological factors such as dominant leader persuasion, rigidity to publicly expressed

6 Ford, Robert N., "Motivation Through the Work Itself", New York: American Management Association, 1969.

7 Dunnett, Campbell & Jaastad, "The Effect of Group Participation on Brainstorming Effectiveness", Journal of Applied Psychology (1963), pp. 30-37.

8 Van de Ven, A. and Delbecq, A., "The Effectiveness of Nominal Delphi and Interacting Group Decision Making Process", Academy of Management Journal (1974), pp.605-621

opinions, the bandwagon effect and the unwillingness to change one's mind in public.

Objectives of This Study

Recent research on job improvement has concentrated on improving the stages of the job improvement process. Most noteworthy is Hackman and Oldham's contribution to diagnosing the receptivity of workers to job improvement programs⁹. This study furthers this research into improvements in the stages of the job improvement process. Specifically, it analyzes a new approach for the generation and evaluation phases of the job improvement process..

The new approach under consideration is the Delphi technique. Unlike traditional heuristic approaches, the Delphi process is an analytical process. It develops objective ratings for the ideas that have been proposed as compared to the subjective evaluation of the ideas generated in more traditional approaches. Such objective ratings can be used more easily to make a choice.

9 Hackman, J. R., Oldham, G., Janson, R. and Purdy, K., "A New Strategy for Job Enrichment", California Management Review, 1975, 17, 4, pp. 57-71.

The details of the Delphi process will be analyzed in the next chapter. As will be shown, Delphi has certain traits that make it appropriate for generating and evaluating ideas for job improvement. It makes use of individual brainstorming which has been shown to be better than group brainstorming used in most job improvement programs. Secondly, the Delphi process tends to generate a consensus of opinion which reflects group support towards the generated ideas. Third, the quantitative evaluations produced by the Delphi process can aid the decision maker at the choice phase in deciding which ideas to implement. Finally, the consensus and commitment produced by the Delphi process can lessen resistance to implementation if the workers who are the recipients of the changes helped generate the consensus.

This study specifically analyzes the first two of the above four traits. It is hypothesized that the Delphi process will lead to (1) a consensus opinion, (2) greater satisfaction amongst the participants and (3) increased effectiveness as a result of generating the ideas. This study does not analyze the appropriateness of the Delphi technique at the choice and implementation phases. Time limitations prevented such follow-up to be considered.

The Setting

The test of the Delphi method was conducted with the salesmen of one of the larger Canadian meat packing companies. These salesmen work individually or in small groups in sales offices across Canada. Their communication with the firm is mostly limited to the entering of orders and the receipt of marketing data. This study was to involve these salesmen in the generation and evaluation of ideas for job improvement.

The method by which this study could be carried out presented several problems due to the unique combination of opportunities and constraints affecting this matter. The salesmen were spread out across Canada. Several days would have been necessary with all participants to carry out the study on a conventional basis. The time and cost involved in bringing them together would have been prohibitive. Since the Delphi approach could be conducted by mail, cost savings were possible. Moreover, the salesmen were a knowledgeable and articulate group, accustomed to communicating by mail. These factors, along with the negative aspects of group brainstorming outlined above, prompted the use of the Delphi method.

The next chapter discusses in more detail the traits of the

Delphi technique. It specifically considers both the advantages and disadvantages of Delphi. The third chapter describes the experimental method and the various phases of the study. Chapter four presents the findings on the consensus generating ability of the Delphi method. Findings on the attitude and effectiveness changes are documented in chapter five. The conclusion, chapter six, evaluates whether the hypotheses have been substantiated.

THE DELPHI METHOD

History

Developed at the RAND Corporation by Olaf Helmer and Norman Dalkey, Delphi relies on a panel of experts who answer questionnaires as a way to obtain consensus on decisions or suggestions¹. It consists of eliciting and systematically altering the judgement of individuals through controlled interaction². Delphi was first used by senior scientists at RAND in the early fifties. It was little used until about ten years later, in the mid-sixties. At that time there was a sudden world-wide interest in methods for both corporate and military forecastings. There are now hundreds of corporations using this method, including Weyerhauser Co., McDonnell-Douglas, Du Pont, Scott Paper, and Lever Brothers in the United States. It is also used in the United Kingdom, Japan and the Soviet Union³. Here in Canada it is used by Bell Canada, IBM Canada, MacMillan-Bloedell and the Federal

1 Dalkey, N. C., The Delphi Method, An Experimental Study of Group Opinion, The RAND Corporation, RM-5888-PR, April 1969.

2 Farquhar, J. A., A Preliminary Inquiry Into the Software Estimation Process, the RAND Corporation, RM-6271-PR, August 1970.

3 Currill, D. L., "Technological Forecasting in Six Major U. K. Companies", Long Range Planning, March 1972.

Government, among others⁴. Delphi is used most frequently as a tool in forecasting a variety of trends and directions. First developed for forecasting and developing strategies for the military, it has been applied extensively for technological forecasting. Today, many corporations use it as a guide for future product development, based on forecasts of technological trends and consumer demand.

To date, however, the Delphi technique has not been utilized to generate a consensus amongst a group of worker experts on how an operating business system can be improved⁵. The behavioural implications of commitment and consensus which the technique generates may make it a promising procedure for producing ideas to improve and enrich jobs. Studies have indicated that research in Delphi should stress its psychological aspects in terms of communication, rather than in mathematical terms alone. Yet these behavioural implications have been largely ignored by researchers utilizing the Delphi technique⁶.

4 Canadian Computer/Communications Task Force, Branching Out, Vol. 2, Information Canada, Ottawa, May 1972.

5 Wedley, W. C., The Delphi Technique for Job Enrichment, Proceeding - First Annual Conference of the Canadian Association of Administrative Sciences, Kingston, Ontario: Queen's University, 1973 pp. 5-271 - 5-305.

6 Pill, Juri, "The Delphi Method: Substance, Context, A Critique and an Annotated Bibliography", Socio-Economic Planning Sciences, Vol. 5, 1971, pp. 57-71.

The Delphi technique has been described as

replacing direct debate with a carefully designed program of sequential individual interrogations (best conducted by questionnaires), interspersed with information and opinion feedback, derived by computed consensus from earlier parts of the program. Some of the questions directed to respondents may, for instance, inquire into "reasons" for previously expressed opinions, and a collection of such reasons may be presented to each respondent in the group, together with an invitation to reconsider and possibly revise his earlier estimates. Both the enquiry into the reasons and subsequent feedback of the reasons adducted by others may serve to stimulate the experts into taking into due account considerations they might, through inadvertance, have neglected, and to give due weight to factors they were inclined to discuss as unimportant on first thought⁷.

Adducted, as used by the authors, is intended to mean the pulling together of responses towards the centre or the consensus.

In practical situations, the experts do not face one another. Thus there is no confrontation. Group dynamics are eliminated as the experts are polled by questionnaire. The opinions of these experts are anonymous. Only the collective results are made known⁸.

7 Helmer, O. and Reschner, N., On the Epistemology of the Inexact Sciences, the RAND Corporation, R-353, February 1960.

8 "Forecasters Turn to Group Guesswork", Business Week, March 14, 1970, pp. 130-134.

The questions are asked in a series of rounds. A round includes the eliciting of opinion and the feedback showing the collective result of the poll. For best effects, three or four rounds should be conducted. In the second round and onwards, the expert can review the opinions and quantitative assessments of the other experts, dispassionately and by himself, without any personal characteristics of other experts entering into his frame of reference. After four rounds, the expert has usually reached a firm opinion. As a general rule, there is greater consensus among panelists in later rounds, but also diminishing returns to consensus.

Other features of the technique include anonymity of the participants, controlled feedback and statistical group response. Typical characteristics were outlined by Sackman⁹. He stated that questionnaires are accompanied by some set of instructions, guide lines and ground rules. Participants do not meet or discuss issues face-to-face, and they may be geographically remote from one another. The questionnaire items may be generated by the director, the participants, or both, and consist of a series of items using similar or different scales, quantitative or qualitative, concerned with the study objectives.

9 Sackman, H., Delphi Assessment: Expert Opinion, Forecasting and Group Process, the RAND Corporation, R-1283-PR, April 1974, pp. 7 & 8.

Sackman further states that the questionnaire is administered for two or more rounds and that although participants respond to scaled objective items, they may or may not respond to the open-ended verbal requests. Each iteration is accompanied by some form of statistical feedback which usually involves a measure of central tendency (i.e.: mean or median), some measure of dispersion (i.e.: inter-quartile range or standard deviation), or perhaps the entire frequency distribution of responses for each item. It may also be accompanied by selected verbal feedback from some participants, with the types and amounts of feedback determined by the director. Outliers (i.e.: upper and lower quartile responses) may be asked by the director to provide written justification for their outlying responses. Finally, iterations with feedback are continued until convergence of opinion, or consensus, reaches some point of diminishing returns.

Application of the Delphi Method

The above characteristics indicate that the Delphi method would be applicable to this study as it lends itself easily to be used for the generation and evaluation of ideas for improvement. This study will provide a unique opportunity

to test the Delphi method as a behavioural tool.

The advantages of Delphi for this application include the opportunity for individual brainstorming, and a more creative generation of ideas. Delphi also provides quantitative measures for evaluating the suggestions as opposed to the usual heuristic ones, providing objective facts on which to base choices. Moreover, the low cost of administering the project and the feasibility of carrying it out without bringing the participants together, provided further advantages for using this method.

Conversely, the Delphi method is not devoid of drawbacks. The ideas that are generated can only be as good as the experts who generate them. In this application, it may be prudent to question the ability of a salesman to submit new ideas about his own job. The answer is probably 'yes' with regards to improved methods by which he carries out his job. However, he would not be expected to submit proposals for changing the broader system within which he works, as he lacks the perspective to be in a position from which to suggest such changes.

One anticipated problem in this application is the long time interval between iterations. It is difficult to maintain the

proper momentum between rounds and thus a participant may not remember the ideas he was excited about in the previous round. Finally, by its nature, Delphi discourages the adversary process, encourages conformity and penalizes dissent.

Taking into account the above characteristics of Delphi and the advantages and disadvantages of the method, its application to our study is acceptable. Considering a complete lack of alternative methods that would provide the anticipated results as well as the low costs, the Delphi method was found to be the only way of carrying out this study.

THE METHOD

The detailed procedure carried out to test both the Delphi method and the hypotheses in this study, consisted of five phases. In the first phase, the participants were introduced to the project and their support was requested. This phase also included the acquisition of specific and timely data that was subsequently used to measure the effectiveness of the project.

In the second phase, an experimental group of salesmen participated in the first Delphi round. They were requested to generate ideas for improving their job. The next phase consisted of the second round of the Delphi process, while the fourth phase was the third and final Delphi round. In the last phase, data was once more collected to provide relevant information for measuring effectiveness.

After the first phase, the participants were divided into two groups: An experimental group and a control group. Both groups were to provide data for testing the effectiveness of the project. The control group, however, did not participate in the Delphi portion of the project. This arrangement provided sufficient data to provide a basis for comparison in two different ways: A 'before' project versus 'during' project relationship and an 'experimental group' versus 'control group' relationship.

The First Phase

To ensure a reasonable chance for success, the Firm's Vice-President of Marketing was requested to support this project by encouraging the salesmen to participate. The Vice-President was advised that the project consisted primarily of studying a new technique which would hopefully increase the effectiveness of the sales force. In order to set the Vice-President at ease, he was told the full intentions of the study. In a memo, a copy of which may be found in Appendix I, he was told that the project consisted of a series of mailed questionnaires which his staff will be requested to answer. The responses to the questionnaires would hopefully lead to a consensus on a series of suggestions which could potentially enrich the salesmen's jobs. The Vice-President was requested not to divulge the method to the participants before the study was complete.

None of the participants knew that an experiment was being conducted or that a consensus was expected. They were told only that they were taking part in a project to improve jobs.

