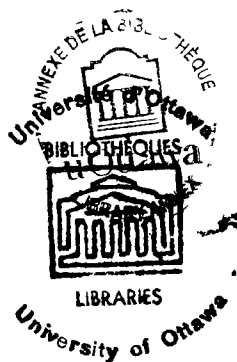


AN APPLICATION OF HERZBERG'S MOTIVATOR-HYGIENE THEORY  
TO TEACHER JOB SATISFACTION

by Elizabeth Strachan

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of Graduate Studies of the Uni-  
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## CURRICULUM STUDIORUM

Elizabeth Strachan was born March 9, 1939, in Pembroke, Ontario. She received the Bachelor of Arts degree in English Literature from Carleton University, Ottawa, in 1970.

## TABLE OF CONTENTS

| Chapter                                                                                                           | page |
|-------------------------------------------------------------------------------------------------------------------|------|
| INTRODUCTION . . . . .                                                                                            | vii  |
| I.- REVIEW OF THE LITERATURE . . . . .                                                                            | 1    |
| 1. The Motivator-Hygiene Theory                                                                                   | 1    |
| 2. Test of the Motivator-Hygiene Theory                                                                           | 8    |
| 3. Summary and Basic Hypotheses                                                                                   | 32   |
| II.- EXPERIMENTAL DESIGN . . . . .                                                                                | 35   |
| 1. The Sample                                                                                                     | 35   |
| 2. The Critical Episode Technique                                                                                 | 36   |
| 3. Experimental Procedure                                                                                         | 40   |
| 4. Method of Data Analysis                                                                                        | 43   |
| III.- PRESENTATION OF THE RESULTS . . . . .                                                                       | 45   |
| 1. Results of the Study                                                                                           | 45   |
| 2. Results of the Present Study Compared with Herzberg's Research Findings                                        | 56   |
| 3. Comparison of Results of the Present Study with those of Sergiovanni and Wickstrom                             | 66   |
| 4. Summary and Conclusions                                                                                        | 70   |
| IV.- IMPLICATION OF RESULTS . . . . .                                                                             | 72   |
| 1. Implications for Future Research                                                                               | 72   |
| 2. Implications of Results for Educational Administration                                                         | 74   |
| SUMMARY AND CONCLUSIONS . . . . .                                                                                 | 79   |
| BIBLIOGRAPHY . . . . .                                                                                            | 85   |
| Appendix                                                                                                          |      |
| 1. QUESTIONNAIRE . . . . .                                                                                        | 89   |
| 2. CORRESPONDENCE . . . . .                                                                                       | 93   |
| 3. ANALYSIS OF FACTORS . . . . .                                                                                  | 98   |
| 4. CODING WORKSHEETS . . . . .                                                                                    | 105  |
| 5. ABSTRACT OF <u>An Application of Herzberg's Motivator-Hygiene Theory to Teacher Job Satisfaction</u> . . . . . | 118  |

## LIST OF TABLES

| Table                                                                                                                                                           | page |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| I. (a) First Level Factor Frequencies in Satisfaction and Dissatisfaction Episodes from Herzberg's Study . . . . .                                              | 12   |
| (b) Second Level Factor Frequencies in Satisfaction and Dissatisfaction Episodes from Herzberg's Study . . . . .                                                | 14   |
| II. (a) First Level Factor Percentages in Satisfaction and Dissatisfaction Episodes from Sergiovanni's Study . . . . .                                          | 21   |
| (b) Second Level Factor Percentages in Satisfaction and Dissatisfaction Episodes from Sergiovanni's Study . . . . .                                             | 26   |
| III.- Factor Percentages in Satisfaction and Dissatisfaction Episodes from Wickstrom's Study. .                                                                 | 28   |
| IV.- First Level Factor Frequencies in Satisfaction and Dissatisfaction Episodes, with z values for Differences in Proportions . . . . .                        | 46   |
| V.- Second Level Factor Frequencies in Satisfaction and Dissatisfaction Episodes, with z values for Differences in Proportions . . . . .                        | 51   |
| VI.- Percentages of Occurrences of First Level Factors in Satisfaction and Dissatisfaction Episodes in Herzberg's Research and the Present Research . . . . .   | 58   |
| VII.- Percentages of Occurrences of Second Level Factors in Satisfaction and Dissatisfaction Episodes in Herzberg's Research and the Present Research . . . . . | 64   |
| VIII.- Comparison of Results of First Level Factor Percentages of Strachan, Sergiovanni and Wickstrom . . . . .                                                 | 68   |

## LIST OF FIGURES

| Figure                                                                                                                                          | page |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1.- Comparison of the Motivator-Hygiene Hypothesis<br>and the Conventional Hypothesis of Job<br>Satisfaction . . . . .                          | 6    |
| 2.- Results of Test of Independence of Motivator-<br>Hygiene and Satisfaction-Dissatisfaction<br>Factors . . . . .                              | 50   |
| 3.- Results of Test of Independence of Motivator-<br>Hygiene and Satisfaction-Dissatisfaction<br>Second Level Factors . . . . .                 | 54   |
| 4.- Results of Test of Independence of Motivator-<br>Hygiene and Satisfaction-Dissatisfaction<br>First Level Factors from Herzberg's Study . .  | 62   |
| 5.- Results of Test of Independence of Motivator-<br>Hygiene and Satisfaction-Dissatisfaction<br>Second Level Factors from Herzberg's Study . . | 67   |

## INTRODUCTION

The devoted, painstaking, ultra conservative teacher of yesterday is unprepared to face public demands that schools somehow cure all society's ills. The authoritarian delivery-of-knowledge function of teachers is changing to diagnosing students' needs, planning curriculum, motivating and encouraging learning, and checking acquired knowledge. Because the production element is less visible, one of the major difficulties that teachers face is the absence of feedback. Though achievements are immeasurable the process is subject to criticism by the whole community. Teachers' opportunities for advancement rewards are few. Those willing to leave teaching for administration face keen competition. Those who wish to retain a teaching function have few opportunities for upward mobility.

The school environment has many elements unlike those of other work settings. The whole set of interpersonal relations with administrators, other teachers, parents, and students is unique. The allocation of space results in most teachers doing the major part of their teaching unobserved and unsupported by their colleagues. The large percentage of women teachers could affect the pattern of the desires and needs of teachers. The history of low income



and limited prestige could influence the teachers' expectations. Teachers enter the profession having spent several thousand hours in schools and therefore cannot plead ignorance of the job setting. Yet teachers are increasingly dissatisfied as reflected in the growing number abandoning the profession, annually.

This research, based on Herzberg's studies, will attempt to reveal what it is about their occupation that makes teachers satisfied and dissatisfied.

Frederick Herzberg developed a theory of job satisfaction from an investigation of accountants and engineers.<sup>1</sup> His subjects related actual experiences on the job from which they derived strong feelings of satisfaction or dissatisfaction. An analysis of the contents of these reported experiences identified different factors which contributed to satisfaction and to dissatisfaction. Herzberg observed that these factors formed two natural groupings: generally, the factors that affected satisfaction centred around the actual performance of the job and the factors that affected dissatisfaction centred around the work environment. Herzberg called the factors related to satisfaction, motivators, and the factors related to dissatisfaction,

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<sup>1</sup> Frederick Herzberg, Bernard Mausner, and Barbara Snyderman, The Motivation to Work, New York, Wiley, 1959.

hygiene factors. The unidirectional effect of the motivators on satisfaction, and of the hygiene factors on dissatisfaction is referred to as the motivator-hygiene theory.

This study will analyze teachers' experiences to determine whether they also contain factors that fall into these two natural groupings. Thus, it is the purpose of this study to ascertain if the factors contributing to teacher job satisfaction are mainly concerned with the performance of the work and if the factors contributing to teacher dissatisfaction are primarily concerned with the work environment.

If Herzberg's motivator-hygiene theory can be proven relevant to teachers, personnel management must reconsider its reward system for teachers. The concern with comfortable working conditions, fringe benefits and adequate salaries is all related to the job environment and according to Herzberg's motivator-hygiene theory only serve to limit the teachers' feelings of dissatisfaction. For a positive influence on the degree of satisfaction experienced by teachers it is necessary to modify elements in the actual performance of the work.

Since this study is an outgrowth of Herzberg's research it commences with a description of the motivator-hygiene theory. The controversy in the research testing the theory is reported next, followed by a presentation

of the hypotheses to be tested. The experimental design for testing Herzberg's theory is then explained. The results of the analysis of the data obtained from the teachers are presented and discussed along with an analogy to findings in other applications of the theory. The study concludes with implications of results for future research and for educational administration.

## CHAPTER I

### REVIEW OF THE LITERATURE

This study of the factors in the teaching task and school organization which cause teachers' job satisfaction and dissatisfaction is based on the motivator-hygiene theory of Frederick Herzberg. A presentation of the theory will be followed by a discussion of research relevant to the present study. The chapter will then conclude with a statement of the research problem and hypotheses evolving from the literature.

#### 1. The Motivator-Hygiene Theory.

##### a) Two dimensional theory

In a review of 155 studies on job attitudes previous to 1954,<sup>1</sup> Herzberg observed three types of investigations. In one type subjects were asked to rate or rank an a priori list of factors contributing to job attitudes. In another subjects gave general opinions regarding their likes and dislikes with respect to the job, and the third type consisted of responses to multiple choice questionnaires

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<sup>1</sup> Frederick Herzberg, B. Mausner, R. Peterson, and D. Capwell, Job Attitudes: Review of Research and Opinion, Pittsburgh, Psychological Services of Pittsburgh, 1954.

concerning job satisfaction. In the studies he reviewed, the influences of the various factors on job satisfaction were not consistent. Herzberg attributed the inconsistency to leading questions, the subjects' incapacity for self-insight, and the subjects' desire to concur with generally accepted behavioural models. However, Herzberg noted that the lists of factors in the studies were basically similar and that one set of factors appeared primarily as causing satisfaction and another set as causing dissatisfaction. These observations led Herzberg to hypothesize that the factors contributing to satisfaction were different than those contributing to dissatisfaction. He noted that the factors which primarily resulted in job satisfaction were related to the actual performance of the job, while the factors resulting in job dissatisfaction were related to the job environment. He then hypothesized that, since one set of factors was involved when considering satisfaction and a different set when considering dissatisfaction, therefore, job satisfaction and dissatisfaction are two separate and distinct states of mind, not the opposite of each other. It is essential when considering Herzberg's concept of the two different sets of factors to consider his theory of the dual need system of man.

## b) Dual Need System of Man

Herzberg's dual need system of man is well illustrated in his book, Work and the Nature of Man,<sup>2</sup> and in a series of articles in the periodical, Industry Week.<sup>3</sup>

Herzberg emphasizes the importance of establishing management theory with a psychological rather than industrial view of man. He condemns industry for defining man the way it wants him to be. Industry has given preference to its own set of needs which are to conform to uniform practice and bureaucratic traditions and to keep the power in the hands of the supervisors.

Herzberg portrays man as having two coexisting natures, each accompanied by its own set of needs. In one need system, man functions as an avoidance organism that finds in its environment major sources of discomfort associated with physiological, safety and social needs. In the employment setting it is the nature of man, as an avoidance organism, to seek to escape from harmful policies and administration, poor supervision, painful personal relationships, inadequate working conditions, low esteem, and poverty.

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2 Frederick Herzberg, Work and the Nature of Man, New York, Crowell, 1966, 203 p.

3 Frederick Herzberg, "Motivation", series of ten articles in Industry Week, issues of May 18, 1970 to February 15, 1971.

The other need system of man has to do with man's innate potential for accomplishment. Man has a compelling need to achieve. This need can be satisfied by elements in the performance of the job. Thus man has two simultaneously operating needs: avoiding pain and seeking happiness through fulfillment. Herzberg's theory of the dual system of man's needs explains his definition of the factors that behave as "satisfiers" and the resulting state of job satisfaction. Also it explains the factors that behave as "dissatisfiers" and the resulting state of job dissatisfaction.

#### c) Motivators and Hygiene Factors

Herzberg hypothesized from his review of studies that the factors that caused dissatisfaction are associated with the work environment. From his theory of needs he concluded that these are the factors, the negative element from which man, as an avoidance organism, seeks escape. Herzberg called these factors hygiene factors because of the association of the word, hygiene, with prevention of disease and preservation of health. Fulfilling work environment needs prevents job dissatisfaction and preserves a healthy work environment. Deterioration of these factors impedes job satisfaction or causes job dissatisfaction, but improvement in these factors does not directly affect job satisfaction.

Herzberg hypothesized from his review of literature that the set of factors that resulted in job satisfaction was associated with the actual performance of the job. From his theory of needs, he concluded that these are the factors that answer man's need for self-actualization. Herzberg called these factors motivators because they act as incentives for increased achievement which is in keeping with the usual connotation of the word, motivation. These factors have a positive effect on job satisfaction and job performance.

The motivator-hygiene theory involved a rejection of the conventional beliefs regarding job satisfaction. A comparison of the motivator-hygiene theory and conventional theory is illustrated in Figure 1. Traditionally employees were thought to shift back and forth along a continuum having satisfaction at one extreme and dissatisfaction at the other. The factors, believed to contribute to the shift, were thought to exist along similar continua related to satisfaction at one end and dissatisfaction at the other. For example, good administration would cause satisfaction and poor administration would cause dissatisfaction. According to traditional beliefs, a neutral position would be obtained by a balance of satisfaction resulting from some factors and dissatisfaction resulting from other factors or from different aspects of the same factor. For example,



## Motivator-Hygiene Hypothesis

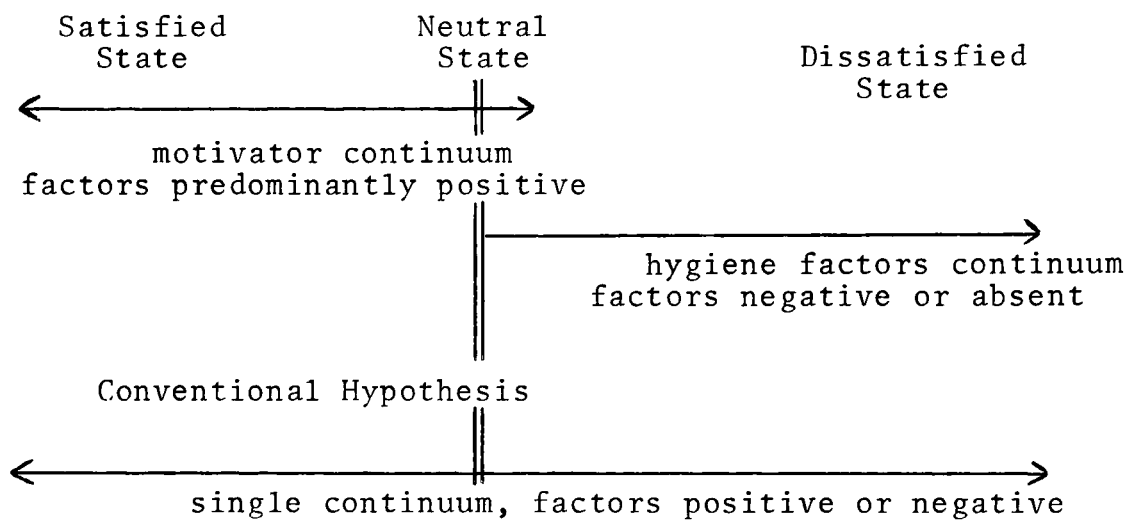


Figure 1.- Comparison of the Motivator-Hygiene Hypothesis and the Conventional Hypothesis of Job Satisfaction.

with regard to working conditions, the building facilities might contribute to job satisfaction but inadequate supplies might cause an equal amount of job dissatisfaction. The relative weighting of all contributing factors was presumed to determine the subject's degree of overall satisfaction.