The Vice-President endorsed the project. To indicate his support, he, in turn, sent a memo to all salesmen, indicating that he will study the results with a view to implementing

those suggestions which must be introduced by Management¹. At the same time the Vice-President's office sent the author an analysis of each salesman's recent performance. This report was coded by a secretary to maintain anonymity.

The first letter to the salesmen (see Appendix I) introduced the author and the study which, they were told, was an investigation of a method which would hopefully improve jobs, job performance and the satisfaction gained from the work. They were promised complete anonymity as each questionnaire was identified only by a code number and the author had no way of associating any name with any code number. This last factor was an extremely important matter as the attitude tests discussed below require some very frank answers to questions about the salesman's attitude towards his work and the firm.

Anonymity was assured as all mail to and from the participants was being handled by the Secretary to the M.B.A. program at Simon Fraser University. The author had no way of relating any questionnaire with a specific salesman. A letter from Professor Wedley (see Appendix I) supported the necessity for the maintenance of anonymity and assured all participants that

1 See Appendix I for copies of all written communications used in phase one.

the M.B.A. office would provide the means by which anonymity will be preserved.

Finally, the salesmen were informed that some would receive more questionnaires than others. The salesmen who end up in the control group will, of course, receive fewer questionnaires. All the salesmen were told that in the future, they would receive tabulated results of some of the surveys so that they will be able to benefit from the suggestions and opinions of their fellow salesmen. They were not told that they were part of an experimental or control group. The first questionnaire was designed to measure need fulfillment and need satisfaction before the study began. The questionnaire was sent to all salesmen, the experimental group as well as the control group. The resulting data provided a measure of attitudes which can be compared to subsequent tests. A sample is enclosed in Appendix I.

The attitude questionnaire was based on one developed by Lyman W. Porter in 1964¹. It consisted of thirteen items in the following form:

1 Porter, L. W. and Lawler, E. E., Managerial Attitudes and Performance, Homewood, Ill.: Irwin-Dorsey, 1968, pp. 190-193.

The opportunity for independent thought and action in my job position:

(a) How much is there now?

(Min) 1...2...3...4...5...6...7...8...9... (Max)

(b) How much should there be?

(Min) 1...2...3...4...5...6...7...8...9... (Max)

The complete listing of thirteen items -- although presented in a random order in the questionnaire -- had been pre-classified into five types of needs:

Security

Social

Esteem

Autonomy

Self-actualization

Salesmen were given three weeks from the date of mailing to complete the questionnaires and return them to the author. Forty-six attitude questionnaires were sent out and forty-three were returned. (See Table I.) Immediately following return of the attitude questionnaires, fifteen participants were selected at random to become the control group. This group simply did not receive any further questionnaires until the final phase.

T A B L E I

MAILING	DATE (All in 1975)	TOTAL MAILED				EXPERIMENTAL GROUP			CONTROL GROUP		
		Mailed Out		Returned		Mailed Out	Returned		Mailed Out	Returned	
		No.	%	No.	%	No.	No.	%	No.	No.	%
"Before" Attitude Survey	June 3	46	93	43	31	31	100	15	13	87	
Round 1 Idea Generation	June 19	31	71	22	31	22	71				
Round 2 Idea Evaluation	Aug. 12	22	77	17	22	17	77				
Round 3 Idea Re-evaluation	Sept 30	22	68	15	22	15	68				
"After" Attitude Survey	Nov. 26	37	65	24	22	15	68	15	9	60	

The Idea-Generation Phase

The next questionnaire asked the salesmen to list as many ideas as possible on how their job could be made more effective. As a means of providing a certain amount of education in the area of job enrichment, a letter was enclosed with the questionnaire which focused the participant's attention on suggestions which would increase the influence of the participant's motivators. The suggestions would prompt the salesman to recommend changes for responsibility in his job, more control over his work, feed-back and recognition of output and a means to set his own goals. The intent of this influence was to steer away from task-related suggestions as well as maintenance (hygiene) factors.

The questionnaire was designed to elicit about ten questions in an unstructured format². As in all mailings, coded questionnaires were taken to Simon Fraser University, where they were stuffed into the appropriate envelopes. A due date three weeks after mailing was given to assure prompt return of the questionnaire.

Upon return to Simon Fraser University, questionnaires were separated from their envelopes and passed on to the author. Twenty-two (71 percent) of the thirty-one questionnaires were returned. Only those participants who responded to this

2 See Appendix II

first round were mailed subsequent Delphi questionnaires. The rest were assumed to have chosen not to participate.

The suggestions were many and varied. Most had to be edited and shortened to provide concise, specific statements. After eliminating duplication, sixty-four suggestions were listed in random order. This list of suggestions was fed back to the participants on the questionnaire in the next phase.

(See Appendix III for samples).

Phase Three -- Idea Evaluation

The next mailing included a letter thanking the salesmen for their suggestions and explaining the ground rules for the evaluation phase. Each suggestion was to be rated four ways: (1) the suggestion's benefit to the salesman himself, (2) the benefit to the Company, (3) the benefit to his customer and (4) the ease to implement the suggestion. Ratings were based on a scale of one to nine. The greater the benefit of the suggestion, the higher the number. Similarly, an extremely difficult suggestion to implement would rate a low number, while an easy one to implement would rate a high number. In addition to the explanation in the letter, instructions and sample scales were shown on each page of the questionnaire.

The salesmen were asked to rate each of the sixty-four suggestions (a total of two-hundred and fifty-six variables). They were also given the opportunity to add any comments they wished regarding any suggestion. Room for comments was also provided on the questionnaire (see Appendix III).

After the return of the questionnaires, each response was key-punched and the mean for each variable (benefit to salesman, Company, customer, ease of implementation) for each suggestion was calculated with the aid of a computer. These results were documented and fed back to the participants as part of the next questionnaire. The comments were also summarized, edited and listed. They were fed back to the participants as well³.

Phase Four -- Idea Re-Evaluation

The fourth phase was basically a repeat of the previous one. Instructions requested that the participants review the list of suggestions, which now had the mean ratings alongside each suggestion. They were asked to re-rate each suggestion in view of the rating assigned by their peers. Again, they were given the opportunity to make comments, and encouraged to do

³ See Appendix III for a list of these comments.

so if they disagreed with the shown ratings. Once more, instructions and sample scales were included on each page of the questionnaire. Appendix IV includes a sample.

The questionnaires were returned in the usual manner. Response, at this stage, dropped slightly to sixty-eight percent. After key-punching and computing, the means were documented along with the results of the previous round⁴. These results were mailed to the participants.

Standard deviations for the ratings in phase three and four as well as the significance of the changes in means and standard deviation were also computed. The highest-rated suggestions were selected and the relevant results are included in Table II. These tables contained the consensus on the highest rated suggestions for job improvement.

Assuming that the Delphi rounds fulfilled the original intent, Table II should contain the basis for a choice of suggestions to be implemented. Since they are the end product of the project, they are being sent to the salesmen and to the Vice-President of Marketing for their consideration.

4 See Appendix IV

The Concluding Phase

The last phase of the project consisted of mailing attitude questionnaires, to both the experimental and the control group. They were identical to the initial questionnaire with one exception. The experimental group was also sent an additional short questionnaire which enquired about their opinion on the effectiveness of the project as a whole. It asked about the time and effort the project required as well as the benefits it produced. This additional questionnaire was to provide the author with some direct feedback to augment the other measures of effectiveness. A sample questionnaire is contained in Appendix V.

During this last phase, a coded version of each salesman's performance (a Company sales analysis report) was sent to the author. It indicated each salesman's average performance over the past four months. This information provides an indication of performance from the time the salesmen completed the idea-generation questionnaire to the time they filled out the last attitude survey. The results of the surveys and the measures of effectiveness are discussed in subsequent chapters.

TABLE II - Continued
HIGHEST-RATED SUGGESTIONS

SUGGESTION	Round 2					Round 3						
	Effectiveness		Effectiveness			Effectiveness		Effectiveness				
	Sales	Comp	Custo	Imple	Sales	Comp	Custo	Imple	Sales	Comp	Custo	Imple
Note: * indicates significant at 10% level Top line shows mean ** indicates significant at 5% level Bottom line shows std. dev. *** indicates significant at 1% level () indicates number of suggestion in questionnaire	7.76	7.65	7.82	6.88	7.94	7.71	8.12	7.41	7.94	7.71	8.12	7.41
	1.72	1.97	1.55	1.62	0.66	0.99	0.70	0.71	0.66	0.99	0.70	0.71
Salesmen should be supplied with more industry and market information and price trends. (44)	7.44	7.81	6.69	7.13	8.06	8.12	7.18	7.65	8.06	8.12	7.18	7.65
Salesmen should put emphasis on good communication with their superiors. It's the key to making the salesmen's part in the company successful. (54)	2.07	1.72	2.27	1.93	0.56	0.60	1.59	0.77	0.56	0.60	1.59	0.77
Salesmen should be made more aware of problems in the meat industry and livestock markets. (45)	8.00	7.65	8.12	6.94	8.06	7.71	7.88	7.29	8.06	7.71	7.88	7.29
Production should try harder to fill any orders that were promised. (15)	1.00	1.54	0.93	1.68	0.66	0.85	0.70	0.69	0.66	0.85	0.70	0.69
Each salesman should be aware that he can reach his goal only with the help of management, plant staff, office staff, his family and most of all -- his self-confidence. (53)	8.41	7.47	8.47	5.94	8.41	8.23	8.47	5.65	8.41	8.23	8.47	5.65
Salesmen should be given more training, be given the opportunity to tour the plant, see the operation and all the products so that they have a better knowledge of what they are selling. (41)	0.94	2.18	0.87	1.85	0.62	**	**	1.73	0.62	**	**	1.73
There should be more sales meetings with production people present. (18)	7.76	7.71	6.59	6.82	8.24	8.18	6.82	7.24	8.24	8.18	6.82	7.24
Salesmen should be allowed to get more involved in their work. They should be involved in all discussions affecting their territory. (47)	1.95	1.93	2.43	2.16	0.66	0.64	1.38	0.83	0.66	0.64	1.38	0.83
Salesmen could get more involved in their work if they would learn all aspects of the meat industry. (46)	7.50	7.75	7.44	7.00	7.88	7.88	7.24	7.35	7.88	7.88	7.24	7.35
Note - tests between means used paired samples	1.83	1.61	1.59	1.75	0.99	0.99	1.09	1.22	0.99	0.99	1.09	1.22
- tests between standard deviations used grouped samples	8.07	8.07	6.27	6.80	8.31	8.12	7.06	6.50	8.31	8.12	7.06	6.50
	1.67	1.49	2.89	2.08	0.60	0.62	1.18	1.95	0.60	0.62	1.18	1.95
	8.00	7.37	5.73	6.56	8.18	8.00	6.47	7.12	8.18	8.00	6.47	7.12
	2.03	2.31	3.22	2.34	0.73	0.71	1.20	1.05	0.73	0.71	1.20	1.05
	7.94	7.81	8.06	6.56	7.70	7.53	7.76	6.41	7.70	7.53	7.76	6.41
	1.24	1.22	1.18	2.03	0.98	1.01	0.90	1.28	0.98	1.01	0.90	1.28

RESULTS OF THE DELPHI ROUNDS

As described in the previous chapter, the participants created sixty-four suggestions for job improvement. The salesmen assumed the role of the experts who generated and rated these suggestions. Thirty-one experts were initially polled, but only fifteen completed all rounds. A complete list of all suggestions and their ratings are in Appendix IV.

In addition to the mean scores shown, the standard deviation for each of the four variables for each suggestion was calculated. Those suggestions with a high mean at the end of the third round are the ones of greater value. Another indication of the better suggestions is a small standard deviation at the end of the third round. The smaller the standard deviation, the greater the consensus. Also, the greater the decrease in standard deviation between rounds, the greater the change towards consensus.

For computing purposes, the four variables for each of the sixty-four suggestions were considered as two hundred and fifty-six variables for each of the two idea-evaluating rounds. Results showed that of the two hundred and fifty-six means, one hundred and eleven increased, six did not change between rounds and one hundred and thirty-nine decreased. However, none of the changes in mean were significant at the ten percent level in a paired two-tailed

T-test. Thus means changed very little between rounds and any variations can be attributable largely to chance.