The importance of the motivator-hygiene theory is considerable to personnel management. Administrators tend to view employees in a conventional manner and wonder why, in spite of all the modern working conditions and fringe benefits, achievement does not increase. They arrive at the conclusion that employees "just don't want to work nowadays". The motivator-hygiene theory argues that these people should look for satisfaction in their work, but in fact they have been conditioned to look for hygiene rewards in their work and to look for self-actualizing experiences elsewhere. If a worker feels no challenge in his job, a thousand dollar salary increase and a dinner to celebrate is not going to affect his achievement. All these could do is negate dissatisfaction and he may not be dissatisfied in the first place. Management must look to work content rather than work environment if achievement is the behaviour it wants to change. When achievement does occur, the reward must be increased opportunity for new achievements. In other words, one rewards motivated behaviour with more motivation.

This does not mean that working condition factors can be neglected. These are essential for a healthy working atmosphere. Employees may react, consciously or unconsciously, with negative behaviour, to working conditions they regard as poor or unfair. The point of the motivator-hygiene theory is that improving elements in the job environment is a treatment for dissatisfaction or a preservation of a "not dissatisfied" state, and, important though that is, that is all that it is. Stressful working conditions limit the possibility for achievement. Establishing excellent working conditions is insufficient to increase the quality of achievement if the job content is not rewarding.

## 2. Test of the Motivator-Hygiene Theory.

Herzberg reported his research procedures and findings in The Motivation to Work.<sup>4</sup> His methodology has become the focal point of the argument between those who adhere to traditional theory and those who accept the motivator-hygiene theory. Herzberg's technique involves the collection of many personal observations of positive and negative experiences related to some subject of inquiry. The analysis of the observations allows the investigator to identify and

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4 Frederick Herzberg, Bernard Mausner, and Barbara Snyderman, The Motivation to Work, New York, Wiley, 1959.

measure the effect of the influential factors. This is referred to as the critical episode technique.

To test his hypotheses, Herzberg selected 203 accountants and engineers in the Pittsburgh area for his sample. His pilot study included clerical and production workers but his main study omitted them because "the professional and managerial groups were more verbal, showed a quicker grasp of the technique, and gave more and better delineated sequences of events than the clerical and production groups".<sup>5</sup>

In a semi-structured interview, the subjects were asked to think about times when they felt especially good and especially bad about their jobs. They were asked to describe these events which are referred to in his research as sequences of events. In this study they are referred to as critical episodes. Next the subjects were asked what they felt about the events so that Herzberg would know in the words of the subjects what the events meant to them. Participants averaged between two and three events. Feeling that the most valuable analysis would be one which emerged from the material itself, Herzberg chose an a posteriori approach to content analysis. All interviews were read and broken down into thought units. A thought unit is a short

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5 Herzberg, Work and the Nature of Man, p. 32.

statement about a single event or condition that led to a feeling, or a single characterization of a feeling. Five thousand thought units were sorted into groups that seemed to go together. These groups resulted in Herzberg's classification system, containing sixteen first level and twelve second level factors. First level factors are objective elements contained in the episodes in which the subjects find a source for happy or unhappy feelings about their job. The list of first level factors came from the thought units contained in the episodes. They include six motivators and ten hygiene factors. The motivators are:

- |                                |                          |
|--------------------------------|--------------------------|
| 1. achievement                 | 4. responsibility        |
| 2. recognition for achievement | 5. advancement           |
| 3. work itself                 | 6. possibility of growth |

The hygiene factors are:

1. salary
2. interpersonal relations with subordinates
3. interpersonal relations with superiors
4. interpersonal relations with peers
5. supervision
6. company policy and administration
7. working conditions
8. personal life
9. status
10. job security

The second level factors categorize the reasons given by the subjects in their own words for their feelings brought about by the episodes. Being subjective, Herzberg considered them less important in supporting his theory than the first level factors. They tell what needs the subjects

believe are met or fail to be met during the critical episodes. The list of second level factors came from the thought units contained in what the subjects said they felt about the episodes. The second level factors are:

- |                    |                                       |
|--------------------|---------------------------------------|
| 1. recognition     | 7. salary                             |
| 2. achievement     | 8. group feeling                      |
| 3. work itself     | 9. feelings of fairness or unfairness |
| 4. responsibility  | 10. feelings of pride or shame        |
| 5. advancement     | 11. status                            |
| 6. possible growth | 12. security                          |

By implications from Herzberg's writings the second level factors are divided similarly to the first level factors. The first six are motivators (work performance related) and the last six are hygiene factors (environment related).

Using the resulting classifications two staff members read each of the 476 episodes and noted the influencing first and second level factors. These two staff members worked independently and their coding results were checked by a third. All disagreements were discussed by the three and a final consensus was reached. After analyzing sixty-five episodes the coders reached ninety-five per cent agreement which indicated a consistency in their use of the classification system.

Herzberg's results regarding the first level factors are listed in Table I (a). Of the motivators, achievement occurred in one-quarter of the satisfaction episodes and recognition in one-fifth. These were closely followed by responsibility, work itself and advancement. Even though the

Table I (a).- First Level Factor Frequencies in Satisfaction and Dissatisfaction Episodes from Herzberg's Study.

| Factor                                       | Satisfaction | Dissatisfaction |
|----------------------------------------------|--------------|-----------------|
| 1. Achievement                               | 41*          | 7               |
| 2. Pecognition                               | 33*          | 18              |
| 3. Work itself                               | 26*          | 14              |
| 4. Responsibility                            | 23*          | 6               |
| 5. Advancement                               | 20*          | 11              |
| 6. Possibility of growth                     | 6            | 8               |
| 7. Salary                                    | 15           | 17              |
| 8. Interpersonal relations with subordinates | 6            | 3               |
| 9. Interpersonal relations with superiors    | 4            | 15*             |
| 10. Interpersonal relations with peers       | 4            | 8*              |
| 11. Technical supervision                    | 3            | 20*             |
| 12. Status                                   | 4            | 4               |
| 13. Policy and administration                | 3            | 31*             |
| 14. Working conditions                       | 3            | 11*             |
| 15. Personal life                            | 1            | 6*              |
| 16. Security                                 | <u>1</u>     | <u>1</u>        |
| Total Episodes                               | 169          | 177             |

\* Differences of factor effects significant at .01 level of confidence according to Herzberg.

sixteen factors were more evenly distributed in the dissatisfaction episodes, there was a preponderance of hygiene factors there. These were interpersonal relations with supervisors and peers, quality of supervision, company policy and administration, working conditions, and personal life. Salary contributed to both satisfaction and dissatisfaction. The reason for this is explained later.

Table I (b) presents Herzberg's findings regarding the second level factors which were expected to support the major first level findings. Here, as in the first level factors, recognition and achievement appear most frequently related to satisfaction episodes. The possibility of growth factor occurred more frequently in the second level results indicating that the subjects felt strongly about their chance to progress in the profession and also to improve their skills. Feelings of responsibility and work itself were noted significantly more often in the satisfaction episodes than in the dissatisfaction. In the dissatisfaction episodes feelings of unfairness appeared as the most frequently stated second level factor, closely followed by feelings that growth had been blocked. Recognition and achievement were indicated in about one-fifth of the dissatisfaction episodes which is about one-half as often as in the satisfaction episodes.



Table I (b).- Second Level Factor Frequencies in  
Satisfaction and Dissatisfaction Episodes  
from Herzberg's Study.

| Factor                       | Satisfaction | Dissatisfaction |
|------------------------------|--------------|-----------------|
| 1. Recognition               | 59 *         | 26              |
| 2. Achievement               | 57 *         | 19              |
| 3. Possible growth           | 38           | 33              |
| 4. Responsibility            | 30 *         | 8               |
| 5. Work itself               | 29 *         | 13              |
| 6. Advancement               | 3            | 2               |
| 7. Salary                    | 19           | 13              |
| 8. Status                    | 18           | 10              |
| 9. Group feeling             | 10 *         | 3               |
| 10. Pride, guilt, inadequacy | 9            | 14              |
| 11. Security                 | 7            | 9               |
| 12. Fairness-unfairness      | 3            | 38              |
| Total Episodes               | 282          | 188             |

\* Difference in factor effects significant at .01 level of confidence according to Herzberg.

Thus, Herzberg concluded from his investigation of the first and second level factors in critical episodes related by accountants and engineers that there is one set of factors that contribute to employee job satisfaction and a different set of factors that contribute to dissatisfaction, the former being related to the performance of the job and the latter to the job environment.

The critical episode technique has been alluded to as one area of contention between the proponents of the conventional one-continuum theory of job satisfaction and those who accept the dual element motivator-hygiene theory. Therefore, considerable attention will be devoted to both the theoretical and empirical evidence accumulated regarding this technique. Herzberg's deliberations in selecting the critical episode technique will be reviewed and this will be followed by empirical evidence concerning its reliability and validity.

Herzberg developed his critical incident technique because of the weaknesses of previous attitudinal research, where the definition of attitude and its distinction from similar concepts, such as opinion, interest, and feeling, were not clear. Herzberg attributed the inconsistent results in previous studies to their reliance on direct subjective questioning regarding the respondents' attitudes. Very slight modification in the phrasing of questions

resulted in major changes in the data obtained. One may conclude that results depended as much upon the phrasing of the questions as upon the existence of the attitudes.

Herzberg avoided this problem by basing his data on objective events, a technique he found in the work of John Flanagan.<sup>6</sup> Flanagan had developed the technique to isolate the characteristics of potentially successful officers in the United States armed forces in World War II. The influential factors were obtained from the respondents' descriptions of events in which they observed behaviour that was particularly successful or unsuccessful. There was one major difference between Herzberg's use of the technique and Flanagan's. Flanagan's subjects reported episodes that were relatively independent of their personal feelings. Herzberg's subjects reported critical personal experiences, on the job, that they felt deeply satisfying or dissatisfying. This means they had to judge their own psychological state at the time of the incident. Herzberg found evidence in the research of R. B. Hersey<sup>7</sup> that people can identify their swings of mood and report them, and that these mood changes can be linked to performance effectiveness.

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<sup>6</sup> John Flanagan, "The Critican Incident Technique", in Psychological Bulletin, Vol. 51, No. 4, issue of July 1954, p. 327-358.

<sup>7</sup> R. B. Hersey, "Emotional Factors in Accidents", in Personnel Journal, Vol. 15, 1936, p. 59-63.

By selecting exceedingly good or bad experiences, it is understood that changes in feeling were involved. Thus, Herzberg assumed that attitudes were being tapped. His technique also assures the investigator that the subjects were personally involved, unlike direct questioning in which subjects may indicate positions about which, in fact, they might not be interested, especially if the tests are long ones.

The study of the individual critical episodes allowed Herzberg to analyze the complexities of the factors, the interrelations of factors and the duration of feelings resulting from the factors. These examinations were in keeping with the exploratory nature of the investigation of the factors bringing about satisfaction and dissatisfaction.

Salary is an example. It did not seem to fulfill the hypothesis regarding its main contribution to dissatisfaction because it was indicated in both satisfaction and dissatisfaction episodes. Examination revealed that in satisfaction episodes it was usually accompanied by recognition, and in dissatisfaction episodes feelings of unfair policy and administration occurred along with it. As well, when salary was cited in the satisfaction episodes, the resulting feelings were of shorter duration than when it was noted in the dissatisfaction episodes. Hence, salary fulfills

Herzberg's hypothesis if one considers the strong relationship with motivators in satisfaction episodes and with hygiene factors in dissatisfaction episodes. Moreover, salary was remembered much longer as a dissatisfier than as a satisfier.

Also, the critical episode technique was "open" to unexpected findings. For instance, Herzberg's subjects complained more often about too little work than too much work.

Nonetheless, despite these advantages, numerous critics accuse the Herzberg theory of being technique-bound. Some claim results may reflect a defensive reaction of the subjects. Opponents of the theory suggest that an individual's ego tends to perceive satisfaction as being self-initiated and dissatisfaction as outside his control. Herzberg answers, that if a bias exists, it is more likely to be the reverse:

Employees who wish to make themselves "look good" are much more prone to say that they are unhappy because they do not have responsibility, are not getting ahead, have uninteresting work, see no possibility for growth and do not receive recognition than to say their supervisor is unfriendly, the working conditions are bad, their fellow workers are unsociable, etc.<sup>8</sup>

A review of the results of applications of the motivator-hygiene theory supports Herzberg's statement, in that the

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8 Herzberg, Work and the Nature of Man, p. 131.

motivators are found to contribute to dissatisfaction more often than the hygiene factors contribute to satisfaction; that is, the motivator continuum is less unidirectional, as was illustrated in figure 1. The choice of the technique was to limit the subjective element of the responses. In order to "fake", a subject must conjure up stories or deliberately choose an experience which was not among his most happy or unhappy. This would be more difficult than putting an "appropriate" check mark on a predetermined list of factors.

Numerous replications of the motivator-hygiene theory using the critical episode technique, by Herzberg and other researchers, occurred in the 1960's as reported in dissertations, journal articles and papers. Generally, these replications were thought necessary since in psychological research it is difficult to control extraneous variables. Specifically the ability to generalize from Herzberg's initial research to other populations was questioned even by Herzberg.<sup>9</sup> Herzberg's research had been conducted in nine industrial settings of various sizes and activities within a thirty mile radius of Pittsburgh including both suburban areas and small towns. The question of whether the unique characteristics of this site influenced results needed investigation as well.

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9 Herzberg et al., The Motivation to Work, p. 31.

The replications of the study were summarized by Herzberg in Work and the Nature of Man<sup>10</sup> along with detailed support of the theory. These studies were also examined by Orlando Behling, George Labovitz, and Richard Kosmo.<sup>11</sup> Their findings will be reported rather than Herzberg's, since they are less likely to be accused of being subject to the bias of the investigator. With regard to these replications, Behling and his associates came to the following conclusion:

Using the critical-incident technique or something closely akin to it, these researchers were able to demonstrate the existence of the duality in close to twenty separate studies involving such diverse groups as housekeepers, and unskilled food service workers, county agricultural extension workers, women in high-level professional positions, scientists, nurses and engineers--including a group of Hungarian engineers.<sup>12</sup>

Behling and his associates then considered fifteen studies which conflict with or do not fully support Herzberg's hypotheses regarding the duality concept, and arrived at this conclusion:

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10 Herzberg, Work and the Nature of Man, p. 92-168.

11 Orlando Behling, George Labovitz, and Richard Kosmo; "The Herzberg Controversy: A Critical Reappraisal", in Academy of Management Journal, Vol. 2, No. 1, issue of March 1968, p. 99-108.

12 Ibid., p. 102.

These studies treated a variety of populations and involved several different methods of gathering data. In fact, the only truly consistent pattern running through them was a negative one--none of the studies in support of a uniscalar explanation used Herzberg's critical-incident technique. With few exceptions, although the measuring techniques varied, they used some form of structured, scalar device.<sup>13</sup>

Behling concludes that research using Herzberg's critical-incident technique supports the motivator-hygiene theory and research using other methods conflicts with the duality theory and supports a uniscalar theory of job satisfaction. These conclusions are upheld if one examines the studies of teachers by Sergiovanni and Adair, who followed Herzberg's method, and by Wickstrom, who modified it. These studies will be reported next because they are a good example of Behling's conclusions, and also because they are of particular interest to this study having teacher job satisfaction as their subject.