Although no exact calculations were made, a positive correlation seemed to occur between highly rated suggestions and increasing means as well as lower rated suggestions and decreasing means.

Changes in standard deviation were more definite. The standard deviation decreased in two hundred and fifty-three out of two hundred and fifty-six cases. It increased in only three cases. In grouped one-tailed T-tests, twenty-six decreases in standard deviation were significant at the ten percent level, fifty-one cases at the five percent level and one hundred and eight cases at the one percent level. This would generally indicate a very definite trend towards a consensus.

Although each suggestion was rated on the basis of three benefit scales and an ease-of-implementation scale, there was generally a very strong correlation between all four scores. The scores for each of the four variables seldom varied by more than one point for any particular suggestion. This closeness will probably prompt future use of an average score or one summarizing score per suggestion. Such a use of the scores suggests that, instead of having four different scores per suggestion, one would have been sufficient -- a score indicating the overall value of the suggestion.

The use of a single score may be acceptable for some studies, but as close correlation between the various benefit scales and ease of implementation scales is not necessarily attained, the use of a single score per suggestion may not provide an adequate, objective measurement of the value of the suggestion. Furthermore, by eliciting four different scores for each suggestion, the participant is forced to consider several aspects of the suggestion, thereby bringing about more considered judgements. A single score would allow a quick, impulsive rating, while several value judgements would force the participant to weigh the benefits more carefully.

Of the sixty-four suggestions, only nine can be considered as motivators which would enrich jobs¹. Only two of these nine motivators were included in the sixteen suggestions which received the highest ratings. The remainder of the suggestions concern themselves with maintenance factors and operational changes in the salesman's work. These hygiene or maintenance suggestions would probably have no effect on the salesmen's feeling of satisfaction. If implemented, however, many of these suggestions might make the salesman more effective, as some of these ideas would increase efficiency without causing motivation. Customer-oriented suggestions,

1 Suggestions No. 7, 10, 14, 19, 20, 21, 38, 47, 50,
List of suggestions, Appendix II.

such as those suggesting changes in the service level the Company provides, may, in effect, increase sales. Increases in effectiveness may therefore occur due to both management implemented policy changes as well as due to increased staff motivation.

In spite of the limited number of motivator suggestions, the Delphi process for Job Improvement may still produce valuable results. The fact that most standard deviations decreased significantly means that much greater convergence of opinion has been achieved by using the Delphi technique. Therefore, even if only a very limited number of suggestions are implemented, the consensus that was achieved will probably assist implementation as a result of the salesmen's commitment and expected attitude change.

CHAPTER V

MEASURES OF EFFECTIVENESS

Three measures of effectiveness were implemented for this study. It was hoped that some, if not all, of these measures would provide positive indications that the Delphi technique is a beneficial method for generating and evaluating job improvement suggestions. All three measures were taken before and after the Delphi treatment. The first was the actual sales performance of the experimental and control groups. The second measure was an attitude survey which would indicate changes in need satisfaction as a result of the project. The last measure was direct feed-back from the participants of their perception of the project.

Effect on Sales Performance

It is relatively easy to measure the performance of a salesman compared to any other worker, as the product of his work (the sales he makes) is tangible and generally well documented. Unfortunately, his effectiveness is often dependent on many factors which are outside his control.

Hence, although the sales he made are measured, his effort, in relation to the assistance and hinderance he meets,

cannot be determined. Assistance and hinderance he meets include the positive influences of product quality, prompt service, high reputation of the goods, favourable market conditions and good customer relations whereas the negative influences include strong competitors, low demand, high prices and delivery problems.

Traditionally, salesmen's performances have generally been evaluated on actual sales only, while the positive and negative influences were assumed to be a constant factor that could be ignored in month-to-month or year-to-year analyses. Due to the impracticality of weighing and including all these external factors, this study had to rely on actual sales figures alone. This does not necessarily mean that the external factors were constant.

The influence of the project on the salesmen's effectiveness was measured by comparing a participant's average weekly sales just before the first questionnaire was mailed, to his average weekly sales during the last seventeen weeks of the project, ending when the last questionnaire was returned. All sales figures were converted to indicate the sales a participant was responsible for as a percentage of the total sales for his sales division. This is because of the relative difference between the sizes of various sales

territories and the variation of total demand resulting from seasonal and market influences. Such a calculation should equalize all external influences that affect salesmen, as the environmental conditions within a division would affect salesmen equally. However, different environmental conditions affect each of the geographic sales divisions. This required that sales comparisons be maintained within each division..

The participants were included in five of the company's national sales divisions. Although thirty-one salesmen were asked to participate, only fifteen completed the project. The performance of those fifteen was compared to the nine members of the control group that participated in both the initial and final attitude survey.

The sales of each man, before and during the project, whether member of experimental or control group, were converted to percentage of division sales. Next, the "before" and "during" figures were compared and a percentage increase or decrease was calculated.

Table III shows the changes in sales percentage achieved by each of eleven salesmen in the experimental group and nine salesmen in the control group. The remaining participants

TABLE III

CHANGE IN SALESMEN'S EFFECTIVENESS IN PERCENT

EXPERIMENTAL GROUP		CONTROL GROUP	
<u>CODE NO.</u>	<u>CHANGE</u>	<u>CODE NO.</u>	<u>CHANGE</u>
15	+3.2	16	+9.4
34	+3.0	20	+5.9
37	+2.1	18	+2.0
28	+2.1	9	+1.0
29	+1.6	1	+0.9
10	+1.1	23	+0.7
4	+1.0	19	+0.4
35	+0.5	17	-0.2
39	-1.0	26	-0.4
12	-2.0		
27	-3.0		

were divisional sales managers whose effectiveness was not indicated by sales analysis reports. The changes are shown in rank sequence. The Wilcoxon Sum of Ranks test on this data demonstrated that there was an insignificant difference between the two groups¹. On examination, therefore, the differences are due to outside influences or chance. The probability of outside influences having an effect on the result is strengthened by the implementation of new marketing policies, restructuring of territories and the substantial reduction of the total sales force during the course of the project. There is substantial reason to believe that the effectiveness of the salesmen has been influenced far more by external factors than by this project.

Effect on Attitudes

As described in Chapter III, the attitude surveys consisted of two identical tests, administered to both experimental and control groups, at the beginning and end of the project. Each test included thirteen pairs of questions. These questions, though presented in a random order in the questionnaire, had been preclassified into one of five types of needs.

1 See Appendix VI

They were security, social, esteem, autonomy and self-actualization needs. The key feature of the design of the thirteen items was to try to determine the relative potency of the various needs classified in Maslow's theory^{2,3}.

For each of the thirteen items, two questions were asked:

How much (of the characteristic) do you now have
in your job?

How much (of the characteristic) should you have
in your job?

The answers to the first of these two questions for each of the thirteen items were taken as a measure of need fulfillment. The difference in answers between the second (the perceived equitable amount) and first (the reality) of these questions was taken as the operational measure of need satisfaction. That is, the greater the amount by which "should be" exceeded "is now" in the findings, the greater is the dissatisfaction.

Table IV shows the mean attitude scores obtained from the two groups before and after the Delphi process. It shows

2 Porter, L. W. and Lawler, E. E., Managerial Attitudes and Performance, Homewood Ill.: Irwin Dorsey, 1968, p. 131.

3 Maslow, A. H., Motivation and Personality, New York: Harper, 1954.

TABLE IV

Attitude Surveys - Levels of Need Fulfillment

Need	Experimental Group			Control Group		
	Before	After	Change	Before	After	Change
<u>Security Needs</u>						
1. Job Security	5.3	4.9	-0.4	5.4	4.7	-0.7
<u>Social Needs</u>						
2. Opportunity to help	5.8	5.5	-0.3	5.9	4.7	-1.2
3. Friendship	4.8	4.9	-0.1	4.0	5.3	1.3
<u>Esteem Needs</u>						
4. Self-esteem	6.2	5.8	-0.4	6.1	5.9	-0.2
5. Inside prestige	5.7	5.3	-0.4	4.5	4.7	0.2
6. Outside prestige	6.4	5.8	-0.8	6.5	6.3	-0.2
<u>Autonomy Needs</u>						
7. Authority	4.4	4.2	-0.2	4.8	3.8	-1.0
8. Independent thought	5.6	5.4	-0.2	5.3	5.1	-0.2
9. Participation to set goals	5.5	4.0	-1.5*	3.6	4.3	0.7*
10. Participation - methods	4.3	3.9	-0.4	3.2	3.8	0.6
<u>Self-Actualization</u>						
11. Personal growth	4.5	4.8	0.3	4.3	4.4	0.1
12. Self-fulfillment	5.5	5.5	0	5.7	6.0	0.3
13. Accomplishment	6.9	6.0	-0.9	5.9	6.3	0.4

*Indicates change significant at 10% level, paired one-tailed test.

the levels of satisfaction the participants indicated for the various need factors described above. Statistical analysis indicates that the change in attitude is insignificant when comparing the difference between the attitudes of the experimental and control group before the start of the project. This means that the two groups are comparable. Analysis also indicates that the difference in attitude of the experimental group between "before" and "after" tests is also insignificant. In fact, the before and after response to only one question was significantly different in the test on the experimental group. One significant change in thirteen questions is a result that could easily be due to chance. Similarly, only one response from the control group indicated a significant change, again probably due to chance. However, it is interesting that the same question, "the opportunity in my sales position for participation in the setting of goals for the Sales Department", was the one that indicated significant change for both groups. It is also noteworthy that the experimental group felt that the opportunity for participation had become less, while the control group perceived increasing opportunity for participation. This finding implies that participation in the Delphi process did not provide the salesmen with a feeling that they were participating in the setting of organizational goals. It is possible that their participation in the Delphi

TABLE V

Attitude Surveys - Levels of Need Satisfaction

Need	Experimental Group			Control Group		
	Before	After	Change	Before	After	Change
<u>Security Needs</u>						
1. Job Security	7.4	6.8	-0.6	8.1	8.0	-0.1
<u>Social Needs</u>						
2. Opportunity to help	7.5	7.3	-0.2	8.1	7.4	-0.7
3. Friendship	6.6	6.8	+0.2	6.2	6.6	+0.4
<u>Esteem Needs</u>						
4. Self Esteem	8.2	7.3	-0.9*	7.7	7.4	-0.3
5. Inside Prestige	7.3	7.0	-0.3	7.2	7.3	+0.1
6. Outside Prestige	7.0	6.3	-0.7	7.7	7.3	-0.4
<u>Autonomy Needs</u>						
7. Authority	6.8	6.7	-0.1	6.6	7.3	+0.7
8. Independent thought	7.7	6.9	-0.8*	7.2	7.7	+0.5
9. Participation - goals	7.5	6.6	-0.9	6.7	6.9	+0.2
10. Participation - methods	6.8	6.4	-0.4	5.9	7.1	+1.2
<u>Self Actualization</u>						
11. Personal growth	7.4	6.8	-0.6	7.7	7.7	0
12. Self-fulfillment	7.3	7.0	-0.3	7.9	7.9	0
13. Accomplishment	8.1	7.9	-0.2	8.0	8.6	+0.6

* Indicates a change significant at 10% level, paired test

rounds made them more aware of their lack of participation, thereby lowering their perceived degree of participation.

Table V shows the levels of need satisfaction indicated by the participants. The need satisfaction relates to the "how much should there be" part of each question. The responses indicate that only two changes in attitude were significant in this part of the test as well. It is interesting to note, however, that the levels of need satisfaction have generally decreased for the experimental group while they increased slightly for the control group. One might surmise that the participation in the project has lowered the salesmen's expectations of the levels of satisfaction that the job should provide. This is the only definite trend indicating a difference between experimental and control group, before and after the Delphi rounds and, as indicated earlier, the changes are not statistically significant. Nevertheless, outside influences should not be completely ignored. The reorganization of one division, realignment of territories and reduction of the sales force mentioned earlier would normally be expected to have at least an overall short-term negative influence on attitudes. This, however, was not indicated in the tests. It can therefore be concluded that attitudes were not affected by the salesmen's participation in this project. There is a possibility, of course, that

the project raised the attitudes somewhat to offset the negative effects mentioned above.