In Sergiovanni's work<sup>14</sup> Herzberg's argument is greatly strengthened in the educational field. His population consisted of the 3,682 elementary and secondary teachers working in Monroe County in northern New York State in 1965

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<sup>13</sup> Ibid., p. 105.

<sup>14</sup> Thomas J. Sergiovanni, Satisfaction and Dissatisfaction of Teachers, Research performed pursuant to a contract with the U.S. Department of Health, Education, and Welfare, Office of Education, Illinois University, Urbana, Rochester University, New York, 1966.



and 1966. Sergiovanni chose a random sample of 127 teachers, fifty-six per cent of whom agreed to participate. Sergiovanni followed Herzberg's method closely as to the interviews and treatment of the data. There was, however, one major difference in the analysis of the episodes. Generally, when subjects relate an episode, they sometimes include more than one factor. An example of a satisfaction episode with the two factors, advancement and the work itself, could be, "I received a promotion to a position where my work would be much more interesting". Herzberg accepted more than one factor per episode if more than one was given. Sergiovanni accepted only one factor: "[...] the factor which contributed most to the expressed feeling was to be isolated for subsequent analysis".<sup>15</sup> Sergiovanni's data thus could differ from Herzberg's in two ways. First, each factor's opportunity of being selected could be reduced in varying amounts depending upon how often the coders deemed it of secondary importance. This is an important difference when one considers that fifty-eight per cent of the satisfaction episodes were coded either achievement or recognition, thus limiting the other fourteen factors to fewer than half the episodes. Since both achievement and recognition are motivators it seems likely that Sergiovanni would find more

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15 Ibid., p. 47.

motivators than hygiene factors closely associate with satisfaction. Secondly, the decision with respect to the primacy of the factors may have been the result of the coders' personal bias rather than being inherent in the episodes.

Sergiovanni has a deliberate addition to Herzberg's design. He requested his subjects to relate four episodes. As in Herzberg's research, they related their "most" unusual satisfaction and dissatisfaction episodes, but they also related their most "recent" satisfaction and dissatisfaction episodes. The analysis of factors in the "recent" and in the non-restricted episodes revealed few differences. Thus, Sergiovanni helps to confirm the representativeness of Herzberg's factors by showing that results from "recent" episodes are comparable to results from "overall" episodes. This refutes the criticism that Herzberg's factors are too extreme in nature.

Table II (a) presents the first level factor effects from Sergiovanni's study. Eighty-two per cent of the factor occurrences in the satisfaction episodes were motivators and eighteen per cent were hygiene factors. In the dissatisfaction episodes twenty-three per cent of the factor occurrences were motivators and seventy-seven per cent were hygiene factors.

Table II (a).- First Level Factor Percentages in  
Satisfaction and Dissatisfaction Episodes  
from Sergiovanni's Study.

| Factor                                          | Satisfaction | Dissatisfaction |
|-------------------------------------------------|--------------|-----------------|
| 1. Achievement                                  | 30 *         | 9               |
| 2. Recognition                                  | 28 *         | 2               |
| 3. Work itself                                  | 11           | 8               |
| 4. Responsibility                               | 7 *          | 1               |
| 5. Advancement                                  | 0            | 1               |
| 6. Possibility of growth                        | 6            | 2               |
| 7. Salary                                       | 2            | 3               |
| 8. Interpersonal relations<br>with subordinates | 7            | 20 *            |
| 9. Interpersonal relations<br>with superiors    | 3            | 4               |
| 10. Interpersonal relations<br>with peers       | 1            | 15 *            |
| 11. Technical supervision                       | 1            | 10 *            |
| 12. Policy and administration                   | 2            | 13 *            |
| 13. Working conditions                          | 2            | 6               |
| 14. Personal life                               | 0            | 5 *             |
| 15. Status                                      | 0            | 0               |
| 16. Security                                    | 0            | 1               |

\* Difference between Satisfaction and Dissatisfaction is significant according to Sergiovanni.

Table II (b) shows that the second level factors had a similar concentration of motivators in satisfaction episodes and hygiene factors in dissatisfaction episodes. In the satisfaction episodes the motivators were cited eighty-four per cent of the time and the hygiene factors, sixteen per cent. In the dissatisfaction episodes the motivators occurred thirty-six per cent of the time and the hygiene factors, sixty-four per cent of the time.

Sergiovanni's findings support Herzberg's hypotheses, although some doubt may be expressed because his judges were forced to choose the most significant factor when more than one appeared in an episode.

In a brief article entitled, "Keeping Teachers Happy", Warren Adair<sup>16</sup> published the results of using the critical episode technique for an investigation into the satisfaction of secondary school teachers in a six county area of upstate New York in 1967. While his findings supported Herzberg's motivator-hygiene theory, the article is extremely brief and no conclusive evidence is reported.

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<sup>16</sup> Warren Adair, "Keeping Teachers Happy", in American School Board Journal, Vol. 155, No. 7, issue of January 1968, p. 28-29.

Table II (b).- Second Level Factor Percentages in  
Satisfaction and Dissatisfaction Episodes  
from Sergiovanni's Study.

| Factor                       | Satisfaction | Dissatisfaction |
|------------------------------|--------------|-----------------|
| 1. Recognition               | 21*          | 7               |
| 2. Achievement               | 50*          | 13              |
| 3. Work itself               | 6            | 9               |
| 4. Advancement               | 0            | 0               |
| 5. Responsibility            | 4            | 4               |
| 6. Group feelings            | 3            | 3               |
| 7. Possible growth           | 6            | 3               |
| 8. Status                    | 0            | 5*              |
| 9. Security                  | 5            | 11              |
| 10. Fairness-unfairness      | 0            | 32*             |
| 11. Pride, guilt, inadequacy | 5            | 11              |
| 12. Salary                   | 0            | 2               |

\* Difference between Satisfaction and Dissatisfaction is significant according to Sergiovanni.

In Saskatoon, Saskatchewan in 1970, Rod Wickstrom completed a study to investigate whether Herzberg's hypotheses would be supported with different methodology.<sup>17</sup> Wickstrom's subjects described events which led to feelings of satisfaction and dissatisfaction by responding to questions derived from those used by Herzberg and Sergiovanni in their interviews. Therefore, his method of obtaining critical episodes was similar to theirs. However, he did not subject these episodes to content analysis in order to obtain the factor frequencies. His respondents, themselves, indicated the importance of Herzberg's sixteen factors to their satisfaction and dissatisfaction episodes. Wickstrom composed sixteen statements from Herzberg's sixteen factors. For instance, from the factor recognition, Wickstrom formed the statement: "I received recognition for doing particularly good work." Respondents rated the importance of each statement on a four-point scale for each episode.

Wickstrom's findings are shown in Table III. His results did not agree with those of Herzberg. He found that all factors were important to both satisfaction and

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<sup>17</sup> Rod Wickstrom, An Investigation into Job Satisfaction Among Teachers, unpublished doctoral dissertation presented to the Graduate School of the University of Oregon, September, 1970.

Table III.- Factor Percentages in Satisfaction  
and Dissatisfaction Episodes from  
Wickstrom's Study.

| Factor                                          | Satisfaction | Dissatisfaction |
|-------------------------------------------------|--------------|-----------------|
| 1. Achievement                                  | 96.8         | 71.9            |
| 2. Work itself                                  | 96.5         | 39.2            |
| 3. Interpersonal relations<br>with subordinates | 95.7         | 38.4            |
| 4. Responsibility                               | 82.9         | 32.7            |
| 5. Job security                                 | 79.9         | 42.0            |
| 6. Interpersonal relations<br>with peers        | 79.9         | 23.0            |
| 7. Interpersonal relations<br>with superiors    | 77.8         | 38.6            |
| 8. Working conditions                           | 76.2         | 46.0            |
| 9. Policy and administration                    | 70.7         | 69.0            |
| 10. Supervision                                 | 68.3         | 36.4            |
| 11. Recognition                                 | 68.3         | 38.6            |
| 12. Possibility of growth                       | 65.9         | 30.7            |
| 13. Status                                      | 49.3         | 33.8            |
| 14. Personal life                               | 37.4         | 44.3            |
| 15. Salary                                      | 15.5         | 11.4            |
| 16. Advancement                                 | 13.0         | 9.7             |

dissatisfaction. For instance, achievement, the most frequent satisfier, noted in 96.8 per cent of the satisfaction episodes was also the most frequent dissatisfier, noted in 71.9 per cent of the dissatisfaction episodes.

The critical area of difference between Wickstrom's instrument and Sergiovanni's and Herzberg's technique lies in Wickstrom's sixteen statements which subjects rate from no importance to major importance regarding each episode. As a result Wickstrom's frequency percentages are much higher than those of Herzberg and Sergiovanni. Wickstrom supports the relevancy of his approach with the following reasoning:

If an individual is requested to freely identify factors [...] it is likely that he will name only the most prominent [...] The fact that some factors scarcely were mentioned in the Herzberg studies may not represent a true case of unidirectionality but simply that they were not remembered.<sup>18</sup>

Herzberg disagreed: "Employees are often given predetermined choices of job factors to rate or check, and as a result attitudes may be given where none exist."<sup>19</sup> Thus, Herzberg believes that much irrelevant data result. The doubt created by Wickstrom's instrument may be illustrated

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<sup>18</sup> Rod A. Wickstrom, "Sources of Teacher Job Satisfaction", in The Canadian Administrator, Vol. 13, No. 1, issue of October 1973, p. 4.

<sup>19</sup> Benedict Grigaliunas and Frederick Herzberg, "Relevancy in the Test of the Motivator-Hygiene Theory", in Journal of Applied Psychology, Vol. 55, No. 1, p. 73, Jan. 1971.



as follows. His subjects made judgments on each of the sixteen statements, such as, "I received recognition for doing good work", "I was very pleased with the policies or administration of the school", "My job gave me a great deal of responsibility", "I felt secure in my job". While making these judgments the emotional involvement of the subjects, captured in relating the episodes, could be eroded and replaced by an attempt at logic. The sustained mental activity would make this likely. Then other difficulties could become manifest. Rather than describing a situation and how it affected him, a subject might begin to make self-judgments. To mark the statement, "I felt insecure in my job", as being of major importance might make him uncomfortable. To admit that the cause of dissatisfaction was within himself might threaten his self-esteem. Causes extrinsic to the work itself would seem more palatable. Conversely, he might be reluctant to mark some of the statements following satisfaction episodes of major importance because he might feel that he would seem to be boasting. Herzberg's and Sergiovanni's subjects could be said to have faced similar dilemmas when they made subjective judgments from which the second level factors were derived. However, they were given no leading statements and the second level factors were used merely as additional support to the conclusions formed from the first level factors. Wickstrom did not have second level factors.

Further support for the method of Herzberg and Sergiovanni comes from their smaller percentages due to their coding procedure. Research By Grigaliunas and Herzberg<sup>20</sup> and by Stern<sup>21</sup> confirms that the subjects in relating episodes would be conscious of only one, two or three factors involved and that these are most truly revealed if left to the subject's own composition.

There is one other consideration in the comparison of the methods of the traditionalists and that of Herzberg's followers. This concerns the concept of job satisfaction. Conventional theorists, as was illustrated in figure 1, assume that job satisfaction exists as a single, overall feeling. They employ various data-gathering techniques eliciting varied and often conflicting opinions on numerous aspects of a man's job without defining the overall state of man's feelings which they claim to be examining. Herzberg's position is somewhat more defensible. He does not define what job satisfaction and job dissatisfaction are but he does state that they are two different experiences and he has some foundation for his beliefs. His theory of needs and his empirical evidence of the natural grouping of thought

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20 Grigaliunas and Herzberg, Op. Cit., p. 73-79.

21 M. L. Stern, An Investigation of Slippage in the Motivator-Hygiene Theory, unpublished doctoral dissertation, Case Western Reserve University, 1968.

units drawn from critical episodes into two divisions suggest that two different things are being investigated.

Since Behling and his associates found the use of the critical-incident technique resulted in Herzberg's pattern of factors and other data-gathering procedures produced various other results, and since there is no agreement upon just what concept is being measured, it seems reasonable to assume that the research results may differ because the subject matter of the research differs. The Herzberg position is preferable because it is founded upon theoretical as well as empirical evidence.

### 3. Summary and Basic Hypotheses.

The motivator-hygiene theory has been presented as a two-dimensional concept of job satisfaction. The states of job satisfaction and job dissatisfaction are two different experiences affected by two different sets of factors and acknowledging man's two different need systems. The state of job satisfaction is the consequence of motivators, which are factors intrinsic to the work itself, and which gratify man's need for self-actualizing experiences. The state of job dissatisfaction springs from faulty hygiene factors, which concern the work environment and which relieve man's need to avoid painful experiences. This theory rejects the conventional belief that job satisfaction is one overall

state of mind upon which all factors can cause a positive or a negative influence.

The critical episode technique has been demonstrated to be appropriate for testing the motivator-hygiene theory with a sample of teachers. The need for the investigation lies in the fact that the studies reviewed cannot be generalized to the population of this study. Herzberg's population and that of most replicators of his research technique were of other professions each with its unique elements. One cannot generalize Sergiovanni's study, being American, to a Canadian population. Moreover, Sergiovanni's results could be suspected of error because of the arbitrary selection of one factor per episode. Wickstrom's findings are suspect because of his leading statements. Thus, the motivator-hygiene theory has yet to be tested satisfactorily on a population of teachers.

Therefore, the purpose of this research is to investigate the factors causing satisfaction and dissatisfaction of teachers. Specifically, the problem is to demonstrate the relative influence of the factors and their distribution pattern in support of or conflicting with Herzberg's theory. If concurring, there would be one set of satisfaction factors and a different set of dissatisfaction factors. The satisfaction factors would be intrinsic to the performance of the job and the dissatisfaction factors would be concerned

with the work environment.

In testing Herzberg's theory it is hypothesized that: The factors contributing to the job satisfaction of teachers are different from those contributing to the job dissatisfaction of teachers. From Herzberg's conclusions, it is expected that second level factors, being determined subjectively, will contribute less significantly than will the first level factors. Further, it is hypothesized that:

- a) The factors contributing to the job satisfaction of teachers are related to the performance of the job.
- b) The factors contributing to the job dissatisfaction of teachers are related to the job environment.

The experimental design used to test these hypotheses will be described next.

## CHAPTER II

### EXPERIMENTAL DESIGN

In testing Herzberg's theory, his methodology was applied in the educational setting. Thus, in order to study the factors affecting job satisfaction and dissatisfaction, the critical episode technique was used on a sample of teachers.

In explaining the experimental design the population will be discussed first, followed by a description of the sample being studied and an evaluation of the technique used to obtain satisfaction and dissatisfaction episodes. Next the experimental procedure will be explained and finally steps in the analysis of the data will be outlined.

#### 1. The Sample.

The setting for this study is Carleton County, which consists of the whole Regional-Municipality of Ottawa-Carleton except the cities of Ottawa and Vanier and the village of Rockcliffe. This large region includes suburban areas, villages and widespread rural areas.

The Carleton Board of Education is one of the two systems in Ontario that has continued to have a rapid expansion. Presently under its jurisdiction it has forty-four elementary, six intermediate and eleven secondary schools.

To serve its 36,000 students, the Carleton Board employs 1,800 teachers and 117 principals and vice-principals.

For the purpose of this study a random sample of seventeen per cent, consisting of 250 teachers, 35 principals and 35 vice-principals received questionnaires. There was an eighty-four per cent reply. But when incomplete forms were eliminated, it was found that responses were obtained from 179 teachers, 27 principals and 25 vice-principals. Since this constitutes approximately seventy-two per cent of the subjects sampled, one can generalize the sample results to the Carleton County population. Further generalization, with respect to the existence of the satisfaction and dissatisfaction factors, is tentative and limited to those school areas similar to the sampled one.

## 2. The Critical Episode Technique.

### a) The Research Instrument

Subjects were given a three part questionnaire as found in Appendix 1. Part I contained questions regarding the subject's age, sex, professional qualifications, experience, and responsibility. Part I was referred to in the analysis only if required for clarification of the subject's critical episodes elicited in Parts II and III. In Part II, the subjects were asked to give their critical episode in the following manner:

INSTRUCTIONS: Think of a time when you felt exceptionally good about your job. This should be a fairly recent occasion, within the last two or three years, and may be either a single or a longer-range sequence of events. Briefly describe what happened in the space below. (All incidents described will be kept confidential; however, you may disguise names and places in any way you wish to assure anonymity).

What did this experience mean to you?

Was your job performance, career, health, personal life affected in any way?

In Part III, subjects responded similarly regarding an exceptionally bad experience.

In an attempt to follow Herzberg as closely as possible the above questions were constructed to incorporate the ideas inherent in Herzberg's "semistructured" interview. The subjects were given freedom to choose the kind of experience they wished to report. The questions were designed to approximate those suggested by Herzberg for his interviewers, which motivated episodes with the following criteria. First, the episode had to include some objective happening. Secondly, it had to be founded in time, having a beginning, and unless it was still going on, an end. Thirdly, it must have been accompanied by exceptionally good or bad feelings. Fourthly, it had to concern a time when the individual was working within the last two or three years, although it could have taken place in a different school than the one in which the respondent was working at the time of questioning. Lastly,



the episode had to be caused by something related to the job.

The validity of the technique has been proved not only by the consistent results of the replications of its use but also by the fact that its use has supported the theory.

Further justification for using the critical-incident technique may be found in the research by Gregaliunas and Herzberg<sup>1</sup> and by Andersson and Nilsson<sup>2</sup> who decided that though the technique had been subjected to numerous replications, it had not been sufficiently tested as a technique.

Grigaliunas and Herzberg applied the two methods: that of the critical episode technique and that of the rating scale methodology, to one group of students. The critical episode technique resulted in support for the theory and the rating scale technique resulted in findings contradicting the theory. However, when an independent study was made to ascertain which factors were relevant to the students' episodes, and a second study in which only the factors judged relevant were analyzed, then the results from the rating

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<sup>1</sup> Benedict Gregaliunas and Frederick Herzberg, "Relevancy in the Test of Motivator-Hygiene Theory", in Journal of Applied Psychology, Vol. 55, No. 1, issue of January 1971, p. 73-79.

<sup>2</sup> B. Andersson and S. Nilsson, "Studies in Reliability and Validity of the Critical Incident Technique", in Journal of Applied Psychology, Vol. 48, issue of December 1964, p. 398-403.

scale technique also supported the theory.

Andersson and Nilsson conducted extensive tests on the reliability and validity of the critical episode technique, in its application to Swedish grocery store managers, in which about eighteen hundred incidents were collected, some by interviews and some by questionnaires. In testing the saturation and comprehensiveness of the data collecting procedure, it was found that ninety-five per cent of the categories had been filled when two-thirds of the episodes were classified. As well, an analysis of the contents of related literature revealed no elements that could not be assigned to the classification scheme. A rank correlation between the percentage frequencies obtained in the categories from the interviews and from the questionnaires was found to be .85. To determine whether the category system was an obvious one, two random samples of one hundred episodes were chosen and classified independently by students. Over eighty per cent of the episodes were placed in the same categories as in the original classification suggesting that the category system was plausible and not too subjective. Finally the episodes were rated by a large number of judges to discover if they were really critical or if they were too extreme and unique to be of value.

All these methodological checks resulted in positive evidence concerning the use of the critical episode technique,

its reliability and validity.

## 2. Experimental Procedure.

### a) The Distribution of Questionnaires

Cooperation was freely obtained from the Teachers' Federation of Carleton, the Carleton Principals' Association, and the Carleton Board of Education Research Committee. The school secretaries distributed the questionnaires and returned them to the School Board offices in envelopes labelled only "Carleton Teacher Survey"; so that neither the respondent's name nor school was known. Envelopes from several schools were mixed together before being collected by the investigator; so there was no chance of a series from one school being analyzed consecutively by the judges. School secretaries returned checked lists of the respondents' names, separately, in case a second request had to be made but this was not necessary. Copies of the correspondence concerning the distribution of the questionnaire may be found in Appendix 2.

### b) Coding Procedure

Initially, the judges examined copies of Herzberg's definitions of factors,<sup>3</sup> and his analytical classification of

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<sup>3</sup> Frederick Herzberg, Bernard Mausner, and Barbara Snyderman, The Motivation to Work, New York, Wiley, p. 44-50.

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the factors which may be seen in Appendix 3. The judges were then given examples of episodes from one of Herzberg's other studies<sup>4</sup> upon which to practice selecting the factors contributing to the satisfaction or dissatisfaction expressed in the episode. When the judges felt sufficiently prepared, they commenced the actual episodes.

Copies of the coding worksheets with the judges' decisions may be viewed in Appendix 4. Each episode in the questionnaires was coded independently by three of six judges, who included the investigator, two other Carleton Board of Education teachers, and three Ontario teachers from outside the Carleton Board of Education. The coding action consisted of reading the subjects' satisfaction and dissatisfaction episodes and selecting and recording on the coding worksheets the first and second level factors contained therein. Five judges were not familiar with the motivator-hygiene theory. The factors on the worksheets were not separated into motivators and hygiene factors. To assure the anonymity of the respondents, the part of the questionnaire containing the general information about the respondent was separated from the last two pages containing the episodes. Both parts were numbered identically so that information from

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4 Frederick Herzberg, "The Motivation to Work Among Finnish Supervisors", in Personnel Psychology, Vol. 18, No. 4, issue of Winter, 1965, p. 393-402.

the first part could be related to the episodes if clarification was needed. Very occasionally, the judges had to know the teacher's position of responsibility in order to comprehend the episode. This was not considered to hinder the objectivity of the exercise.

When the first coding was complete all episodes were grouped under each of the sixteen first level and twelve second level factor categories and reexamined by means of Herzberg's analytical scheme as was presented in Appendix 2. This was to ensure that consistency of meaning was kept and that there was no overlapping among the categories.

It was decided to use Sergiovanni's three classifications of decisions: unanimous choice, majority choice and consensus choice.<sup>5</sup> Unanimous choice meant that the three judges agreed in coding. Majority choice meant that two agreed and one disagreed. If a three-way disagreement occurred, the judges were to look at the episode again in order to arrive at a consensus decision.

In Herzberg's initial research which tested the motivator-hygiene theory, the a posteriori method was employed. In other words the categories were determined

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<sup>5</sup> Thomas J. Sergiovanni, Satisfaction and Dissatisfaction of Teachers, Research performed pursuant to a contract with the U.S. Department of Health, Education, and Welfare, Office of Education, Illinois University, Urbana, Rochester University, New York, 1966, p. 47.

directly from the content of the subjects' critical episodes. This study, consistent with subsequent studies by Herzberg and others, used the a priori approach employing Herzberg's predetermined first and second level factor categories.

Tabulations of the data obtained by the judges were produced with the assistance of a computer. The frequency with which each factor occurred in satisfaction and dissatisfaction episodes was tallied. The relative importance as satisfiers and dissatisfiers of each of the sixteen first level and twelve second level factors was demonstrated by comparing their frequencies in the satisfaction and dissatisfaction episodes.

#### 4. Method of Data Analysis.

To test the null hypothesis that the proportions of satisfying and dissatisfying episodes in which a factor was rated important did not differ significantly, the normal approximation to the Irwin Fisher exact test was used. As a further test, the chi square test of independence was employed to test the independence of the motivator-hygiene and the satisfaction-dissatisfaction factors. A similar analysis of the second level factor results followed.

Thus the procedure for this study basically consisted of obtaining from a random sample of 231 Carleton

educators critical episodes illustrating their happy and unhappy experiences. These episodes were read independently by three of six judges who selected and noted the factors appearing to cause satisfaction and dissatisfaction. The occurrences of the factors were totalled and judged to be an indication of their relative importance. The results were tested to see if the factors contributing to job satisfaction were different from the factors contributing to job dissatisfaction, and further, if those contributing to satisfaction were concerned with the performance of the job and if those contributing to dissatisfaction concerned the job environment.

The presentation and interpretation of the data are contained in the next chapter.

## CHAPTER III

### PRESENTATION OF THE RESULTS

This chapter reports the frequencies of occurrence of each of the first and second level factors in the satisfaction and dissatisfaction episodes. The data are analyzed to see if they fulfill the expectations of the motivator-hygiene theory. The chapter concludes with a comparison of the results with those of Herzberg, Sergiovanni and Wickstrom.

#### 1. Results of the Study.

##### a) First Level Factors

The frequencies of the first level factors cited in the episodes are presented in Table IV.

Satisfaction Episodes.- The frequencies of factors showing satisfaction were 271. These were obtained from the 228 episodes related by the 231 subjects of the study. One episode each was related by 207 subjects. Two episodes were related by nine subjects and one subject related three episodes. The remaining fourteen subjects either related no satisfaction episode or their episode did not concur with Herzberg's criteria as given in the research design. The few responses that were rejected described general feelings rather than actual experiences.



Table IV.- First Level Factor Frequencies in Satisfaction and Dissatisfaction Episodes, with z values for Differences in Proportions.

| Factor                                       | Satisfaction | Dissatisfaction | Values of the z ratio |
|----------------------------------------------|--------------|-----------------|-----------------------|
| 1. Achievement                               | 69*          | 16              | 5.928                 |
| 2. Work itself                               | 57*          | 23              | 3.713                 |
| 3. Recognition                               | 39*          | 8               | 4.832                 |
| 4. Responsibility                            | 15*          | 0               | >3.400                |
| 5. Possibility of growth                     | 5            | 2               |                       |
| 6. Advancement                               | 3            | 1               |                       |
| 7. Interpersonal relations with subordinates | 39           | 28              | 1.096                 |
| 8. Interpersonal relations with peers        | 14           | 24*             | 1.919                 |
| 9. Interpersonal relations with superiors    | 9            | 14              | 1.245                 |
| 10. School policy and administration         | 9            | 62*             | 7.158                 |
| 11. Working conditions                       | 6            | 35*             | 4.964                 |
| 12. Salary                                   | 3            | 13*             | 2.689                 |
| 13. Technical supervision                    | 2            | 22*             | 4.459                 |
| 14. Security                                 | 1            | 0               |                       |
| 15. Status                                   | 0            | 2               |                       |
| 16. Personal life                            | 0            | 2               |                       |
| Total                                        | 271          | 252             |                       |

\* Difference between factor effects in satisfaction and dissatisfaction episodes is significant.  $p < .05$ .

The first column in Table IV presents the frequencies of occurrence of the first level factors in satisfaction episodes. The two most frequently occurring factors in satisfaction episodes were achievement, which occurred in twenty-six per cent of the selections, and work itself, in twenty-one per cent. Two factors tied for third place, each with fourteen per cent of the occurrences. They were recognition and interpersonal relations with subordinates. The latter was contrary to the expectations of Herzberg's theory, though not significantly so, since it also occurred in eleven per cent of the dissatisfaction episodes. Further consideration of this factor's effects will be presented later.

The motivators together accounted for approximately sixty-nine per cent of the factor occurrences in the satisfaction episodes, while the hygiene factors accounted for approximately thirty-one per cent.

Dissatisfaction Episodes.- There were 252 factor occurrences in the 208 dissatisfaction episodes related by the 231 subjects. One episode each was given by 196 subjects. Six subjects gave two episodes. The remaining twenty-nine subjects gave no dissatisfaction episode or their replies could not be coded because they did not contain an actual experience.

The frequencies with which each of the first level factors occurred in the dissatisfaction episodes are listed in the second column in Table IV. The most frequently occurring factor in the dissatisfaction episodes was school policy and administration. It occurred in twenty-five per cent of the selections. Working conditions took second place with fourteen per cent of the factor occurrences. Interpersonal relations with subordinates, interpersonal relations with peers, supervision and responsibility each were cited about ten per cent of the time.

Comparison of Results in Satisfaction and Dissatisfaction Episodes.- Table IV also contains the values of the z-statistic obtained in testing the significance of the difference in proportions of occurrences of each first level factor as a satisfier and as a dissatisfier. To make such tests the normal approximation to the Irwin Fisher exact test was used. First level factors which were cited significantly more often as satisfiers than as dissatisfiers were: achievement, work itself, recognition and responsibility. The first level factors which appeared significantly more often as dissatisfiers than as satisfiers were: school policy and administration, working conditions, supervision and salary. Significance tests were not made if the frequencies were too low to be meaningful.

As noted above the factors which appeared significantly more often as satisfiers were motivators and the factors which appeared significantly more often as dissatisfiers were hygiene factors.

As a further analysis of the independence of the occurrence of motivator-hygiene and satisfaction-dissatisfaction factors, a chi square test of independence was made. The frequencies are shown in Figure 2 (a) and the chi square value is 129.119, significant at the 95 per cent confidence level. Therefore the motivator-hygiene factor is not independent of the satisfaction-dissatisfaction factor. Hence, a relationship is present and this is suggested to be as illustrated in Figure 2 (b). It can be concluded that the motivator factors are tied to satisfaction more than dissatisfaction, and conversely, the hygiene factors are related to dissatisfaction more than satisfaction.

#### b) Second Level Factors

The frequencies of the second level factors are presented in Table V. These results, being subjective in source, are considered to be of secondary importance in supporting the theory. The few responses that could not be coded occurred when subjects responded to the question, "What did this experience mean to you?", by relating how they faced the situation.

Figure 2 (a)

|                 | Satisfaction | Dissatisfaction |
|-----------------|--------------|-----------------|
| Motivators      | 188          | 50              |
| Hygiene Factors | 83           | 202             |

$\chi^2 = 129.119, p < .05$

Figure 2 (b)

|                 | Satisfaction         | Dissatisfaction      |
|-----------------|----------------------|----------------------|
| Motivators      | <input type="text"/> | <input type="text"/> |
| Hygiene Factors | <input type="text"/> | <input type="text"/> |

Figure 2.- Results of Test of Independence of Motivator-Hygiene and Satisfaction-Dissatisfaction Factors.

Table V.- Second Level Factor Frequencies in Satisfaction and Dissatisfaction Episodes, with z values for Differences in Proportions.

| Factor                       | Satisfaction | Dissatisfaction | Values of the z ratio |
|------------------------------|--------------|-----------------|-----------------------|
| 1. Achievement               | 118*         | 30              | 6.824                 |
| 2. Possibility of growth     | 27*          | 9               | 2.209                 |
| 3. Recognition               | 23*          | 4               | 2.999                 |
| 4. Work itself               | 21           | 28*             | 2.233                 |
| 5. Responsibility            | 1            | 4               |                       |
| 6. Advancement               | 0            | 0               |                       |
| 7. Group feeling             | 26           | 33*             | 2.281                 |
| 8. Security                  | 10           | 13              |                       |
| 9. Pride, guilt, inadequacy* | 6            | 16*             | 2.964                 |
| 10. Salary                   | 2            | 5               |                       |
| 11. Fairness-unfairness      | 0            | 25*             | >5.738                |
| 12. Status                   | 0            | 5               |                       |
| Totals                       | 234          | 172             |                       |

\* Difference between factor effects in satisfaction and dissatisfaction episodes is significant.  $p < .05$ .