Effectiveness as Perceived by the Participants

To obtain some definite feedback from the participants, those in the experimental group were asked to complete an extra questionnaire included with the last attitude survey⁴. The following results were revealed: Most salesmen spent between one hour and five hours on completing questionnaires. One spent nine hours, but the average was 3.2. All but two agreed to participate in a similar study in the future if requested to do so.

For future budget purposes, if a similar Delphi study was to be carried out, the costs would have to include the participant's time, the administrators' time, key-punch costs, computer time costs, photocopying and mailing costs. The cost of the salesmen's time was based on a salary of \$260 per week. Fifteen salesmen, spending 3.2 hours each filling out questionnaires, would amount to \$333. Administration costs include the wages for a secretary (at an estimated salary of

4 See Appendix V

\$220 per week) who codes, mails and opens mail from participants. The estimated cost would amount to two hours per round: \$35. Design, preparation and typing of the questionnaires along with photocopying and collating them, would require about twelve hours. If a senior office employee, with a salary of \$250 per week carried out these tasks, his cost would be \$80. Key-punching and photocopying costs were estimated at \$40 and postage at \$20. Computer costs are dependent on many variables. Assuming the required system is available and that a suitable statistical analysis program can be used when required, machine time costs could be as low as \$5 - \$10 per run. Consequently, the total cost of such a Delphi study can be estimated at just over \$500.

Other questions revealed that on scales of one to nine, the salesmen averaged 5.2 for learning from this project. Forty percent of them scored 6. The question "did you get new ideas from this project" scored an average of 5.5 while "enjoyment received from this project" averaged 5.3. With relationship to their work, the men awarded an average of 4.5 for the assistance in work planning that this project has provided, and a mean of 4.8 went to "did your involvement in this project help in your work".

The standard deviation for most responses was 2.0, indicating

little consensus among the participants in rating the project. The responses further indicate a rather neutral feeling which precludes any great enthusiasm about the project on the part of the participants. It is felt that the salesmen could not identify with any relevant, new or motivating ideas as a result of this project. This matter is discussed further in the next chapter.

CONCLUSIONS

The success of a Delphi Job Improvement Program from the perspective of a corporation is dependent on whether the workers who participated will feel that their jobs have been enriched, and, as a result of job enrichment, will have become more effective and satisfied. As discussed in the Introduction, research has shown that job enrichment is achieved through changes in the work itself. Consequently, final justification can only be achieved after all phases of the job improvement program have been completed. This study is a partial one insofar as it only considers the idea generation and idea evaluation phases.

There are a few facets which impaired the success of the overall project. Most of these impairments were completely beyond the author's control. Nevertheless, illumination of these obstacles will help provide guidance for future studies.

As previously described by Sackman in his research for the RAND Corporation¹, a short time interval between rounds is critical for the maintenance of momentum among the participants. In this project, participants received feedback from

1 Sackman, H., Delphi Assessment: Expert Opinion, Forecasting and Group Process, the RAND Corporation, R-1283-PR, April 1974.

the previous round after a five week wait, allowing for mailing, processing and the production of the next questionnaire. In addition, the last round was further postponed by a national mail strike, which caused an extra three weeks' delay. During the mail strike, the last round of questionnaires was dispatched via various company trucks. With the effort and co-operation of the company's Traffic Department, questionnaires were delivered to their destination and returned, sometimes being handled by several different carriers. The delays, however, further impaired the effectiveness of the project. During the latter rounds some salesmen considered these questionnaires as nuisances despite initial willingness. The extended time frame may also have been partly responsible for eliminating any improvements in attitudes which this project may have stimulated.

In future Delphi projects, it would be highly desirable to have the various rounds no more than a week apart. This could be accomplished by severely reducing the time required between rounds for computing results and preparing the following questionnaire. In a company-wide Delphi project, where participants are greatly separated, the use of teletype or other electronic communications medium should be considered as a quick method for eliciting responses from participants. Although a national mail strike cannot usually be anticipated months before it occurs, future Delphi

projects should include contingency plans for the speedy handling of questionnaires.

An overwhelming number of suggestions were concerned with hygiene factors. This fact indicates that the participants either did not know what type of suggestion to submit or could not originate job enriching ideas. Ford, in his research, found that workers did not have a broad enough conceptualization of their jobs to enable them to generate viable ideas for job enrichment². This finding has been borne out in this project as well. On the other hand, the letter which was enclosed with the questionnaire contained some specific questions which were supposed to guide the participants towards motivating ideas³. These questions were intended as a simple replacement for the work familiarization stage. Since only hygiene factors were generated, it appears that the leading questions were only a superficial treatment of the work familiarization stage.

Future projects of this type should include a substantial amount of orientation in job enrichment concepts and methods

2 Ford, Robert N., "Motivation Through the Work Itself", New York: American Management Association, 1969.

3 See Appendix II

before the Delphi rounds begin. Although the salesmen could be considered as experts in their jobs, their inability to generate motivating opinions also distorted their appreciation of the value of their suggestions.

This project did not test the creativity of the suggestions nor their effects on job improvement. Since the implementation phase of the program has not yet taken place, it was impossible to measure the impact of the changes in the work itself. However, it was found that, contrary to the initial hypothesis, attitudes and effectiveness were not significantly affected. This finding concurs with the Herzberg's and Ford's contentions that only the actual changes in the work itself will affect these factors. Consequently, the overall success of this study is dependent on the effectiveness of the whole program.

The effectiveness of the Delphi method as tested in this study is more encouraging. The ratings of the suggestions indicated very strong consensus. It is hoped that such consensus would lower resistance to change during the implementation phase. The Delphi method therefore has potential as being a viable technique. It generates and communicates ideas. It gives objective ratings which can aid the decision maker when making a choice. Moreover, when applied

anonymously to workers, it becomes an excellent vehicle for providing upward communication.

Possible future use of the Delphi method for similar applications as a formalized suggestion box or a method for soliciting ideas warrants further research. The Delphi method has been shown to be effective and simple to apply. At the current cost of \$500 for a project which includes fifteen participants from coast to coast, it is a relatively inexpensive tool.

APPENDIX I

FIRST MAILING - INTRODUCTION AND ATTITUDE SURVEY

From G.S. Merchant

Date: April 24, 1975

Further to our conversation here in Vancouver, I am now hoping to get started on the research project I mentioned to you.

The project consists of testing a new technique designed to increase the effectiveness of our salesmen. It entails their participation in a series of surveys which have a two-fold purpose. First, they ask the salesman to think about ways he can improve his own effectiveness by changing the makeup of his job, and second, the results of the survey will hopefully point the way for Management to further improve the Salesmen's effectiveness.

As mentioned, the project consists of a series of questionnaires, the answers leading to a consensus on a plan. In this case, the plan is to improve the Salesmen's effectiveness through reshaping his job and enriching it. In colloquial terms, the aim is to design his job so that he gets more satisfaction from it, a greater feeling of achievement, accepts more responsibility and has more scope for growth. A short write up on this method in a different type of application is enclosed. Incidentally, I would appreciate it if the method not be discussed with the Salesmen before or during the duration of the project. The reason for this is we would not want the Salesmen's reaction to be affected by their expectation of how the technique works.

As the success of the project is entirely dependent on the participation of Management and the Salesmen, I need your full support for the following:

1. A list of names and addresses of all Salesmen, Sales Managers and Plant Managers.
2. A letter from you to each Salesman advising them that I, as a student of Simon Fraser University, am doing a project into the performance of Salesmen and that you urge them to participate. This means filling out a series of questionnaires, one of which will probably take 45 minutes, the rest about 10 - 15 minutes for a total of no more than two hours over about two months. The Salesmen will be asked for opinions and suggestions which will be completely confidential. Only the grouped results of all suggestions will be transmitted to yourself, Company Management and the participants.
3. The above letter should also state that you will study the results of the project with a view to implementing these suggestions. Without this committment, the whole exercise will be futile in the Salesmen's eyes.

2.

4. I am planning to include the Sales and Plant Managers in my survey because I'm sure they have many ideas for improving the Salesman's job. I hope this is okay with you.
5. In order to help ascertain whether the project has been successful, I will need to study the Sales Analysis of each of the Salesmen. I will require the Product Group By Route Summary showing one sales division per page (sample enclosed) for each division at three different times: once just before the first survey, once immediately after the last survey and once about three months later. These results will indicate (hopefully) any change in effectiveness when comparing the sales in a territory in which the Salesman participates with one in which the Salesman does not. Of course, initially all Salesmen are urged to participate and a substantial number are expected to respond. Could Bruce Goodfellow provide the liason on this?

One aspect of the technique is an assurance to the participants that the answers will be treated anonymously. With confidentiality assured, the Salesmen will feel freer to respond. To assure them of complete confidentiality, my professor, Dr. William C. Wedley, will have his office mail and receive the questionnaires. He will also maintain a coding list for identifying the respondents. I will receive the coded questionnaires for analysis, but I will not know the names associated with the code numbers.

Many thanks for going along with me on this project. I sincerely hope that it will be a constructive tool which not only pays dividends by improving the effectiveness of your staff, but also by providing us with a new method of obtaining participation from the whole team.

To save you some time, I am enclosing a possible sample letter which you might consider sending to the Salesmen. Please feel no obligation to use any part of this letter, as I'm not trying to put words in your mouth. While I was in the midst of making up letters and memos I thought I might as well include this one and possibly save you some time.

Finally, I would appreciate that list of names and addresses of Salesmen and their Managers as well as the Sales Analysis sheets as soon as possible, so that I may get started. Thanks.

George Merchant

GM/cm

28 May 1975

Important Bulletin

FELLOW SALESMEN:

We want to make your jobs more enriching. Accordingly, George Merchant our Vancouver Manager of Administration, is presently carrying out a study which will benefit both you and the Company. To do this, he must involve all forty-two salesmen in a series of questionnaires. The results of these questionnaires hopefully will bring about improved and more satisfying jobs for all sales people - this is our objective.

Again, many new ideas should come from this project. Both you and I will be getting feed-back on these new thoughts. We look forward to using the ideas you bring out in your future sales work.

Please do your part to answer George's questions. The project is being done for your benefit. It will work only if you participate.

I thank George for helping us. Let's get behind this project and make it a success. Only you can make this happen - please do your part.

Sincerely,

To: All Salesmen

From: G. Merchant

Date: June 3, 1975

Although I am known to some of you, let me introduce myself to those I have not had the pleasure of meeting.

As you can see, my name is George Merchant. My present position is Manager of Administration in the Vancouver Office. I have been employed by the Company for 6 years, but got to know many people within the organization long before I joined.

I am presently going to Simon Fraser University, working toward a Masters Degree in Business Administration. As part of my studies, I am investigating a method of improving jobs, job performance and the satisfaction people get from their work.

I would like to have your assistance in suggesting improvements for the Salesman's job within our Company. Over the next month or two, you will be receiving some questionnaires to fill out and return in a pre-addressed envelope. All of the surveys will be anonymous. A few people will be receiving more questionnaires than others. Your questionnaire will be identified by a code number, but as Professor Wedley has mentioned in his accompanying letter, only he and his secretary will know the name associated with the code.

You will receive the tabulated results of some of the key surveys so that you will be able to benefit from the suggestions and opinions of your fellow Salesmen. This feedback should make your participation an interesting and enjoyable experience. It is anticipated that no more than two hours of your time will be required for all of the surveys.

I have received our Vice-President's permission and support to work with the Sales Force on this project. At the end of the survey, both you and the Vice-President will receive a list of suggestions. He has given me his assurance that he will seriously consider every suggestion. Obviously, for the project to succeed, I need the serious support of all concerned.