Satisfaction Episodes.- Second level factors denoting satisfaction had frequencies totaling 234. As may be seen in Table V achievement was noted in half of the factor occurrences. Growth, group feelings, recognition, and work itself were each noted about one-tenth of the time. The motivators together accounted for fully eighty per cent of the frequencies while the hygiene factors had frequencies totaling only twenty per cent.

Dissatisfaction Episodes.- Second level factors denoting dissatisfaction had frequencies totaling 172. The second level factors appearing most often were group feelings, achievement, and work itself. Advancement was the only factor that did not occur at all in the subject's responses regarding their reasons for feelings of satisfaction and dissatisfaction. Salary, recognition, and responsibility all occurred less than three per cent of the time. Together the motivators were cited in 43.5 per cent of the factor occurrences and the hygiene factors were cited in 56.5 per cent.

Comparison of Results in Satisfaction and Dissatisfaction Episodes.- Table V also contains the values of the z-statistic obtained in testing the significance of the difference in proportions of occurrences of second level factors as satisfiers and as dissatisfiers. To make such tests the normal approximation to the Irwin Fisher exact test was

used. Second level factors which were cited significantly more often as satisfiers than as dissatisfiers were achievement, possibility of growth and recognition. Those which appeared significantly more often as dissatisfiers than as satisfiers were group feelings, fairness-unfairness, and pride, guilt and inadequacy. Significance tests were not made if the frequencies were too low to be meaningful.

It should be noted that the factor, work itself appeared significantly more often in dissatisfaction than satisfaction episodes. Though second level factors are considered less reliable in supporting the theory, they are of value in indicating what the teachers consider important as sources of satisfaction and dissatisfaction. Work itself ranked fourth in importance in its contribution to satisfaction. Yet it occurred significantly more often as a dissatisfier indicating that there are aspects about the work with which teachers are not satisfied.

As a further study of the relationship between the occurrence of motivator-hygiene and satisfaction-dissatisfaction factors, the chi square test of independence was made. The frequencies are shown in Figure 3 (a) and the chi square value is 39.836, well above the value significant at the 95 per cent confidence level. Hence, the satisfaction-dissatisfaction factor is not independent of the motivator-hygiene factor. Thus, some relationship does exist and this



Figure 3 (a)

|                 | Satisfaction | Dissatisfaction |
|-----------------|--------------|-----------------|
| Motivators      | 190          | 75              |
| Hygiene Factors | 44           | 141             |

$$\chi^2 = 39.836, p > .05$$

Figure 3 (b)

|                 | Satisfaction                                                                        | Dissatisfaction                                                                       |
|-----------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Motivators      |  |  |
| Hygiene Factors |  |   |

Figure 3.- Results of Test of Independence of  
Motivator-Hygiene and Satisfaction-  
Dissatisfaction Second Level Factors.

is suggested to be as illustrated in Figure 3 (b). It can then be concluded that the motivators contribute to satisfaction more than dissatisfaction, while the hygiene factors contribute to dissatisfaction more than satisfaction.

### c) Summary of the Results

The results from the analysis of the teachers' happy and unhappy experiences have shown the relative importance of the factors contributing to satisfaction and dissatisfaction. The experiences causing satisfaction usually centred around the actual performance of the job. The dissatisfaction experiences centred around the work environment.

The hypothesis that the factors contributing to job satisfaction of teachers are different from the factors contributing to the dissatisfaction of teachers was tested for significance. Using the normal approximation to the Irwin Fisher exact test four first level motivators--achievement, work itself, recognition, and responsibility--were found to contribute significantly more often to satisfaction than to dissatisfaction. Four hygiene factors--school policy and administration, working conditions, supervision, and salary--contributed significantly more often to dissatisfaction. In the second level factors three motivators--achievement, possibility of growth, and recognition--were associated significantly more often with satisfaction, and three hygiene

factors--group feeling, fairness-unfairness, pride, guilt and inadequacy--were significantly more often associated with dissatisfaction. Of the first level factors having frequencies high enough to be meaningful only interpersonal relations were not found to be significant in the expected direction; of the second level factors only work itself and security were not found to be significant in the expected direction.

As well, the chi square test of independence was employed to test the independence of factors appearing as motivators or hygiene factors with those appearing as satisfiers or dissatisfiers. This test also provided support for the hypothesis.

Thus, the factor effects indicated by the teachers of this study generally concur with Herzberg's motivator-hygiene theory. It may be concluded that teacher job satisfaction is related to the performance of the work and teacher job dissatisfaction is related to elements in the job environment.

## 2. Results of the Present Study Compared with Herzberg's Research Findings.

### a) First Level Factors

A comparison of the results of the present study and Herzberg's results allows one to contrast the population of

the teachers of Carleton with the accountants and engineers of Herzberg's study.

The percentages of the first level factors in satisfaction and dissatisfaction episodes from both studies may be seen in Table VI. The motivators are considered first. Achievement is the main contributor to satisfaction for subjects of both studies. The accountants' and engineers' second contributor to satisfaction was recognition followed by work itself. Teachers indicated the reverse. As may be seen in Table VI they received more satisfaction from work itself referring to it one-third more often than recognition. Recognition was third in importance for teachers, indicating they receive less recognition or are less dependent upon it. The only motivator contributing exclusively to teacher satisfaction was responsibility yet the teachers referred to it only one-fourth as often as the accountants and engineers. Advancement occurred more often in the episodes related by the accountants and engineers than in the teachers', reflecting the lack of opportunity for teachers to obtain promotions. The remaining motivator, possibility of growth, showed an indication of being a dissatisfier rather than a satisfier in Herzberg's study, but episodes indicating this factor were too few to be considered of consequence.

The motivators also occurred in the dissatisfaction episodes although significantly less often. Among the

Table VI.- Percentages of Occurrences of First Level Factors in Satisfaction and Dissatisfaction Episodes in Herzberg's Research and the Present Research.

| Factor                                       | Herzberg |     | Strachan |     |
|----------------------------------------------|----------|-----|----------|-----|
|                                              | S        | D   | S        | D   |
| 1. Achievement                               | 22*      | 4   | 26*      | 6   |
| 2. Recognition                               | 17*      | 10  | 14*      | 3   |
| 3. Work itself                               | 14       | 8   | 21*      | 9   |
| 4. Responsibility                            | 12*      | 3   | 6*       | 0   |
| 5. Advancement                               | 11*      | 6   | 1        | 0   |
| 6. Possibility of growth                     | 3        | 5   | 2        | 1   |
| 7. Salary                                    | 8        | 10  | 1        | 5*  |
| 8. Interpersonal relations with subordinates | 3        | 2   | 14       | 11  |
| 9. Interpersonal relations with superiors    | 2        | 8*  | 3        | 7   |
| 10. Interpersonal relations with peers       | 2        | 5   | 5        | 10  |
| 11. Supervision                              | 2        | 11* | 1        | 9*  |
| 12. Policy and administration                | 2        | 18* | 3        | 25* |
| 13. Working conditions                       | 2        | 6*  | 2        | 14* |
| 14. Personal life                            | 0        | 3   | 0        | 1   |
| 15. Status                                   | 0        | 0   | 0        | 1   |
| 16. Security                                 | 0        | 0   | 0        | 0   |

Note: In Herzberg's research the first level factors occurred 430 times in 228 satisfaction episodes and 438 times in 248 dissatisfaction episodes.  
In the present study the first level factors occurred 271 times in 228 satisfaction episodes and 252 times in 208 dissatisfaction episodes.

\* Difference in factor effects in satisfaction and dissatisfaction episodes is significant. z test of significance was calculated using frequency proportions.

S = Satisfaction episodes.

D = Dissatisfaction episodes.

motivators, recognition was the main source of dissatisfaction for the accountants and engineers. The teachers and the accountants and engineers were all unhappy about aspects of the work itself. Herzberg admits that the motivator continuum is less unidirectional in its main contribution to satisfaction, than that of the hygiene factors to dissatisfaction, as was illustrated in Figure 1.

The hygiene factors coded in dissatisfaction episodes are considered next. The greatest source of dissatisfaction for both groups was policy and administration indicating a similar sensitivity to injurious or ineffective organization of work. The factor, working conditions, was next in importance as a cause of teacher dissatisfaction, with more than double the occurrence for accountants and engineers. Other than salary and interpersonal relations which are considered separately, the remaining hygiene factors occurred in too few of the episodes to warrant attention.

The hygiene factors were seldom indicated as the source of satisfaction by either group. With the exception of salary for the accountants and engineers and interpersonal relations for the teachers, the hygiene factors occurred in an average of about two per cent of the satisfaction episodes. Therefore, the hygiene factor continuum is almost entirely unidirectional in its main contribution to dissatisfaction, as was illustrated in Figure 1.

As indicated earlier, salary contributed to both the satisfaction and dissatisfaction of the accountants and engineers, depending on whether motivators or hygiene factors accompanied it in the same episode. Teachers referred to salary only one-third as often, but significantly more often as a dissatisfier than as a satisfier, which concurs with the expectations of the motivator-hygiene theory.

The aspect of interpersonal relations deserves special attention as promised earlier. Herzberg considered the accountants' and engineers' interpersonal relations to be extraneous to the work itself, and hence, they were called hygiene factors. The expectation that interpersonal relations would occur more often as a dissatisfier than as a satisfier was supported in his research. In his study interpersonal relations occurred thirty-one times in the satisfaction episodes and sixty-four times in the dissatisfaction episodes. This constitutes eleven per cent of the total factor occurrences. Interpersonal relations with superiors was a significant dissatisfier. Interpersonal relations with peers was also significant according to Herzberg's test of significance but not according to the z-test used in this study. However, subjects of both studies found more satisfaction than dissatisfaction in their relationships with peers. This was especially true of teachers. For teachers, the aspect of interpersonal relations has more importance

than for accountants and engineers. Teachers noted interpersonal relations as contributing to their satisfaction sixty-two times in all and to dissatisfaction sixty-six times. This constitutes twenty-four per cent of the total factor occurrences. This suggests, and the nature of teaching suggests, that interpersonal relations are much more vital to teacher satisfaction and dissatisfaction. The interpersonal relations with subordinates factor was cited in the teachers' satisfaction episodes thirty-nine times and in their dissatisfaction episodes twenty-eight times, suggesting the factor is closely related to the teachers' feelings of success or failure. Indeed, a teacher may view his relationship with his students as "part of the job". Hence, interpersonal relations with subordinates may act as a motivator for teachers.

In order to test the relationship of the motivator and hygiene factors and the satisfaction and dissatisfaction factors a chi square test of independence was made on Herzberg's results. The frequencies are shown in Figure 4 and the chi square value was 158.665. In the present study, as previously noted, the chi square value for first level factors was 129.119. Both values are significant at the 95 per cent confidence level. Therefore, it can be concluded that in both studies the motivators are associated with satisfaction more often than dissatisfaction and the hygiene



|                    | Satisfaction | Dissatisfaction |
|--------------------|--------------|-----------------|
| Motivators         | 338          | 497             |
| Hygiene<br>Factors | 92           | 371             |

$$\chi^2 = 158.665, p > .05$$

Figure 4. Results of Test of Independence of Motivator-Hygiene and Satisfaction-Dissatisfaction First Level Factors from Herzberg's Study.

factors are associated with dissatisfaction more often than satisfaction.

#### b) Second Level Factors

The percentages of second level factors in Herzberg's research and the present study are presented in Table VII. The teachers felt their feelings of satisfaction were associated with achievement one-half of the time. The engineers and accountants cited achievement in only one-fifth of the factor occurrences and this was slightly less often than they cited recognition. Lack of achievement was a source of considerable dissatisfaction to teachers, being the motivator most often referred to in the dissatisfaction episodes.

Contrary to expectations, work itself appeared as a significant dissatisfier for teachers. For the accountants and engineers it was a significant satisfier. In actual frequencies, rather than percentages, the teachers referred to the work itself twenty-eight times in dissatisfaction episodes and twenty-one times in satisfaction episodes. The engineers referred to work itself sixty-seven times in satisfaction episodes and thirty-two times in dissatisfaction episodes. The teachers appeared to be much more dissatisfied with aspects of the work itself. The accountants and engineers appeared to be more conscious of responsibility

**Table VII.- Percentages of Occurrences of Second Level Factors in Satisfaction and Dissatisfaction Episodes in Herzberg's Research and the Present Research.**

| Factor                       | Herzberg |     | Strachan |     |
|------------------------------|----------|-----|----------|-----|
|                              | S        | D   | S        | D   |
| 1. Recognition               | 21*      | 14  | 10*      | 2   |
| 2. Achievement               | 20*      | 10  | 50*      | 17  |
| 3. Work itself               | 10*      | 7   | 9        | 16* |
| 4. Responsibility            | 11*      | 4   | 0        | 2   |
| 5. Advancement               | 1        | 1   | 0        | 0   |
| 6. Possibility of growth     | 13       | 18  | 12*      | 5   |
| 7. Salary                    | 7        | 7   | 1        | 3   |
| 8. Group feeling             | 4*       | 2   | 11       | 20* |
| 9. Fairness-unfairness       | 1        | 20* | 0        | 15* |
| 10. Pride, guilt, inadequacy | 3        | 8   | 3        | 9*  |
| 11. Status                   | 6*       | 5   | 0        | 3   |
| 12. Security                 | 2        | 5   | 4        | 8   |

Note: In Herzberg's research the second level factors occurred 645 times in 228 satisfaction episodes and 465 times in 248 dissatisfaction episodes. In the present study the second level factors occurred 234 times in the 228 satisfaction episodes and 172 times in the 208 dissatisfaction episodes.

\* Difference in factor effects in satisfaction and dissatisfaction episodes is significant. z-test of significance was calculated using frequency proportions.

S = Satisfaction episodes.  
D = Dissatisfaction episodes.

as a satisfier than were the teachers. Advancement occurred infrequently in both studies. Both groups appeared to be much more conscious of the possibility of growth factor than their experiences indicated in the first level factors. For the teachers this factor was a significant satisfier. The accountants and engineers mentioned it more often as a dissatisfier, though not significantly so.

For teachers, group feeling was the most significant dissatisfier. This factor indicated negative feelings towards an individual or group. Thus, the idea suggested from the first level factor results--that interpersonal relations is a key issue for teachers--is supported by these findings. Group feeling was also the most frequently mentioned satisfier among the hygiene factors in the teachers' study.

The accountants and engineers most often reported feelings of unfairness as their main cause of dissatisfaction. This factor was also important for teachers and it was one of the most unidirectional in its contribution to dissatisfaction.

Salary was two-directional in Herzberg's study and was indicated more than twice as often by accountants and engineers. Both groups felt dissatisfaction from feelings of guilt and inadequacy, and in approximately the same proportions. Of the remaining two hygiene factors, teachers were more concerned with security, while for the accountants

and engineers status appeared more important.

To test the relationship of the motivator and hygiene factors and the satisfaction and dissatisfaction factors in Herzberg's study a chi square test of independence was made. The contingency table is shown in Figure 5. The chi square value of 63.699 was significant. As reported earlier, the comparable value for the present study was 39.836. Both values are significant at the 95 per cent confidence level. Therefore, it can be concluded from the results of the second level factors in both studies that the motivators contribute more to satisfaction and the hygiene factors contribute more to dissatisfaction.

### 3. Comparison of Results of the Present Study with those of Sergiovanni and Wickstrom.

A comparison of results of this study with those of Sergiovanni and Wickstrom allows us to tentatively suggest which factors are most influential in causing teacher satisfaction and teacher dissatisfaction. The results of the studies may be viewed in Table VIII. Achievement was the factor most frequently indicated as causing satisfaction in all the studies. Wickstrom's teachers and the teachers of this study showed work itself as the next important factor, followed by recognition. Sergiovanni's teachers showed recognition to be more than twice as important as work

|                 | Satisfaction | Dissatisfaction |
|-----------------|--------------|-----------------|
| Motivators      | 494          | 250             |
| Hygiene Factors | 151          | 215             |

$\chi^2 = 63.699, p > .05$

Figure 5.- Results of Test of Independence of Motivator-Hygiene and Satisfaction-Dissatisfaction Second Level Factors from Herzberg's Study.

Table VIII.- Comparison of Results of First Level Factor Percentages of Strachan, Sergiovanni and Wickstrom

| Factor                                       | Strachan |     | Sergiovanni |     | Wickstrom |    |
|----------------------------------------------|----------|-----|-------------|-----|-----------|----|
|                                              | S        | D   | S           | D   | S         | D  |
| 1. Achievement                               | 26*      | 6   | 30*         | 9   | 97        | 72 |
| 2. Recognition                               | 14*      | 3   | 28*         | 2   | 68        | 39 |
| 3. Work itself                               | 21*      | 9   | 11          | 8   | 97        | 39 |
| 4. Responsibility                            | 6*       | 0   | 7*          | 1   | 83        | 33 |
| 5. Advancement                               | 1        | 0   | 0           | 1   | 13        | 10 |
| 6. Possibility of growth                     | 2        | 1   | 6           | 2   | 66        | 31 |
| 7. Salary                                    | 1        | 5*  | 2           | 3   | 16        | 11 |
| 8. Interpersonal relations with subordinates | 14       | 11  | 7           | 20* | 96        | 38 |
| 9. Interpersonal relations with superiors    | 3        | 7   | 3           | 4   | 78        | 39 |
| 10. Interpersonal relations with peers       | 5        | 10  | 1           | 15* | 80        | 23 |
| 11. Supervision                              | 1        | 9*  | 1           | 10* | 68        | 36 |
| 12. Policy and administration                | 3        | 25* | 2           | 13* | 71        | 69 |
| 13. Working conditions                       | 2        | 14* | 2           | 6   | 76        | 46 |
| 14. Personal life                            | 0        | 1   | 0           | 5*  | 37        | 44 |
| 15. Status                                   | 0        | 1   | 0           | 0   | 49        | 34 |
| 16. Security                                 | 0        | 0   | 0           | 1   | 80        | 43 |

S = Satisfaction Episodes.

D = Dissatisfaction Episodes.

\* = Difference in Factor Effects is significant.

itself. Responsibility was the only other motivator of significant importance to satisfaction in all three studies.

Of the hygiene factors, policy and administration was cited most often by the teachers in this study in dissatisfaction episodes. Although this was important to the teachers in the other two studies, both groups were more concerned with interpersonal relations with subordinates. This factor was ranked third as a satisfier in Wickstrom's study. We should note that in Wickstrom's findings all factors were satisfiers except personal life. Sergiovanni's was the only study in which interpersonal relations with subordinates was noted more often in dissatisfaction than satisfaction episodes. In both this study and Sergiovanni's interpersonal relations with peers contributed more often to dissatisfaction. In Sergiovanni's study this factor was clearly unidirectional in effect. Supervision was another factor whose effect was unidirectional in both studies. Salary had the second lowest frequency value of the factors in Wickstrom's study. In Sergiovanni's study salary contributed more to dissatisfaction and in the present study salary was shown to be a significant dissatisfier. The teachers of this study mentioned working conditions more than twice as often as the teachers of Sergiovanni's study.

Sergiovanni's conclusions from his American study regarding the unidirectionaleffects of the motivators on



teacher job satisfaction and the unidirectional effects of the hygiene factors on teacher job dissatisfaction are supported by the findings of this study. Because of his leading questions, as reported earlier, Wickstrom's findings did not include this natural grouping of the motivators and hygiene factors into two different groups with two different effects. Because of the limitations referred to earlier, this comparison allows only tentative suggestions regarding the comparative importance of the factors in their contribution to teacher job satisfaction and teacher job dissatisfaction.

#### 4. Summary and Conclusions.

Herzberg's motivator-hygiene theory has been proven relevant when applied to teachers. The factors contributing to job satisfaction of teachers were found to be different from those contributing to job dissatisfaction of teachers. Furthermore, those contributing to job satisfaction of teachers were found to be related to the performance of the job. As related in the critical episodes the factors found to contribute significantly to satisfaction were: achievement, recognition, work itself, and responsibility. The factors contributing to job dissatisfaction of teachers were found to be related to the work environment. These were: school policy and administration, working conditions,

supervision and salary.

When the findings of this study together with those of Sergiovanni and Wickstrom are compared and contrasted with Herzberg's conclusions, teachers show tendencies distinct from the general pattern proposed by Herzberg. Teachers demonstrate an unusual concern with interpersonal relationships both as sources of satisfaction and dissatisfaction, whereas they are less concerned with advancement, recognition and salary than were Herzberg's subjects and those of subsequent studies of other populations. Further consideration of these findings and their implications for future research and for school personnel management will be the subject of the next chapter.

## CHAPTER IV

### IMPLICATIONS OF RESULTS

#### 1. Implications for Future Research.

The present study demonstrates that Herzberg's hypotheses regarding the main effect of motivators on satisfaction and hygiene factors on dissatisfaction can be applied successfully to teachers.

The relative importance of the factors contributing to satisfaction and dissatisfaction varied in the present study and Sergiovanni's. Further investigation is needed to determine if these factor contributions can be clarified and explained in terms of differences in the nature of the work itself and in the school organization and management. Demographic studies to examine factor effects for various types of teachers, grouped by age, sex, professional qualifications, and responsibility, would supply badly needed information for present day school organization and management.

Accepting Herzberg's first and second level factors as a valid means of classifying the episodes of teachers was a basic assumption of this study, as well as of Sergiovanni's. Since both studies obtained interpretable results, the classification system is workable. However, a study which used an a posteriori approach to the analysis

of episodes would reveal differences more directly applicable to the educational organization.

The judges in this study experienced some difficulty in applying Herzberg's analysis of factors to the education scene. For example "opportunity to do a whole job--all phases", under the heading, work itself, was felt to be more appropriate to the industrial setting where production is concretely measurable. Some factors were found to be too inclusive. By interpreting interpersonal relations with peers to include both teachers and parents, specific information was lost from the data analysis. Similarly, recognition might be subdivided in a manner similar to that of interpersonal relations. Some subheadings were felt to be lacking sufficient distinction to merit separate classifications. The three subheadings, "supervisor unwilling to listen to suggestions", "supervisor delegated work (badly)", and "harmful or ineffective organization of work", came from three different categories, interpersonal relations with superiors, technical supervision, and policy and administration.

In the second level factors the reason for differentiating between feelings of pride and achievement remained unclear. Under group feelings, "negative feelings towards a group" was made to include negative feelings towards an individual since there was no second level category

specifically referring to an individual.

As in Sergiovanni's study inadequacy was included in the second level factor with pride and guilt. This is unclear in Herzberg's study as inadequacy is included in the description of the factor in his report, but not in the appendix. The juxtaposition of guilt and inadequacy may be misleading. Several teachers suffered from feelings of inadequacy because they felt the job was too much for them, but there was no feeling of guilt because they felt the job would be herculean for anyone.

Having broken away from the stereotype of the dedicated but isolated teacher in the little red schoolhouse, teachers are struggling to find their place in the societal structure. Factors such as salary, security, and status may receive more notice if redefined with the peculiar needs of teachers in mind. Development of a classification system directly from critical episodes of teachers would increase our understanding of the unique position of teachers and also provide a test for Herzberg's hypotheses using a different analytical scheme.

## 2. Implication of Results for Educational Administration.

Herzberg's motivator-hygiene theory indicates that educational personnel management has two distinct areas of concern based on man's two separate need systems. Firstly,

administration can help teachers avoid psychological grievance in their work by alleviating negative hygiene or work environment factors. The second concern of personnel management is with motivation. Administrators should design the teachers' tasks so that the work is interesting and so that there is opportunity for achievement, recognition and self-actualizing experiences.

The key to a successful administration program, therefore, is the proper diagnosis of the operating need system of teachers. The situation with regard to hygiene needs should be examined first because of the necessity for establishing and maintaining a healthy working environment without which teacher job satisfaction will not exist.

Several characteristics of the hygiene factors must be understood in order to establish healthy working surroundings. It is the misuse of or lack of attention to hygiene factors due to misunderstanding their effects that results so often in administrators' nonfulfillment of their programs. These characteristics of hygiene factors are well illustrated in the periodical Industry Week, referred to earlier.

Firstly, the fulfillment of man's hygiene needs is of very short duration. For example, research indicates that the average length of time an employee is not

dissatisfied with his salary is six to nine months.<sup>1</sup> Therefore, management must resign itself to the fact that it will never complete its hygiene program.

Secondly, all hygiene needs inevitably return to a zero level of satisfaction. The needs are felt by employees as severely at the second and any subsequent occurrence of demands as they were felt the first time. For example, a superintendent, seeking a promotion to a position as director, feels as deprived in status as a teacher seeking a department headship.

Thirdly, all hygiene needs have an escalating zero level of satisfaction. If a \$4,000 increase in salary one year is followed by a \$2,000 increase the next, the employee's psychological response is that of having been denied \$2,000. The new zero level is \$4,000.

With an understanding of these three characteristics of hygiene, administrators can begin to come to grips with the boundaries of the task of maintaining a good working environment. The most serious difficulty about administering hygiene is the fact that it is never ending. Dissatisfaction must be expected and accepted. There are no hygiene schemes which can ensure schools or school systems unlimited

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<sup>1</sup> Frederick Herzberg, "Avoiding Pain in Organizations", in Industry Week, Vol. 167, No. 6, issue of December 1970, p. 48.

freedom from teacher dissatisfaction.

Yet administrators should not be too discouraged. There are positive statements from Herzberg regarding the management of hygiene. Simply stated, teachers should be relieved as much as possible from the factors that bother them. This should be done quietly. Herzberg suggests that many hygiene programs fail because they are too complex. When teachers' hygiene needs are activated, they seek to avoid pain and must be relieved of whatever is bothering them. The substitution of grandiose plans does not have any lasting effect. If salary is the issue, a human relations program will not solve the problem. The reverse is also true. A complex program, for instance an incentive system, rather than a straight salary system, is dangerous because it brings into play new areas of discontent--the way the system was conceived, organized, administered and propagandized. The result is four new concerns about which to fret as well as salary. Hygiene programs should be administered without fanfare. If teachers are encouraged to concentrate on factors extraneous to the work itself, they develop the idea that what they do is less important than what they get for what they do. This is a learned behavioural response and results in an unhealthy employee situation.

When hygiene needs appear to be temporarily alleviated the second order of man's needs deserves attention. This is



the nucleus of effective personnel management. A contented staff whose hygiene needs are well met is not necessarily an achievement-oriented staff. If the teachers are treated reasonably well, yet express few positive attitudes towards their work, and are unwilling to extend any extra effort or to assume extra responsibilities, then there is a motivation problem. Lack of motivation in employees may be diagnosed in two ways. Teachers lack the necessary talent and skills, or teachers find insufficient opportunities for achievement in their duties. The first problem requires proper use of professional development programs. Simultaneously supportive administration must be maintained. Teachers are paralyzed if they fear to demonstrate their inadequacies. Opportunity to experiment with improved methods must be accompanied by recognition for achievement and support and encouragement to continue at times of failure.

The solution to the second problem is to redesign the tasks to include increased opportunities for achievement. This involves job enrichment. Because teachers are already complaining of too much work, ways of enriching the job without enlarging it must be found when the teachers seem to be suffering from lack of motivation. If teachers have the ability and opportunity for self-actualizing experiences, with the rewards of feelings of achievement, recognition for achievement, responsibility and growth opportunity, then motivated behaviour will result.

## SUMMARY AND CONCLUSIONS

The present research was a test in education of Herzberg's motivator-hygiene theory which states that employees' job satisfaction and dissatisfaction are two separate experiences, the result of two distinct sets of factors which respond to man's inherent dual system of needs.

Herzberg's theory originated from his review of previous attitudinal research where he discovered inconsistencies in results regarding job satisfaction. He observed that the lists of contributing factors were similar and moreover seemed to fall into two natural divisions, some associated with job satisfaction and some associated with job dissatisfaction. He explained this division with his theory of the dual system of man's needs. Man has a need system which causes him to seek to avoid psychological hurt and a second need system requiring self-actualizing experiences.

Herzberg tested his theory with a sample of engineers and accountants in Pittsburgh. He used a technique based directly upon reports of actual happy and unhappy job experiences related by his subjects. These related episodes were subdivided into thousands of single thought units which were reassembled simply by putting ones together that seemed to belong together. These groupings were labelled, resulting

in a categorical system of factors contributing to job satisfaction and dissatisfaction. Judges read the subjects' episodes and selected from Herzberg's factor categories the ones present and affecting the subjects' feelings of satisfaction or dissatisfaction. It was assumed that the number of times a factor was selected in all the episodes was an indication of its relevant importance.

Herzberg found that the factors selected from the satisfaction episodes were different from the factors selected from the dissatisfaction episodes. The factors from which the subjects derived satisfaction were concerned with the actual performance of the job, whereas the factors associated with dissatisfaction were related to the job environment. Thus, Herzberg's research supported his theory.

The motivator-hygiene theory expressed a rejection of the conventional belief regarding job satisfaction. It had been assumed that job satisfaction was one overall state of mind which could be affected positively or negatively by all contributing factors. A controversy arose among the advocates of each theory. The conventionalists accused Herzberg's followers of being technique-bound. Countercharges were laid that subjective direct questioning obtained irrelevant material and that only the critical episode technique could be relied upon to obtain true results.

Herzberg's motivator hygiene theory was replicated many times with subjects from various occupational and geographical settings, but it was never satisfactorily applied to teachers. Sergiovanni performed a study on a sample of teachers in northern New York State which supported the theory but his findings could have been influenced by his arbitrary selection of only one factor per episode. Deciding that the study should be repeated in Canada, Wickstrom tested a sample of teachers in Saskatchewan but he had the subjects, themselves, rate the various influences of the factors on their satisfaction and dissatisfaction and his findings were in direct opposition to Herzberg's.

The purpose of this investigation was to test Herzberg's motivator-hygiene theory on a sample of teachers in Carleton County.