Please indicate your willingness to participate by filling out the attached questionnaire. Do not enter your name because your questionnaire is already identified by a code number and we want to maintain anonymity. Upon completion of the form, just enclose it in the envelope provided and mail it back to: Professor William C. Wedley, Department of Economics and Commerce, Simon Fraser University, Burnaby, B. C. Your reply will be analyzed on June 18, 1975 so please have your response in the mail before that time. The best idea is to spend a few minutes to fill out the questionnaire right now.

Thank you.



SIMON FRASER UNIVERSITY, BURNABY 2, B.C., CANADA
M.B.A. EXECUTIVE PROGRAMME; 291-3639

Dear Sir:

I am sorry that I have not had the opportunity to meet the Sales force of As your company's name implies you are spread too far across the country to enable a meeting to be held.

I am writing to explain my role in Mr. George Merchant's study of a method for making jobs more satisfying and rewarding. I have been advising and assisting George in organizing the study. I have also agreed to act as the person who codes, mails out, and receives the questionnaires which you will be completing. This procedure enables us to keep track of which individuals respond without actually identifying those individuals by name.

The procedure works as follows. George will present me with (1) envelopes with your addresses on them, (2) uncoded questionnaires, and (3) pre-addressed return envelopes. I or my secretary will place a code number on your questionnaire and send the materials to you. Upon return of the completed questionnaire from you, I will open and discard the envelope, and give the completed and coded questionnaires to George for analysis and preparation of the next questionnaire.

I can assure you that only I and my secretary will know the names associated with the code numbers. If it ever became known that I did not respect confidentiality, then my ability to be involved in similar studies in industry would be seriously jeopardized. As a consequence, I have no intention of revealing names and breaking your trust.

Your participation in these series of questionnaires should be a worthwhile experience without a major expenditure of time on your part. The project has many benefits for you, and I urge you to give it your serious consideration.

Yours sincerely,

W.C. Wedley
Assistant Professor

WW/vod



QUESTIONNAIRE NO. 1

INSTRUCTIONS: Several characteristics or qualities connected with Sales positions are listed. For each characteristic you are asked to give two (2) ratings on the separate scales numbered one (1) to nine (9). The low numbers on each scale represent low or minimum (min) amounts of the characteristic being measured, and high numbers on each scale represent high or maximum (max) amounts of the characteristic being measured.

EXAMPLE: The opportunity for professional growth connected with my Sales position;

- a. How much is there now? (min) 1 2 ③ 4 5 6 7 8 9 (max)
- b. How much should there be? (min) 1 2 3 4 5 ⑥ 7 8 9 (max)

Notice that in the example above, the numbers (3) and (6) were circled. This does not mean to imply that the number circled in the (a.) part of each question must be smaller than the number circled in the (b.) part of the same question. Once you circle a number on the (a.) part of the question, you are free to choose any number on the (b.) part of that same question. In other words, you may make your responses in any combination you so choose. **BUT BE SURE TO CIRCLE A NUMBER ON BOTH THE (a.) AND THE (b.) PARTS TO EACH QUESTION.**

- 1. The feeling of security in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
- 2. The opportunity in my Sales position to give help to Customers:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
- 3. The opportunity to develop close friendships in my Sales position (particularly among fellow workers):
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
- 4. The feeling of self-esteem a person gets from being in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
- 5. The prestige of my Sales position inside the office and plant (that is, the regard received from others who work in the office, including Managers and staff):
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)

(OVER)

6. The prestige of my Salesman's position outside the Plant (that is, the regard received from others not connected with the business):
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
7. The authority connected with my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
8. The opportunity for independent thought and action in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
9. The opportunity in my Sales position for participation in the setting of goals for the Sales department:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
10. The opportunity, in my Sales position, for participation in the determination of methods and procedures:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
11. The opportunity for personal growth and development in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
12. The feeling of self-fulfillment a person gets from being in my Sales position (that is, the feeling of being able to use your own unique capabilities, or realizing your potential):
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
13. The feeling of worthwhile accomplishment in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)

APPENDIX II

SECOND MAILING - IDEA-GENERATION PHASE

To: The Sales Force
From: George Merchant

June 19, 1975

Gentlemen:

Thank you for returning the first questionnaires. Your answers are being tabulated. In the meantime, here is another questionnaire. This is the one which will take the most of your time, but is also the key questionnaire in the project.

You are requested to list a series (as many as you can) of ideas on how your job could be made more effective. Please think about this for a minute or two, then jot down whatever comes to mind. I have jotted down some questions, the answers to which may trigger an idea or two in your minds:

How can I get more involved in the work, so that I feel I am a greater part of it?

How can I take greater control of things so that I can make more decisions that affect my work?

Is there a better way for me to know when I've done a good job?

How can I get my boss to talk to me more, so I can tell what he expects of me?

How can I get a better handle on what the Company thinks of my potential for getting ahead?

What would have to change in order to make me feel great after a successful day's work?

How can I grow in my job? Get ahead as quickly as possible and let others see how well I'm doing?

How can I have more say about what I should be doing, how I should be doing it and when?

How can I set my own goals?

How can I meet the goals I have set for myself?

Are my present goals high but attainable? If not, how can they be changed?

Does the boss really let me know how I'm doing? If not, how can we change the situation?

Does the Company evaluate my efforts in a fair manner? If not, how can the method of evaluation be changed? Can I keep score myself?

Do the rewards I get reflect the effort I put into my job? If not, how should the reward (salaries, bonus, prizes) system be changed?

Do I get help when I want it? If not, how can I get it? How can I get encouragement when I feel I need it? Can I get the boss to leave me alone when I don't want his help? What can be changed so I can have my way in this matter?

What can be done to get rid of my pet gripes?

What can I do to do a better job on the territory?

Is my time scheduled in such a manner that I can get my job done without having to wait for others? If not, how can I change the schedule?

Do I have the information necessary to do my job? If not, what information do I need?

Do I want more chance to take part in decisions that affect my work? How can that be accomplished?

What can be done to adjust the amount of work I do?

Am I doing the amount and quality of work that is expected of me? Is there a way I can meet greater demands?

Please take a few minutes right now and jot down as many specific ideas as possible. The idea here is to get an abundance of ideas, so as long as the idea is beneficial, jot it down.

When you can't think of any more ideas, put them in the envelope and mail them back. We'll tabulate them all by July 12, 1975. Shortly after that date I will let you know the ideas that were created.

Thanks.

TURN THIS SHEET

SUGGESTIONS, page 1

1.

2.

3.

4.

5.

SUGGESTIONS, page 2

6.

7.

8.

9.

10.

Please return. Enclose more sheets, if you wish. Thank you

APPENDIX III

THIRD MAILING - IDEA-EVALUATION PHASE

TO: All Salesmen

FROM: George Merchant

SUBJECT: LIST OF SUGGESTIONS

DATE: August 12, 1975

Many thanks for returning your list of suggestions which would make your jobs more effective. Your suggestions and comments were much appreciated since they indicate that you must have taken considerable time and spent considerable effort on this project.

All suggestions made have been reproduced on the attached sheets. You will note that they have all been reworded. This was done to make each suggestions more brief, concise and to the point. It was also done to make the style of all suggestions similar to allow you to compare one suggestion to another more easily.

The next step in this project is to evaluate each of these suggestions. As the attached sheets indicate, the idea is to rate each suggestion on a scale of 1 to 9 upon its benefits to the salesmen (yourselves) to the company and to the customer. We are also looking for a rating telling how easily the suggestion can be put into effect. As noted, by a scale of 1 to 9 we mean that if you consider the suggestion as very beneficial you should rate it as 9 and if you see it as virtually useless rate it as 1, or give it a rating anywhere in between extremes. Any number from 1 to 9 is acceptable. In the same manner, if a suggestion is easy to impliment give it a rating of 9, and if very difficult a rating of 1. Once again, any number between 1 and 9 is acceptable as long as it describes the ease or difficulty of putting the suggestion into effect.

Your rating of each suggestion will be a clear indication of the value of each suggestion. Although this task will not take too much of your time, it is important that you consider each suggestion carefully and rate it as you truly see it.

I hope to analyze your responses starting September 8th, therefore hope you can get your questionnaires back to me well before that time.

Many thanks again for participating in this very worthwhile project, and, as before, I will get back to you with the results of your efforts as soon as your questionnaires have been analysed.

PLEASE BE SURE TO MAIL BACK ALL 6 PAGES.

GM/cm

George Merchant

ROUND TWO QUESTIONNAIRE

B E N E F I T S C A L E								
1	2	3	4	5	6	7	8	9
Useless	might have some value			ok		quite beneficial	excellent	

E A S E O F P U T T I N G I N T O E F F E C T S C A L E								
1	2	3	4	5	6	7	8	9
Very difficult	quite difficult		some effort		quite easy		very easy	

Shown below is a list of the suggestions submitted in the previous questionnaire. Please rate each of them. Pick the number you consider applicable from the above scales and write it in the appropriate square below. Rate each question four ways:

1. How beneficial is the suggestion to the salesman (benefit scale)
2. How beneficial is the suggestion to the Company (benefit scale)
3. How beneficial is the suggestion to the Customer (benefit scale)
4. How easily can the suggestion be put into effect (ease scale)

You may add any comments you wish to each suggestion.

S U G G E S T I O N	S A L E S - M A N	C O M P.	C U S T.	E A S E	C O M M E N T S
1. A summary of products shorted during the week should be issued on Fridays to allow salesmen to boost their volume the following week.					
2. Salesmen should be aware of new products or labels before they are in the field. They should be informed about the product and have a sample to show customers, even if only a picture.					
3. Salesmen should be kept informed as to which products are in short supply as well as which should be moved.					
4. Some beef sold in the Vancouver area could be bought directly from Red Deer to make the company more competitive.					
5. The company should get promotions in stores for 2 weeks at a time. More exposure of our brand label should provide repeat business.					
6. We should become a price leader at least some of the time.					
7. Salesmen should have more say as to the issuing of credit for returned product, errors or shipping troubles.					
8. A Book on the type and size of hotel, restaurant, and institutional cuts should be available to salesmen calling on such accounts.					
9. The company should have a sales supervisor in the various areas who would spend time on each territory to help salesmen solve their problems.					
10. Salesmen should be informed on the availability of product in advance so that they can plan sales.					
11. Salesmen should have more opportunity to pass complaints onto Dept. heads without being put on the defensive.					

ROUND TWO QUESTIONNAIRE

BENEFIT SCALE									
1	2	3	4	5	6	7	8	9	
Useless		might have some value			ok		quite beneficial		excellent

EASE OF PUTTING INTO EFFECT SCALE									
1	2	3	4	5	6	7	8	9	
Very difficult		quite difficult			some effort		quite easy		very easy

Shown below is a list of the suggestions submitted in the previous questionnaire. Please rate each of them. Pick the number you consider applicable from the above scales and write it in the appropriate square below. Rate each question four ways:

1. How beneficial is the suggestion to the salesman (benefit scale)
2. How beneficial is the suggestion to the Company (benefit scale)
3. How beneficial is the suggestion to the Customer (benefit scale)
4. How easily can the suggestion be put into effect (ease scale)

You may add any comments you wish to each suggestion.

SUGGESTION	SALES				COMMENTS
	-MAN	COMP.	CUST.	EASE	
12. If a salesman is not willing to fully accept company policies, procedures, wages, bonuses and quotas, he is not doing himself or the company any good and should look elsewhere.					
13. Salesmen could make customers happy by calling at the customer's convenience, not the salesmen's.					
14. Salesmen should "sell" more and spend less time quoting prices and then waiting to see who is the lowest bidder.					
15. Production should try harder to fill any orders that were promised.					
16. The company should produce more custom hotel cuts.					
17. Salesmen's meetings should be held once a month and all people should participate in all discussions.					
18. There should be more sales meetings with production people present.					
19. There should be a better exchange of problems and ideas between department heads and salesmen. Sales meetings can provide such opportunities.					
20. There should be more meetings between salesmen and department heads to discuss new products, new ideas and slow movers.					
21. There should be more opportunity to discuss new products with management.					
22. Accounts should be re-distributed among salesmen so that each salesman has large as well as small accounts. The salesmen with mostly small accounts would improve his volume by getting larger accounts and the one with large accounts could increase his volume by also calling on some small ones.					

ROUND TWO QUESTIONNAIRE

B E N E F I T S C A L E								
1	2	3	4	5	6	7	8	9
Useless	'might have some value'			ok		'quite beneficial'		'excellent'

E A S E O F P U T T I N G I N T O E F F E C T S C A L E								
1	2	3	4	5	6	7	8	9
Very difficult	'quite difficult'		'some effort'		'quite easy'		'very easy'	

Shown below is a list of the suggestions submitted in the previous questionnaire. Please rate each of them. Pick the number you consider applicable from the above scales and write it in the appropriate square below. Rate each question four ways:

1. How beneficial is the suggestion to the salesman (benefit scale)
2. How beneficial is the suggestion to the Company (benefit scale)
3. How beneficial is the suggestion to the Customer (benefit scale)
4. How easily can the suggestion be put into effect (ease scale)

You may add any comments you wish to each suggestion.

S U G G E S T I O N	SALES -MAN	COMP.	CUST.	EASE	C O M M E N T S
23. More product information, contents & make-up of product, as well as time required to produce it, should be made available to the salesmen.					
24. Salesmen's earnings should be based on salary plus commission.					
25. Salesmen's earnings should include a bonus system based on business done the year round.					
26. Salesmen's rewards should be directly related to his success. Therefore, he should be paid more as he increases his volume or margin.					
27. Salesmen should be able to get a commission on sales above list price.					
28. If a salesman wants to get ahead, he should say so once in a while.					
29. Salesmen should be told more often how they are doing individually and should be told of ways to improve their own performance.					
30. Top management should accept more responsibility to have more contact with salesmen, tell them their potential and give them advise.					
31. To succeed, salesmen must make money for the company. Therefore the emphasis should be on margin, with volume second in importance.					
32. Decisions should not be made only with considerations for the majority. Individuals should get consideration as well.					
33. Salesmen should have more pricing knowledge, such as costs and sales margins to enable them to trade on the spot instead of having to phone their manager.					

ROUND TWO QUESTIONNAIRE

BENEFIT SCALE								
1	2	3	4	5	6	7	8	9
Useless		might have some value		ok		quite beneficial		excellent

EASE OF PUTTING INTO EFFECT SCALE								
1	2	3	4	5	6	7	8	9
Very difficult		quite difficult		some effort		quite easy		very easy

Shown below is a list of the suggestions submitted in the previous questionnaire. Please rate each of them. Pick the number you consider applicable from the above scales and write it in the appropriate square below. Rate each question four ways:

1. How beneficial is the suggestion to the salesman (benefit scale)
2. How beneficial is the suggestion to the Company (benefit scale)
3. How beneficial is the suggestion to the Customer (benefit scale)
4. How easily can the suggestion be put into effect (ease scale)

You may add any comments you wish to each suggestion.

SUGGESTION	SALES	COMP.	CUST.	EASE	COMMENTS
34. Salesmen should have access to costing information so that they could promote the products that carry the largest sales margins.					
35. Salesmen could become more involved with their work by sharing ideas with fellow salesmen and helping each other more.					
36. If a salesman makes a good sale, he should not hesitate to let his superior know.					
37. In future sales contests, chain store territories should compete in a separate division of the contest.					
38. Salesmen should have more authority to make decisions on pricing policies.					
39. Salesmen should have more trading privilege. The loss on one item can be offset by the rest of the order.					
40. Salesmen should be consulted when an account is switched from PREPAID to COLLECT before the change is made & given the reason for the change.					
41. Salesmen should be given more training, be given the opportunity to tour the plant, see the operation and all the products so that they have a better knowledge of what they are selling.					
42. Salesmen should talk to as many people within the industry as possible. The more they listen, the more they will learn. The more they learn, the better they will be able to do their job.					
43. Salesmen should learn all they can about our & related industries. The more knowledge they have, the more confidence the customers will have in them.					

ROUND TWO QUESTIONNAIRE

BENEFIT SCALE								
1	2	3	4	5	6	7	8	9
Useless	might have some value			ok		quite beneficial		excellent

EASE OF PUTTING INTO EFFECT SCALE								
1	2	3	4	5	6	7	8	9
Very difficult	quite difficult			some effort		quite easy		very easy

Shown below is a list of the suggestions submitted in the previous questionnaire. Please rate each of them. Pick the number you consider applicable from the above scales and write it in the appropriate square below. Rate each question four ways:

1. How beneficial is the suggestion to the salesman (benefit scale)
2. How beneficial is the suggestion to the Company (benefit scale)
3. How beneficial is the suggestion to the Customer (benefit scale)
4. How easily can the suggestion be put into effect (ease scale)

You may add any comments you wish to each suggestion.

SUGGESTION	SALES -MAN	COMP.	CUST.	EASE	COMMENTS
44. Salesmen should be supplied with more industry and market information and price trends.					
45. Salesmen should be made more aware of the problems in the meat industry & livestock markets.					
46. Salesmen could get more involved in their work if they would learn all aspects of the meat industry.					
47. Salesmen should be allowed to get more involved in their work. They should be involved in all discussions affecting their territory.					
48. Salesmen should be made more aware that their efforts are being evaluated					
49. The orders received, the paperwork done, and the prospect of more of the same tomorrow should give the salesmen a good feeling of accomplishment.					
50. When a salesman has done a good job, the boss should congratulate him personally by phone.					
51. Salesmen should be given more information that tells them how they are doing compared to their counter-part.					
52. Selling becomes much easier when the salesman sets daily and weekly goals for himself.					
53. Each salesman should be aware that he can reach his goal only with the help of management, plant staff, office staff, his family and most of all - his self-confidence.					
54. Salesmen should put emphasis on good communication with their superiors. It's the key to making the salesmen's part in the company successful.					

ROUND TWO QUESTIONNAIRE

BENEFIT SCALE								
1	2	3	4	5	6	7	8	9
Useless		might have some value		ok		quite beneficial		excellent

EASE OF PUTTING INTO EFFECT SCALE								
1	2	3	4	5	6	7	8	9
Very difficult		quite difficult		some effort		quite easy		very easy

Shown below is a list of the suggestions submitted in the previous questionnaire. Please rate each of them. Pick the number you consider applicable from the above scales and write it in the appropriate square below. Rate each question four ways:

1. How beneficial is the suggestion to the salesman (benefit scale)
2. How beneficial is the suggestion to the Company (benefit scale)
3. How beneficial is the suggestion to the Customer (benefit scale)
4. How easily can the suggestion be put into effect (ease scale)

You may add any comments you wish to each suggestion.

SUGGESTION	SALES				COMMENTS
	-MAN	COMP.	CUST.	EASE	
55. Some sales managers need to be much stronger when trying to negotiate something between the salesmen and top management.					
56. Office and plant staff should help the salesmen by putting more effort into catching errors in order processing.					
57. Those who fill orders in the plant must be made aware that they share responsibility for the success of the sales function.					
58. Salesmen should do more for the struggling merchants who are at a disadvantage due to their location and shipping schedules.					
59. The company should spend more money on radio, T.V. and newspaper advertising.					
60. The company should spend more money on public relations work.					
61. It would be a definite asset for the salesmen to have some hockey or football tickets to give away in the right places.					
62. Salesmen should be encouraged and supported to join service clubs such as Lions, Rotary, Elks, etc. Taking an active part in community affairs is ideal for good P.R. work.					
63. More printed material, posters, etc. should be provided for customer's displays.					
64. When the company offers a salesman a move to another province, it must be willing to committ itself and give firm answers before expecting a committment from the salesman.					

APPENDIX IV

FOURTH MAILING - IDEA-RE-EVALUATION PHASE

To: All Salesmen

From: George Merchant

Subject: Round Three Questionnaire

Many thanks for returning the last questionnaire with your ratings of each suggestion.

The last round of this questionnaire requires that you take a look at the suggestions again. You will note that a rating for each has been included. This is the mean or average of the ratings that each of these suggestions received from all of you as a group.

I would like you to re-rate each of these suggestions in view of the rating that your peers have assigned it already. As this is the most critical phase of the experiment, I would like each of you to take the time to re-read the suggestion, take a look at the rating assigned and once more decide what rating you would give that suggestion. Incidentally, please note both sides of the sheets are being used this time so please turn the pages over and be sure that you go through all six pages of suggestions. If you disagree with the ratings shown, feel free to say why in your comments.

Many thanks again for your participation in this project, and as I mentioned, since it is a critical part of the experiment I do hope that you will make the effort one more time to help me complete this project. I hope to start the analysis of your responses by October 15th, therefore hope that you can get these questionnaires back to me well before that time.

Please be sure to return all three pages. For your information I am enclosing a summary of the comments made in Round Two.

GM/bb

ROUND THREE QUESTIONNAIRE

BENEFIT SCALE								
1	2	3	4	5	6	7	8	9
Useless		might have some value		ok		quite beneficial		excellent
EASE OF PUTTING INTO EFFECT SCALE								
1	2	3	4	5	6	7	8	9
very difficult		quite difficult		some effort		quite easy		very easy

Please re-rate each of the following suggestions. The numbers already shown are the averages of the ratings applied by all participants during the previous round. Considering the ratings given these suggestions by your fellow participants, re-rate all suggestions, again picking the applicable number from the scales above and writing it into the squares below the number shown. Rate each suggestion as before, for benefit to you, to the Company, to the Customer and for ease of putting into effect. Again, you may add any comments you wish, especially if your view varies with the average.

SUGGESTION	SALES				COMMENTS
	MAN	COMP.	CUST.	EASE	
1. A summary of products shorted during the week should be issued on Fridays to allow salesmen to boost their volume the following week.	4	5	4	6	
2. Salesmen should be aware of new products or labels before they are in the field. They should be informed about the product and have a sample to show customers, even if only a picture.	8	8	8	8	
3. Salesmen should be kept informed as to which products are in short supply as well as which should be moved.	9	8	8	8	
4. Some beef sold in the Vancouver area could be bought directly from Red Deer to make the company more competitive.	7	7	6	6	
5. The company should get promotions in stores for 2 weeks at a time. More exposure of our brand label should provide repeat business.	6	7	5	5	
6. We should become a price leader at least some of the time.	7	6	7	6	
7. Salesmen should have more say as to the issuing of credit for returned product, errors or shipping troubles.	6	5	7	6	
8. A book on the type and size of hotel, restaurant, and institutional cuts should be available to salesmen calling on such accounts.	8	8	8	7	
9. The company should have a sales supervisor in the various areas who would spend time on each territory to help salesmen solve their problems.	7	8	6	7	
10. Salesmen should be informed on the availability of product in advance so that they can plan sales.	8	9	8	7	
11. Salesmen should have more opportunity to pass complaints onto Dept. heads without being put on the defensive.	7	7	7	7	

ROUND THREE QUESTIONNAIRE

BENEFIT SCALE								
1	2	3	4	5	6	7	8	9
Useless		might have some value		ok		quite beneficial		excellent
EASE OF PUTTING INTO EFFECT SCALE								
1	2	3	4	5	6	7	8	9
very difficult		quite difficult		some effort		quite easy		very easy

Please re-rate each of the following suggestions. The numbers already shown are the averages of the ratings applied by all participants during the previous round. Considering the ratings given these suggestions by your fellow participants, re-rate all suggestions, again picking the applicable number from the scales above and writing it into the squares below the number shown. Rate each suggestion as before, for benefit to you, to the Company, to the Customer and for ease of putting into effect. Again, you may add any comments you wish, especially if your view varies with the average.