The argument concerning the appropriateness of the critical episode technique was reviewed and it was decided to adopt this technique as the most suitable method for obtaining results. The instrument was designed to approximate as closely as possible Herzberg's method for obtaining the episodes. It was sent to a sample of 320 teachers, and responses were received from over seventy-two per cent. The teachers' episodes were read independently by three of six judges who selected the factors contributing to the teachers' satisfaction and dissatisfaction using Herzberg's

categorical scheme. The frequencies with which the factors occurred were totalled and considered a measure of their relative contribution to satisfaction and dissatisfaction.

It was found that the factors selected from the satisfaction episodes centred around the performance of the work and the factors selected from the dissatisfaction episodes concerned the work environment. Thus Herzberg's findings were supported.

The application of Herzberg's motivator-hygiene theory to teachers suggested that further investigation is needed to determine the effects of the factors on teacher job satisfaction and dissatisfaction. If the teachers' episodes, as in Herzberg's initial research, were subjected to an a posteriori method of analysis, the resulting classifications should be more appropriate than those developed from workers in an industrial setting. Secondly, demographic studies would supply badly needed information regarding the effects of factors on various groups of teachers.

The significance of this research to educational administration lies in the suggestion that personnel management has two distinct areas of concern based on man's two separate need systems. In order to circumvent job dissatisfaction, the teachers' work environment must be enhanced. To foster teacher satisfaction and motivation, aspects of the work itself must be modified to include opportunity for

self-actualizing experiences.

The making of the statement regarding teacher satisfaction and dissatisfaction based on human needs, presents a challenge to Boards of Education to take a new look at their school systems.

Questions in the work environment must be confronted, such as, the arrangement of space and its implications, the modes of affiliations, the character of authority relationships, and the effect of the performance of numerous tasks which teachers find trivial or meaningless.

As for the work itself, the recognition of perhaps the most valuable asset in the schools--the experienced teacher--could have far reaching implications on the teacher image and the job design. The question of apprenticeship might be investigated. How many promising teachers abandon the profession because their first year's assignment was what the experienced teacher refused? There must be reasonable class loads with planning time if teachers are not to repeat the old mistakes, whether the setting is traditional or experimental. Opportunity and encouragement might be given teachers to record some of the technical processes of learning and classroom management.

These questions are not new but the motivator-hygiene theory allows us to look at them from a new perspective.

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APPENDIX 1  
QUESTIONNAIRE

## QUESTIONNAIRE

## PART I: GENERAL INFORMATION

In computing the data to this questionnaire neither your identity nor the school to which you belong will be known. None of the questions is considered to be an evaluation. Your cooperation will further our knowledge about how teachers feel towards their work, and hopefully suggest ways in which satisfactions can be increased.

1. Age: under 25 \_\_\_\_, 25 to 34 \_\_\_\_, 35 to 44 \_\_\_\_, over 44 \_\_\_\_.
2. Sex: male \_\_\_\_, female \_\_\_\_.
3. Position of responsibility: teacher \_\_\_\_, principal \_\_\_\_, vice-principal \_\_\_\_.
4. If teacher, level taught: primary \_\_\_\_, junior \_\_\_\_, intermediate \_\_\_\_, secondary \_\_\_\_.
5. If specialist, name area, e.g. music \_\_\_\_\_.
6. If principal or vice-principal, grades of school, e.g. K to 6. \_\_\_\_\_.
7. Total years experience (include this year as one) \_\_\_\_\_.
8. Academic qualifications: List degrees \_\_\_\_\_.  
Number of university courses other than those included in degrees \_\_\_\_\_. Number of Departmental Courses \_\_\_\_\_.
9. Check level paid on salary grid, if applicable:  
D \_\_\_\_ C \_\_\_\_ B \_\_\_\_ A<sub>1</sub> \_\_\_\_ A<sub>2</sub> \_\_\_\_ A<sub>3</sub> \_\_\_\_ A<sub>4</sub> \_\_\_\_.
10. If the architectural plan of your school "open" \_\_\_\_\_  
"closed" \_\_\_\_\_, "combined" \_\_\_\_\_.

## PART II: CRITICAL EPISODE (a)

INSTRUCTIONS: Think of a time when you felt exceptionally good about your job. This should be a fairly recent occasion, within the last two or three years, and may be either a single or a longer-range sequence of events. Briefly, describe what happened in the space below. (All incidents described will be kept confidential; however, you may disguise names and places in any way you wish to assure anonymity.)

What did this experience mean to you?

Was your job performance, career, health, personal life, affected in any way?

## PART III: CRITICAL EPISODE (b)

INSTRUCTIONS: Now think of a time within the past two or three years when you felt exceptionally bad about your job. Briefly describe what happened.

What did this experience mean to you?

Was your job performance, career, health, personal life, affected in any way?

APPENDIX 2  
CORRESPONDENCE

89 Loch Isle Road,  
Ottawa, K2H 8G7,  
April 15, 1974.

Miss Ioma Kerr, President,  
Teachers' Federation of Carleton,  
Bell's Corners Public School,  
3770 Richmond Road,  
Ottawa, Ontario, K2H 7T2.

Dear Ioma and Fellow Members of TFC,

I am conducting a survey of Teacher Job Satisfaction as partial requirements for my MA at Ottawa University.

The study has the support and encouragement of the Carleton Board of Education Research Committee and the Carleton Principals' Association. I would very much like to have the support of the Teachers' Federation of Carleton.

The information gained should be of interest to all those concerned with education. It is time teachers made a decisive statement as to what contributes to their satisfaction and dissatisfaction with suggestions to improve their situation.

My sample includes 250 elementary and secondary school teachers, 35 principals and 35 vice-principals randomly selected by a computer. The questionnaires will take about 10 minutes to complete. The questionnaires are completely anonymous. Neither the name of the respondent nor his school shall be known when the data is being computed. Please encourage all selected teachers to respond promptly. I enclose notices to be posted Wednesday morning. Questionnaires will be delivered in the Wednesday or Thursday interschool mail.

In thanking you, I enclose for the TFC Professional Library, my MODEL TO LINK EDUCATIONAL PRACTICE WITH CONTEMPORARY EDUCATIONAL THEORY. When complete, results of the Satisfaction Study will be made available to you.

Sincerely,

Elizabeth Strachan



89 Loch Isle Rd.,  
Ottawa, K2H 8G7,  
April 8, 1974.

Mr. P. J. Carroll, President,  
Carleton Principals' Association,  
South Carleton High School,  
Richmond, Ontario, KoA 2Z0.

Dear Mr. Carroll and Principals:

This letter is in response to our telephone conversation of April 4.

I am conducting a study on Teacher Job Satisfaction as partial requirements for the M.A. degree at Ottawa University. Beyond such personal considerations, however, I believe the information gained will be of value to all those interested in education, especially administrators. Teachers need to make a convincing statement as to what contributes to their satisfaction and dissatisfaction. The study has the support and encouragement of the Carleton Board of Education Research Committee.

My sample includes 250 elementary and secondary teachers, 35 principals, and 35 vice-principals, all randomly selected by the computer, except that all secondary principals and vice-principals were included so that their representation would not be too small.

The questionnaires will take approximately 10 to 15 minutes to complete. I ask for your support and encouragement of the teachers to respond. I enclose a copy of a letter all secretaries will receive regarding procedures for returning the questionnaires. Please inform your secretaries in advance that they will be receiving these letters.

I realize this is an inconvenience to you but I believe the study will be useful. When complete, results will be made available to you. Questions may be directed to me at 828-6106.

In thanking you I enclose my Model to Link Educational Practice with Contemporary Educational Theory, parts of which may be of value to some of you.

Thank you in anticipation for your assistance.

Sincerely,

(Mrs.) Elizabeth Strachan

Secretary

School

Dear

A list of teachers in your school receiving questionnaires for a teacher survey is on the reverse side of this letter. This survey has the support of the Carleton Board Research Committee and the Carleton Principals' Association.

Would you please check off the teachers' names as they return the sealed envelopes to you. Since the envelopes are to be completely anonymous they are not to have the name of the respondent or school.

When returns are complete, please send the checked list and the sealed envelopes to me through the interschool mail. You may put an elastic around the envelopes but please send the list separately.

If returns are incomplete within two or three days, inform the principal or vice-principal. It is most important that I receive returns from almost everyone. When returns seem as complete as possible please send the checked list to me so if need be, I can make follow up requests to those who have not completed the questionnaire. Please make all returns within one week.

No substitutions please. Names were selected by a computer.

Any questions you have may be directed to me at 828-6106.

I hope this will not cause you too much inconvenience and I thank you sincerely for your assistance.

Sincerely,

(Mrs.) Elizabeth Strachan

Dear Fellow Teacher,

You may have been informed of my desire to conduct a research project among Carleton's elementary and secondary school teachers regarding job satisfaction. This study has the support of the Carleton Board Research Committee.

You have been selected by a computer as one of the 320 participants. Please complete the enclosed questionnaire. It will take approximately 10 to 15 minutes. It is important that I receive completed returns from almost everyone. Answer the questions as honestly as possible and return the sealed envelope to the school secretary. She will check your name off a list which will be sent to me separately in case I have to make follow up requests. Since all replies are anonymous please do not put your name or your school on the questionnaire.

It is time teachers made a convincing statement as to what makes them happy and unhappy on their job and how their situation can be improved. While the study is to fulfill partial requirements for my Master of Arts degree at Ottawa University, I believe it will be of significance generally to all teachers and administrators.

When the study is complete, hopefully by September 1974, results will be made available to you. Any questions can be directed to me at 828-6106.

Having taught 14 years in Carleton, I realize this is an inconvenience to you in your busy schedules and I thank you kindly for your assistance.

Sincerely,

Mrs. Elizabeth Strachan

APPENDIX 3  
ANALYSIS OF FACTORS

## ANALYSIS OF FACTORS

## 1. Recognition--first level

- 0. Not mentioned.
- 1. Work praised--no reward.
- 2. Work praised--reward given.
- 3. Work noticed--no praise.
- 4. Work not noticed.
- 5. Good idea(s) not accepted.
- 6. Inadequate work blamed or criticized--no punishment.
- 7. Inadequate work blamed or criticized--punishment given.
- 8. Successful work blamed or criticized--no punishment.
- 9. Successful work blamed or criticized--punishment given.
- R. Credit for work taken by supervisor or other.
- X. Idea accepted by company.

## 2. Achievement--first level

- 0. Not mentioned.
- 1. Successful completion of job, or aspect of it.
- 2. The having of a good idea--a solution to a problem.
- 3. Made money for the company.
- 4. Vindication--demonstration of rightness to doubters or challengers.
- 5. Failure in job, or aspect of it.
- 6. Seeing results of work.
- 7. Not seeing results of work.

## 3. Possibility of growth--first level

- 0. Not mentioned.
- 1. Growth in skills--objective evidence.
- 2. Growth in status (advancement)--objective evidence.
- 3. Lack of opportunity for growth--objective evidence.

## 4. Advancement--first level

- 0. Not mentioned.
- 1. Received unexpected advancement.
- 2. Received advancement (expected or expectation not mentioned).
- 3. Failed to receive expected advancement.
- 4. Demotion.

## 5. Responsibility--first level

- 0. Not mentioned.
- 1. Allowed to work without supervision.
- 2. Responsible (for his own efforts).
- 3. Given responsibility for the work of others.
- 4. Lack of responsibility.
- 5. Given new responsibility--no formal advancement.

## 6. Salary--first level

- 0. Not mentioned.
- 1. Received wage increase (expected or expectation not mentioned).
- 2. Received unexpected wage increase.
- 3. Did not receive expected increase.
- 4. Received wage increase less or later than expected.
- 5. Amount of salary.
- 6. Wages compare favorably with others doing similar or same job.
- 7. Wages compare unfavorably with others doing similar or same job.

## 7. Interpersonal relations--supervisor--first level

- 0. Not mentioned.
- 1. Friendly relations with supervisor.
- 2. Unfriendly relations with supervisor.
- 3. Learned a great deal from supervisor.
- 4. Supervisor went to bat for him with management.
- 5. Supervisor did not support him with management.
- 6. Supervisor honest.
- 7. Supervisor dishonest.
- 8. Supervisor willing to listen to suggestions.
- 9. Supervisor unwilling to listen to suggestions.
- R. Supervisor gave credit for work done.
- X. Supervisor withheld credit.

## 8. Interpersonal relations--subordinates--first level

- 0. Not mentioned.
- 1. Good working relationship with subordinates.
- 2. Poor working relationship with subordinates.
- 3. Good personal relationship with subordinates.
- 4. Poor personal relationship with subordinates.

## 9. Interpersonal relations--peers--first level

- 0. Not mentioned.
- 1. Liked people he worked with.
- 2. Did not like people he worked with.
- 3. Cooperation of people he worked with.
- 4. Lack of cooperation on the part of his co-workers.
- 5. Was part of a cohesive group.
- 6. Was isolated from group.

## 10. Supervision--technical--first level

- 0. Not mentioned.
- 1. Supervisor competent.
- 2. Supervisor incompetent.
- 3. Supervisor tried to do everything himself.
- 4. Supervisor delegated work well.
- 5. Supervisor consistently critical.
- 6. Supervisor showed favoritism.

## 11. Company policy and administration--first level

- 0. Not mentioned.
- 1. Effective organization of work.
- 2. Harmful or ineffective organization of work.
- 3. Beneficial personnel policies.
- 4. Harmful personnel policies.
- 5. Agreement with company goals.
- 6. Disagreement with company goals.
- 7. High company status.
- 8. Low company status.

## 12. Working conditions--first level

- 0. Not mentioned.
- 1. Work isolated.
- 2. Work in social surroundings.
- 3. Good physical surroundings.
- 4. Poor physical surroundings.
- 5. Good facilities.
- 6. Poor facilities.
- 7. Right amount of work.
- 8. Too much work.
- 9. Too little work.

## 13. The work itself--first level

- 0. Not mentioned.
- 1. Routine.

2. Varied.
  3. Creative (challenging).
  4. Too easy.
  5. Too difficult.
  6. Opportunity to do a whole job--all phases.
14. Factors in personal life--first level
0. Not mentioned.
  1. Family problems.
  2. Community and other outside situations.
  3. Family needs and aspirations salarywise.
15. Status--first level
0. Not mentioned.
  1. Signs or appurtenances of status.
  2. Having a given status.
  3. Not having a given status.
16. Job security--first level
0. Not mentioned.
  1. Tenure or other objective signs of job security.
  2. Lack of objective signs of security (i.e., company instability).
17. Recognition--second level
0. Not mentioned.
  1. First-level factors perceived as source of feelings of recognition.
  2. First-level factors perceived as source of failure to obtain recognition.
  3. First-level factors perceived as source of disapproval.
18. Achievement--second level
0. Not mentioned.
  1. First-level factors perceived as source of achievement.
  2. First-level factors perceived as source of failure.
19. Possible growth--second level
0. Not mentioned.
  1. First-level factors perceived as leading to possible growth.



2. First-level factors perceived as block to growth.
3. First-level factors perceived as evidence of actual growth.

20. Advancement--second level

0. Not mentioned.
1. Feelings of advancement derived from changes in job situation.
2. Feelings of demotion derived from changes in job situation.

21. Responsibility--second level

0. Not mentioned.
1. First-level factors leading to feelings of responsibility.
2. First-level factors as source of feelings of lack of responsibility or diminished responsibility.

22. Group feeling--second level

0. Not mentioned.
1. Feelings of belonging--social.
2. Feelings of isolation--social.
3. Feelings of belonging--sociotechnical.
4. Feelings of isolation--sociotechnical.
5. Positive feelings toward group.
6. Negative feelings toward group.