SUGGESTION	SALES	-MAN	COMP.	CUST.	EASE	COMMENTS
12. If a salesman is not willing to fully accept company policies, procedures, wages, bonuses and quotas, he is not doing himself or the company any good and should look elsewhere.	7	7	6	7		
13. Salesmen could make customers happy by calling at the customer's convenience, not the salesmen's.	4	4	8	3		
14. Salesmen should "sell" more and spend less time quoting prices and then waiting to see who is the lowest bidder.	6	7	5	4		
15. Production should try harder to fill any orders that were promised.	8	8	8	6		
16. The company should produce more custom hotel cuts.	6	6	7	4		
17. Salesmen's meetings should be held once a month and all people should participate in all discussions.	8	7	6	7		
18. There should be more sales meetings with production people present.	8	8	7	6		
19. There should be a better exchange of problems and ideas between department heads and salesmen. Sales meetings can provide such opportunities.	7	7	6	6		
20. There should be more meetings between salesmen and department heads to discuss new products, new ideas and slow movers.	7	7	6	6		
21. There should be more opportunity to discuss new products with management.	7	7	6	6		
22. Accounts should be re-distributed among salesmen so that each salesman has large as well as small accounts. The salesmen with mostly small accounts would improve his volume by getting larger accounts and the one with large accounts could increase his volume by also calling on some small ones.	5	5	5	5		

ROUND THREE QUESTIONNAIRE

BENEFIT SCALE								
1	2	3	4	5	6	7	8	9
Useless		might have some value		ok		quite beneficial		excellent
EASE OF PUTTING INTO EFFECT SCALE								
1	2	3	4	5	6	7	8	9
very difficult		quite difficult		some effort		quite easy		very easy

Please re-rate each of the following suggestions. The numbers already shown are the averages of the ratings applied by all participants during the previous round. Considering the ratings given these suggestions by your fellow participants, re-rate all suggestions, again picking the applicable number from the scales above and writing it into the squares below the number shown. Rate each suggestion as before, for benefit to you, to the Company, to the Customer and for ease of putting into effect. Again, you may add any comments you wish, especially if your view varies with the average.

SUGGESTION	SALES				COMMENTS
	-MAN	COMP.	CUST.	EASE	
23. More product information, contents & make-up of product, as well as time required to produce it, should be made available to the salesmen.	7	6	6	5	
24. Salesmen's earnings should be based on salary plus commission.	6	6	3	4	
25. Salesmen's earnings should include a bonus system based on business done the year round.	8	7	4	6	
26. Salesmen's rewards should be directly related to his success. Therefore, he should be paid more as he increases his volume or margin.	8	7	4	6	
27. Salesmen should be able to get a commission on sales above list price.	6	5	3	4	
28. If a salesman wants to get ahead, he should say so once in a while.	6	6	3	6	
29. Salesmen should be told more often how they are doing individually and should be told of ways to improve their own performance.	8	7	5	7	
30. Top management should accept more responsibility to have more contact with salesmen, tell them their potential and give them advise.	7	7	5	6	
31. To succeed, salesmen must make money for the company. Therefore the emphasis should be on margin, with volume second in importance.	6	6	3	5	
32. Decisions should not be made only with considerations for the majority. Individuals should get consideration as well.	6	6	5	6	
33. Salesmen should have more pricing knowledge, such as costs and sales margins to enable them to trade on the spot instead of having to phone their manager.	7	6	7	7	

ROUND THREE QUESTIONNAIRE

BENEFIT SCALE								
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SUGGESTION	SALES	COMP.	CUST.	EASE	COMMENTS
34. Salesmen should have access to costing information so that they could promote the products that carry the largest sales margins.	7	7	5	6	
35. Salesmen could become more involved with their work by sharing ideas with fellow salesmen and helping each other more.	7	7	7	7	
36. If a salesman makes a good sale, he should not hesitate to let his superior know.	6	6	4	8	
37. In future sales contests, chain store territories should compete in a separate division of the contest.	6	6	4	6	
38. Salesmen should have more authority to make decisions on pricing policies.	5	4	6	5	
39. Salesmen should have more trading privilege. The loss on one item can be offset by the rest of the order.	6	6	8	6	
40. Salesmen should be consulted when an account is switched from PREPAID to COLLECT before the change is made & given the reason for the change.	7	6	7	8	
41. Salesmen should be given more training, be given the opportunity to tour the plant, see the operation and all the products so that they have a better knowledge of what they are selling.	8	8	7	7	
42. Salesmen should talk to as many people within the industry as possible. The more they listen, the more they will learn. The more they learn, the better they will be able to do their job.	8	8	8	7	
43. Salesmen should learn all they can about our & related industries. The more knowledge they have, the more confidence the customers will have in them.	8	8	8	7	

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SUGGESTION	SALES -MAN	COMP.	CUST.	EASE	COMMENTS
44. Salesmen should be supplied with more industry and market information and price trends.	8	7	8	7	
45. Salesmen should be made more aware of the problems in the meat industry & livestock markets.	8	7	8	7	
46. Salesmen could get more involved in their work if they would learn all aspects of the meat industry.	8	7	8	6	
47. Salesmen should be allowed to get more involved in their work. They should be involved in all discussions affecting their territory.	8	8	6	7	
48. Salesmen should be made more aware that their efforts are being evaluated	7	7	5	7	
49. The orders received, the paperwork done, and the prospect of more of the same tomorrow should give the salesmen a good feeling of accomplishment.	7	7	5	7	
50. When a salesman has done a good job, the boss should congratulate him personally by phone.	6	6	4	7	
51. Salesmen should be given more information that tells them how they are doing compared to their counter-part.	5	6	3	6	
52. Selling becomes much easier when the salesman sets daily and weekly goals for himself.	7	7	6	7	
53. Each salesman should be aware that he can reach his goal only with the help of management, plant staff, office staff, his family and most of all - his self-confidence.	8	8	7	7	
54. Salesmen should put emphasis on good communication with their superiors. It's the key to making the salesmen's part in the company successful.	8	8	7	7	

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SUGGESTION	SALES -MAN	COMP.	CUST.	EASE	COMMENTS
55. Some sales managers need to be much stronger when trying to negotiate something between the salesmen and top management.	7	7	6	6	
56. Office and plant staff should help the salesmen by putting more effort into catching errors in order processing.	8	8	8	6	
57. Those who fill orders in the plant must be made aware that they share responsibility for the success of the sales function.	9	9	8	7	
58. Salesmen should do more for the struggling merchants who are at a disadvantage due to their location and shipping schedules.	7	6	8	5	
59. The company should spend more money on radio, T.V. and newspaper advertising.	7	6	7	6	
60. The company should spend more money on public relations work.	6	6	7	6	
61. It would be a definite asset for the salesmen to have some hockey or football tickets to give away in the right places.	6	5	7	6	
62. Salesmen should be encouraged and supported to join service clubs such as Lions, Rotary, Elks, etc. Taking an active part in community affairs is ideal for good P.R. work.	7	7	6	7	
63. More printed material, posters, etc. should be provided for customer's displays.	7	7	7	6	
64. When the company offers a salesman a move to another province, it must be willing to committ itself and give firm answers before expecting a commitment from the salesman.	8	8	5	7	

A SUMMARY OF COMMENTS

- (1) Very easy to implement. Very beneficial information.
Who wants to know a summary of shorted product?
It's too late!
We are now well informed on potential shortages.
Customers like to look ahead, not back.
- (2) Excellent suggestion!
We are kept informed.
- (3) Very good!
- (4) Unable to comment as not in B. C. Division.
This has to be a Company decision as they are more knowledgeable than the Salesmen.
- (5) This is presently done where warranted.
- (6) A failure of some salesmen is that all they know is price.
- (7) We are busy enough as it is.
Salesmen could provide details if required.
- (8) This book is available now.
- (9) We do need help!
If a salesman knows his job, this is not necessary.
That's the Sales Manager's job.
- (10) All they have to do is ask.
If processed products are booked in advance, availability would be no problem
Suggest he work closely with production people.
- (11) That's no problem here.
- (12) A good company-salesman relationship is a must.
Some people need help.
Acceptance yes, blind acceptance, no.
- (13) Impractical!
You have to call on accounts according to geographic location.
- (16) This would be done if sufficient volume warranted it.
That's where the money is. Good idea!
Space is at a premium in Plant.
- (17) Once every two months should do.
- (22) Geographic locations make this impossible in some cases.
Okay if it doesn't add to the expense incurred in the territory.
Salesmen should work by district, not by size of account.
A good idea.
- (24) Commission causes friction among salesmen. Also causes dishonesty.
This would not really work because of Unions.
Extra incentive always makes for added effort.
Make it a two way street and cut earnings if business is down.

- (25) All it takes it two or three months of low commissions to change your mind.
- (26) I have never found it to be otherwise with Intercon.
- (27) No one should sell above list price!
I am not a working crook. I sell according to the price list.
What a dreamer!
- (28) Let his results talk for him.
Salesman should tell superior what his ambitions are.
- (33) Branch house list should be made available.
- (34) Large margins without volume is a losing proposition.
- (35) Absolutely no complaint with present exchange of ideas.
I do this all the time now.
- (36) Does it really help?
My salesmanager tells me from my volume sheets.
- (37) Every day is a contest with me.
- (41) Added expense if salesman has to be brought in from distant point.
Self betterment rests with the salesman.
The knowledge is available.
- (42) A progressive salesman will do this automatically.
I do!
- (44) This information is published daily in the press.
Buy "Food in Canada" every month and you'll find all the information.
- (46) This is a matter of personal pride.
- (50) How insecure can you be!
(*%#!*%#!)
It makes salesmen want to do more.
- (54) If you are not, why aren't you?
- (58) It could cost the Company a lot of extra money.
- (62) Company should also pay dues.
Okay, providing it doesn't cut into Company working time.

APPENDIX V

FINAL MAILING - COMPLETED DELPHI QUESTIONNAIRE
AND ATTITUDE SURVEY

To: All Salesmen

November 26, 1975

From: G. Merchant

Many thanks for returning the last questionnaire. Due to the mail strike, I haven't had the opportunity to get the results to you earlier, but they are now enclosed.

These results are the averages of the former and latest rounds of ratings. I will be preparing my final report shortly. It will show much more information, as it will tabulate the most beneficial ideas which had the greatest amount of consensus. In other words, it will include the ideas which you judged would be the most beneficial.

This report will go to Fred Mitchell for his information along with a request that he look at the suggestions with a view to implementing them. There are many suggestions which only he can get started.

It would be a pleasure for me to send you a copy as well if you would just fill out the enclosed questionnaire and return it.

This last questionnaire is most important to the whole project as it tells me both how you feel about things in general and this project in particular.

Please take a few minutes to complete this last questionnaire and return it. I will also send a copy of the final report to those who do so. The secretary who administers the questionnaires will assure that all information is anonymous.

Many thanks.

ROUND THREE QUESTIONNAIRE

<p style="margin: 0;">BENEFIT</p> <p style="margin: 0;">1 2 3 4</p> <p style="margin: 0;">Useless "might have some value"</p>	<p style="margin: 0;">EASE OF PUTTING</p> <p style="margin: 0;">1 2 3</p> <p style="margin: 0;">very difficult "quite"</p>	<p style="margin: 0;">EFFECT SCALE</p> <p style="margin: 0;">6 7 8 9</p> <p style="margin: 0;">"not" "quite easy" "very easy"</p>
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THIS IS FOR YOUR REFERENCE ONLY - DO NOT RETURN

Please re-rate each suggestion. The numbers already shown are the averages of the ratings applied during the previous round. Considering the ratings given these suggestions, re-rate all suggestions, again picking the applicable number as before, for benefit to you, to the Customer and for ease of putting into effect. Again, you may add any comments you wish, especially if your view varies with the average.

SUGGESTION	SALES	-MAN	COMP.	CUST.	EASE	COMMENTS
1. A summary of products shorted during the week should be issued on Fridays to allow salesmen to boost their volume the following week.	4	5	4	6		
	4	4	3	6		
2. Salesmen should be aware of new products or labels before they are in the field. They should be informed about the product and have a sample to show customers, even if only a picture.	8	8	8	8		
	8	8	8	8		
3. Salesmen should be kept informed as to which products are in short supply as well as which should be moved.	9	8	8	8		
	9	8	8	8		
4. Some beef sold in the Vancouver area could be bought directly from Red Deer to make the company more competitive.	7	7	6	6		
	8	8	7	7		
5. The company should get promotions in stores for 2 weeks at a time. More exposure of our brand label should provide repeat business.	6	7	5	5		
	6	7	6	5		
6. We should become a price leader at least some of the time.	7	6	7	6		
	7	6	7	6		
7. Salesmen should have more say as to the issuing of credit for returned product, errors or shipping troubles.	6	5	7	6		
	6	5	7	6		
8. A Book on the type and size of hotel, restaurant, and institutional cuts should be available to salesmen calling on such accounts.	8	8	8	7		
	8	8	8	8		
9. The company should have a sales supervisor in the various areas who would spend time on each territory to help salesmen solve their problems.	7	8	6	7		
	7	8	6	7		
10. Salesmen should be informed on the availability of product in advance so that they can plan sales.	8	9	8	7		
	8	8	8	7		
11. Salesmen should have more opportunity to pass complaints onto Dept. heads without being put on the defensive.	7	7	7	7		
	7	7	7	7		

ROUND THREE QUESTIONNAIRE

<p style="margin: 0;">1 2 3 4</p> <p style="margin: 0;">Useless might have some value</p>	<p style="margin: 0;">7 8 9</p> <p style="margin: 0;">Not beneficial excellent</p>
<p style="margin: 0;">1 2 3</p> <p style="margin: 0;">very difficult quite</p>	<p style="margin: 0;">6 7 8 9</p> <p style="margin: 0;">Not quite easy very easy</p>

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Please re-rate each of the ratings applicable given these suggestions the applicable number shown. Rate each suggestion and for ease of putting your view varies with the average.

Suggestions. The numbers already shown are the averages of the ratings given by all participants during the previous round. Considering the ratings given by all participants, re-rate all suggestions, again picking the applicable number as before, for benefit to you, to the Company, to the Customer and for ease of putting into effect. Again, you may add any comments you wish, especially if your view varies with the average.

SUGGESTION	SALES -MAN	COMP.	CUST.	EASE	COMMENTS
12. If a salesman is not willing to fully accept company policies, procedures, wages, bonuses and quotas, he is not doing himself or the company any good and should look elsewhere.	7	7	6	7	
	7	7	6	7	
13. Salesmen could make customers happy by calling at the customer's convenience, not the salesman's.	4	4	8	3	
	4	4	8	3	
14. Salesmen should "sell" more and spend less time quoting prices and then waiting to see who is the lowest bidder.	6	7	5	4	
	7	7	6	5	
15. Production should try harder to fill any orders that were promised.	8	8	8	6	
	8	8	8	6	
16. The company should produce more custom hotel cuts.	6	6	7	4	
	6	6	7	5	
17. Salesmen's meetings should be held once a month and all people should participate in all discussions.	8	7	6	7	
	7	7	5	7	
18. There should be more sales meetings with production people present.	8	8	7	6	
	8	8	7	7	
19. There should be a better exchange of problems and ideas between department heads and salesmen. Sales meetings can provide such opportunities.	7	7	6	6	
	7	7	6	6	
20. There should be more meetings between salesmen and department heads to discuss new products, new ideas and slow movers.	7	7	6	6	
	7	7	7	6	
21. There should be more opportunity to discuss new products with management.	7	7	6	6	
	7	7	7	6	
22. Accounts should be re-distributed among salesmen so that each salesman has large as well as small accounts. The salesmen with mostly small accounts would improve his volume by getting larger accounts and the one with large accounts could increase his volume by also calling on some small ones.	5	5	5	5	
	5	4	4	4	

ROUND THREE QUESTIONNAIRE

<p>BENEFIT</p> <p>1 2 3 4</p> <p>Useless might have some value very beneficial excellent</p>	THIS IS FOR YOUR REFERENCE ONLY - DO NOT RETURN	<p>EASE OF PUTTING</p> <p>1 2 3</p> <p>very difficult quite easy</p>	<p>EFFECT SCALE</p> <p>6 7 8 9</p> <p>difficult quite easy very easy</p>
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31. To succeed, salesmen must make money for the company. Therefore the emphasis should be on margin, with volume second in importance.	6	6	3	5	
	6	6	2	5	
32. Decisions should not be made only with considerations for the majority. Individuals should get consideration as well.	6	6	5	6	
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ROUND THREE QUESTIONNAIRE

BENEFIT

1 Useless 2 3 might have some value 4 5 6 7 8 9 10
 Not beneficial excellent

EASE OF PUTTING INTO EFFECT SCALE

1 2 3 4 5 6 7 8 9
 very difficult quite difficult quite easy very easy

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48. Salesmen should be made more aware that their efforts are being evaluated.	7 7	7 7	5 5	7 7	
49. The orders received, the paperwork done, and the prospect of more of the same tomorrow should give the salesmen a good feeling of accomplishment.	7 7	7 7	5 6	7 8	
50. When a salesman has done a good job, the boss should congratulate him personally by phone.	6 5	6 5	4 3	7 7	
51. Salesmen should be given more information that tells them how they are doing compared to their counter-part.	5 5	6 5	3 3	6 6	
52. Selling becomes much easier when the salesman sets daily and weekly goals for himself.	7 7	7 7	6 6	7 7	
53. Each salesman should be aware that he can reach his goal only with the help of management, plant staff, office staff, his family and most of all - his self-confidence.	8 8	8 8	7 7	7 7	
54. Salesmen should put emphasis on good communication with their superiors. It's the key to making the salesmen's part in the company successful.	8 8	8 8	7 7	7 7	

ROUND THREE QUESTIONNAIRE

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	7	6	8	5	
59. The company should spend more money on radio, T.V. and newspaper advertising.	7	6	7	6	
	7	7	7	6	
60. The company should spend more money on public relations work.	6	6	7	6	
	6	6	7	6	
61. It would be a definite asset for the salesmen to have some hockey or football tickets to give away in the right places.	6	5	7	6	
	6	6	7	6	
62. Salesmen should be encouraged and supported to join service clubs such as Lions, Rotary, Elks, etc. Taking an active part in community affairs is ideal for good P.R. work.	7	7	6	7	
	7	7	6	7	
63. More printed material, posters, etc. should be provided for customer's displays.	7	7	7	6	
	7	7	7	6	
64. When the company offers a salesman a move to another province, it must be willing to commit itself and give firm answers before expecting a commitment from the salesman.	8	8	5	7	
	8	8	5	7	

FINAL QUESTIONNAIRE

INSTRUCTIONS: Several characteristics or qualities connected with Sales positions are listed. For each characteristic you are asked to give two (2) ratings on the separate scales numbered one (1) to nine (9). The low numbers on each scale represent low or minimum (min) amounts of the characteristic being measured, and high numbers on each scale represent high or maximum (max) amounts of the characteristic being measured.

EXAMPLE: The opportunity for professional growth connected with my Sales position;

- a. How much is there now? (min) 1 2 ③ 4 5 6 7 8 9 (max)
- b. How much should there be? (min) 1 2 3 4 5 ⑥ 7 8 9 (max)

Notice that in the example above, the numbers (3) and (6) were circled. This does not mean to imply that the number circled in the (a.) part of each question must be smaller than the number circled in the (b.) part of the same question. Once you circle a number on the (a.) part of the question, you are free to choose any number on the (b.) part of that same question. In other words, you may make your responses in any combination you so choose. **BUT BE SURE TO CIRCLE A NUMBER ON BOTH THE (a.) AND THE (b.) PARTS TO EACH QUESTION.**

- 1. The feeling of security in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
- 2. The opportunity in my Sales position to give help to Customers:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
- 3. The opportunity to develop close friendships in my Sales position (particularly among fellow workers):
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
- 4. The feeling of self-esteem a person gets from being in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
- 5. The prestige of my Sales position inside the office and plant (that is, the regard received from others who work in the office, including Managers and staff):
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)

(OVER)

6. The prestige of my Salesman's position outside the Plant (that is, the regard received from others not connected with the business):
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
7. The authority connected with my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
8. The opportunity for independent thought and action in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
9. The opportunity in my Sales position for participation in the setting of goals for the Sales department:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
10. The opportunity, in my Sales position, for participation in the determination of methods and procedures:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
11. The opportunity for personal growth and development in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
12. The feeling of self-fulfillment a person gets from being in my Sales position (that is, the feeling of being able to use your own unique capabilities, or realizing your potential):
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)
13. The feeling of worthwhile accomplishment in my Sales position:
 - a. How much is there now? (min) 1 2 3 4 5 6 7 8 9 (max)
 - b. How much should there be? (min) 1 2 3 4 5 6 7 8 9 (max)

This section of the questionnaire asks your feelings about the project:

- A. How much time did you spend on all the questionnaires in total? _____ hrs.
- B. Would you participate in such a project again if requested to do so? Yes or No? _____

Answer the rest of the questions by circling a number between 1 and 9, the same way you did in all other questionnaires. "1" is a most negative feeling, "9" a most positive one.

- C. Learning derived from participation in this project:
(min) 1 2 3 4 5 6 7 8 9 (max)
- D. Did you get new ideas from this project?
(min) 1 2 3 4 5 6 7 8 9 (max)
- E. Enjoyment received from participating:
(min) 1 2 3 4 5 6 7 8 9 (max)
- F. Assistance in planning your work:
(min) 1 2 3 4 5 6 7 8 9 (max)
- G. Did your involvement in this project help in your job?
(min) 1 2 3 4 5 6 7 8 9 (max)
-

To: All Salesmen

November 26, 1975

From: G. Merchant

With the mail strike and other events you probably wondered what happened to the Research Project you helped me out with some time ago.

Well, despite all the problems along the way, we are progressing.

I must ask you to fill out one more questionnaire. Please fill it out, (remember, it's all confidential) and return it to me as soon as possible.

I will be preparing my final report shortly. It will show the most beneficial job changes suggested by your fellow-salesmen. In other words, it will include the suggestions your fellow-salesmen judged most beneficial to yourselves, the Company and customers. I will send a copy of my report to those who fill out and return this questionnaire. To receive a copy, just fill out the enclosed questionnaire and return it. The secretary who administers the questionnaires will assure that all information is anonymous.

Remember, this last questionnaire is of the greatest importance to the whole project. Please send it back as soon as possible. Don't worry if it looks like one you have done before. It's not a duplication.

Thank you.

APPENDIX VI

THE WILCOXSON SUM OF RANKS TEST ON
CHANGE IN SALESMEN'S EFFECTIVENESS

Wilcoxon Sum of Ranks Test

Change in Salesmen's Effectiveness in Percent

<u>Experimental Group</u>			<u>Control Group</u>		
<u>Code No.</u>	<u>Change</u>	<u>Rank</u>	<u>Code No.</u>	<u>Change</u>	<u>Rank</u>
15	+3.2	3	16	+9.4	1
34	+3.0	4	20	+5.9	2
37	+2.2	5	18	+2.0	7
28	+2.1	6	9	+1.0	11
29	+1.6	8	1	+0.9	12
10	+1.2	9	23	+0.7	13
4	+1.1	10	19	+0.4	15
35	+0.6	14	17	-0.2	16
39	-1.0	18	26	-0.4	17
12	-2.0	19			
27	-3.0	20			

Total Ranks: $x_1 = 116$ $x_2 = 94$

Number of cases: $n_1 = 11$ $n_2 = 9$

$n =$ total number of cases

$$\text{std. dev.} = \sqrt{\frac{n_1 \times n_2 (n+1)}{12}} = \sqrt{\frac{11 \times 9 (20+1)}{12}} = \sqrt{\frac{2079}{12}} = \sqrt{173.25} = 13.16$$

Mean for experimental group:

Mean for control group:

$$w_1 = \frac{n_1 (n+1)}{2} = \frac{11 \times 21}{2} = 115.5$$

$$w_2 = \frac{n_2 (n+1)}{2} = \frac{9 \times 21}{2} = 94.5$$

Z - Test:

$$Z_1 = \frac{x_1 - w_1}{\text{std.dev.}} = \frac{116 - 115.5}{13.16} = .038$$

$$Z_2 = \frac{x_2 - w_2}{\text{std.dev.}} = \frac{95 - 94.5}{13.16} = .038$$

This indicates that differences between the two groups are insignificant.

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