23. The work itself--second level

0. Not mentioned.
1. First-level factors leading to interest in performance of the job.
2. First-level factors leading to lack of interest in performance of the job.

24. Status--second level

0. Not mentioned.
1. First-level factors as source of feelings of increased status.
2. First-level factors as source of feelings of decreased status.

## 25. Security--second level

- 0. Not mentioned.
- 1. First-level factors as source of feelings of security.
- 2. First-level factors as source of feelings of insecurity.

## 26. Feelings of fairness or unfairness--second level

- 0. Not mentioned.
- 1. First-level factor perceived as fair.
- 2. First-level factor perceived as unfair.
- 3. First-level factor perceived as source of feelings of disappointment in others.

## 27. Feelings of pride or shame

- 0. Not mentioned.
- 1. First-level factors as source of feelings of pride.
- 2. First-level factors as source of feelings of shame.
- 3. First-level factors as source of feelings of diminished pride.

## 28. Salary--second level

- 0. Not mentioned.
- 1. First-level factors perceived as source of ability to improve well-being.
- 2. First-level factors perceived as source of lack of ability to improve well-being.
- 3. First-level factors perceived as source of more money (need undetermined).
- 4. First-level factors perceived as source of lack of more money (need undetermined).

APPENDIX 4  
CODING WORKSHEETS

## CODING WORKSHEET

## Directions:

- A. 1. Read the Subject's Satisfaction Episode.  
 2. Select from below the first level factor(s) contributing to satisfaction.  
 3. Record their corresponding number(s).  
 4. Read the subject's response to the two questions following his episode.  
 5. Select the second level factor(s) from the list below.  
 6. Record their corresponding numbers.
- B. Do the same for the subject's dissatisfaction episode.

## First Level Factors

1. Recognition
2. Achievement
3. Growth
4. Advancement
5. Responsibility
6. Salary
7. Interpersonal relations with superiors
8. Interpersonal relations with subordinates
9. Interpersonal relations with peers
10. Supervision--technical
11. School policy and administration
12. Working conditions
13. Work itself
14. Personal life
15. Status
16. Security

## Second Level Factors

17. Recognition
18. Achievement
19. Growth
20. Advancement
21. Responsibility
22. Group feeling
23. Work itself
24. Status
25. Security
26. Fairness-unfairness
27. Pride, guilty inadequacies
28. Salary

Note: On following pages U refers to unanimous choice; M to majority choice, and C to to consensus choice.

| SATISFACTION     |             |   |                  |   | DISSATISFACTION  |   |    |                  |  |
|------------------|-------------|---|------------------|---|------------------|---|----|------------------|--|
| 1st level factor |             |   | 2nd level factor |   | 1st level factor |   |    | 2nd level factor |  |
| Critical Episode |             |   | What it meant... |   | Critical Episode |   |    | What it meant... |  |
| 1 - 16           |             |   | 17 - 28          |   | 1 - 16           |   |    | 17 - 28          |  |
| 1                | 2           | U | 18               | U | 8, 13            | U | 26 | U                |  |
| 2                | 2           | U | 18               | U | --               | U | -- | U                |  |
| 3                | 1           | U | 25               | U | 1                | U | 18 | U                |  |
| 4                | 5           | M | 18               | U | --               | U | -- | U                |  |
| 5                | 2           | U | 18               | U | 13               | U | 25 | U                |  |
| 6                | 7           | U | 25               | U | 12               | U | 26 | U                |  |
| 7                | 2           | U | 18               | U | 8                | U | 18 | U                |  |
| 8                | 8           | U | --               | U | 12               | U | 23 | U                |  |
| 9                | 7           | U | 18,22            | U | 11               | U | 26 | U                |  |
| 10               | 5           | U | 18,19            | U | 12               | U | 22 | U                |  |
| 11               | 8           | U | 18               | U | 8,11             | U | 26 | U                |  |
| 12               | 8           | U | --               | U | 9,11             | U | 22 | U                |  |
| 13               | 2           | M | 18               | U | 9                | U | 22 | U                |  |
| 14               | 13          | M | 19               | U | 7                | U | 25 | U                |  |
| 15               | 13          | M | 19               | U | 12               | U | 26 | U                |  |
| 16               | 2           | U | 18               | U | 6                | U | 28 | U                |  |
| 17               | 1,2         | U | 18               | U | 2                | U | 18 | U                |  |
| 18               | 2           | U | 18,22            | U | 13               | U | 21 | U                |  |
| 19               | 2,13        | U | 18               | U | 9                | U | -- | U                |  |
| 20               | not codable | U | --               | U | 11,15            | U | 25 | U                |  |
| 21               | 13          | U | 18               | U | 9                | U | 22 | U                |  |
| 22               | 7           | U | 19               | U | 7,10             | U | 22 | U                |  |

| SATISFACTION     |     |                  |          |   | DISSATISFACTION  |   |                  |   |  |
|------------------|-----|------------------|----------|---|------------------|---|------------------|---|--|
| 1st level factor |     | 2nd level factor |          |   | 1st level factor |   | 2nd level factor |   |  |
| Critical Episode |     | What it meant... |          |   | Critical Episode |   | What it meant... |   |  |
| 1 - 16           |     | 17 - 28          |          |   | 1 - 16           |   | 17 - 28          |   |  |
| 23               | 2   | U                | 18       | U | 10               | U | 22               | U |  |
| 24               | 13  | U                | 19       | U | 10               | U | 22               | M |  |
| 25               | 2   | U                | 18       | U | 7                | U | 22               | U |  |
| 26               | 1   | U                | 23       | U | 1                | U | not codable      | U |  |
| 27               | 9   | U                | 25       | M | 10               | U | 25               | M |  |
| 28               | 2   | U                | --       | U | 6                | U | 22               | U |  |
| 29               | 10  | U                | 25       | U | 10               | U | 22,25            | M |  |
| 30               | 13  | U                | 18       | U | 11               | U | 26               | U |  |
| 31               | 13  | U                | 18,27    | U | 2                | U | 27               | U |  |
| 32               | 1,2 | U                | 18       | U | 4                | U | 17               | U |  |
| 33               | 2   | U                | 18       | U | 9                | U | 18               | U |  |
| 34               | 13  | U                | 18       | U | 1                | U | 27               | U |  |
| 35               | --  | U                | --       | U | 7                | U | --               | U |  |
| 36               | 2   | U                | 18       | U | 11               | U | 26               | U |  |
| 37               | 9   | U                | 18       | U | 11               | U | 26               | U |  |
| 38               | 8   | U                | 19       | U | 2                | U | 27               | U |  |
| 39               | --  | U                | --       | U | 11               | U | 26               | U |  |
| 40               | --  | U                | --       | U | 2                | U | 27               | U |  |
| 41               | 13  | U                | 18       | U | 10               | U | 25               | U |  |
| 42               | 13  | U                | 17,18,22 | U | 11,12,13         | U | 19,23            | U |  |
| 43               | 8   | U                | 18       | U | 8,9              | U | --               | U |  |
| 44               | 6   | U                | 28       | U | 11               | U | 22               | U |  |

| SATISFACTION     |      |   |                  |   | DISSATISFACTION  |   |             |                  |  |
|------------------|------|---|------------------|---|------------------|---|-------------|------------------|--|
| 1st level factor |      |   | 2nd level factor |   | 1st level factor |   |             | 2nd level factor |  |
| Critical Episode |      |   | What it meant... |   | Critical Episode |   |             | What it meant... |  |
| 1 - 16           |      |   | 17 - 28          |   | 1 - 16           |   |             | 17 - 28          |  |
| 45               | 7    | U | 18,19            | U | 11               | U | 19          | U                |  |
| 46               | 9    | U | --               | U | 11               | U | --          | U                |  |
| 47               | 8,13 | U | 18               | U | 11               | U | not codable | U                |  |
| 48               | --   | U | --               | U | 6                | U | 28          | U                |  |
| 49               | 2    | U | 17,19            | U | 7                | U | 19          | U                |  |
| 50               | 7    | U | --               | U | 11               | U | --          | U                |  |
| 51               | 11   | U | 18               | U | 11               | U | 18          | U                |  |
| 52               | 1,2  | U | 22               | U | 11               | U | 19          | U                |  |
| 53               | 8    | M | 19               | U | 11               | U | --          | U                |  |
| 54               | 2,8  | U | 18               | U | 9,14             | U | 22          | U                |  |
| 55               | 13   | U | 18               | U | 13               | U | --          | U                |  |
| 56               | 2    | U | 23               | U | 11               | U | 21          | U                |  |
| 57               | --   | U | --               | U | 9,12             | U | --          | U                |  |
| 58               | 2    | U | 19               | U | 6                | U | 24          | U                |  |
| 59               | 1    | U | 19               | U | not codable      | U | --          | U                |  |
| 60               | 13   | U | 18               | U | 13               | U | 18          | U                |  |
| 61               | 1,13 | U | 17               | U | 9                | U | 22          | U                |  |
| 62               | 9    | U | 17               | M | 9                | U | --          | U                |  |
| 63               | 8    | U | 18               | U | 2                | U | 18          | M                |  |
| 64               | 9    | U | 19               | U | 11               | U | 23          | U                |  |
| 65               | 13   | M | 18,27            | U | 8                | U | --          | U                |  |
| 66               | 8    | U | 17               | U | 8                | U | --          | U                |  |

| SATISFACTION     |             |   |                  | DISSATISFACTION |                  |   |       |                  |  |
|------------------|-------------|---|------------------|-----------------|------------------|---|-------|------------------|--|
| 1st level factor |             |   | 2nd level factor |                 | 1st level factor |   |       | 2nd level factor |  |
| Critical Episode |             |   | What it meant... |                 | Critical Episode |   |       | What it meant... |  |
| 1 - 16           |             |   | 17 - 28          |                 | 1 - 16           |   |       | 17 - 28          |  |
| 67               | 8           | U | --               | U               | 12               | U | --    | U                |  |
| 68               | 1           | U | --               | U               | 10               | U | 22    | U                |  |
| 69               | 5           | U | 17               | U               | 10               | U | 24    | U                |  |
| 70               | 2,13        | U | 18               | U               | 9                | U | --    | U                |  |
| 71               | 2           | U | 18               | U               | 7,8              | U | --    | U                |  |
| 72               | 8,13        | U | 18               | U               | --               | U | --    | U                |  |
| 73               | 11          | U | 19               | U               | 11,12            | U | 23,24 | U                |  |
| 74               | 1,2         | U | 17,25            | U               | 10               | U | 22    | U                |  |
| 75               | 1,2         | U | 18               | U               | 11,13            | U | 23    | U                |  |
| 76               | 2,13        | U | 22               | U               | 13               | U | 23    | U                |  |
| 77               | 13          | U | 18               | U               | 11,13            | U | 18    | U                |  |
| 78               | 2           | M | 18               | U               | 11,13            | U | 26    | M                |  |
| 79               | 13          | U | 22               | U               | 1                | U | 18    | U                |  |
| 80               | 5           | U | 17               | U               | 11,13            | U | 26    | U                |  |
| 81               | --          | U | --               | U               | 11               | U | 22,26 | U                |  |
| 82               | 2,8         | U | 19               | U               | 8,13             | U | 18,27 | U                |  |
| 83               | not codable | U | --               | U               | 6                | U | 28    | U                |  |
| 84               | 2,13        | U | 18               | U               | 11               | U | 23    | U                |  |
| 85               | 5           | U | 18               | U               | 13               | U | --    | U                |  |
| 86               | 16          | U | 17,25            | U               | 10               | U | 18    | U                |  |
| 87               | 7           | U | 22               | U               | 9                | U | --    | U                |  |
| 88               | 2,5         | U | 17,18            | U               | --               | U | --    | U                |  |



| SATISFACTION     |       |   |                  |   | DISSATISFACTION  |   |             |                  |  |
|------------------|-------|---|------------------|---|------------------|---|-------------|------------------|--|
| 1st level factor |       |   | 2nd level factor |   | 1st level factor |   |             | 2nd level factor |  |
| Critical Episode |       |   | What it meant... |   | Critical Episode |   |             | What it meant... |  |
| 1 - 16           |       |   | 17 - 28          |   | 1 - 16           |   |             | 17 - 28          |  |
| 89               | 2     | U | 18,27            | U | 2,8              | U | 18,25       | U                |  |
| 90               | 2     | U | 25               | U | --               | U | --          | U                |  |
| 91               | 1,2   | U | 18,22            | U | 2                | U | 22          | U                |  |
| 92               | 1     | U | 18               | U | 10               | U | 26          | U                |  |
| 93               | 2     | U | 22               | U | 11               | U | not codable | U                |  |
| 94               | 8     | U | 18               | U | --               | U | --          | U                |  |
| 95               | 12    | U | 18               | U | 11,12,13         | U | 18,26       | U                |  |
| 96               | 13    | U | 23               | U | 12               | U | 23          | U                |  |
| 97               | 5     | U | 19,23            | U | --               | U | --          | U                |  |
| 98               | 11,13 | U | 19               | U | 9,11,12          | U | 18,26       | U                |  |
| 99               | 2,13  | U | 17,18            | U | 6,15             | U | 23          | U                |  |
| 100              | 1     | U | 17               | U | 11               | U | 26          | U                |  |
| 101              | 8     | U | 17,18            | U | 2,8              | U | 18          | U                |  |
| 102              | 8     | U | 17               | U | 6,11             | U | 19,24       | U                |  |
| 103              | 11    | U | 18,19            | U | 13               | U | --          | U                |  |
| 104              | 12    | U | 19,23            | U | 11               | U | 23          | U                |  |
| 105              | 1     | U | 18               | U | 8,12             | U | 25          | U                |  |
| 106              | 2     | U | 22               | U | 6                | U | 25          | U                |  |
| 107              | 1     | U | 18               | U | --               | U | --          | U                |  |
| 108              | 2     | U | 17,18            | U | 6                | U | 28          | U                |  |
| 109              | 7,11  | U | 23               | U | 10               | U | 22          | U                |  |
| 110              | 1     | M | 18,25            | U | 8,12             | U | 22,27       | U                |  |

| SATISFACTION     |        |                  |       |   | DISSATISFACTION  |   |                  |   |  |
|------------------|--------|------------------|-------|---|------------------|---|------------------|---|--|
| 1st level factor |        | 2nd level factor |       |   | 1st level factor |   | 2nd level factor |   |  |
| Critical Episode |        | What it meant... |       |   | Critical Episode |   | What it meant... |   |  |
| 1 - 16           |        | 17 - 28          |       |   | 1 - 16           |   | 17 - 28          |   |  |
| 111              | 2,5,13 | U                | 18    | U | 12               | U | 19               | U |  |
| 112              | 8,9    | U                | 22    | U | 2,13             | U | 27               | U |  |
| 113              | 11,13  | U                | 18    | U | 11,12            | U | 18               | U |  |
| 114              | 12,13  | U                | 18    | U | 11,12            | U | 26               | U |  |
| 115              | 1      | U                | 23    | U | 12               | M | not codable      | U |  |
| 116              | 2      | U                | 18    | U | --               | U | --               | U |  |
| 117              | 9      | U                | --    | U | --               | U | --               | U |  |
| 118              | 5      | U                | 18,27 | U | 11               | U | 26               | U |  |
| 119              | 6,13   | U                | 23    | U | --               | U | --               | U |  |
| 120              | 13     | U                | 18    | U | --               | U | --               | U |  |
| 121              | 4      | U                | 23    | U | 10               | U | 23,26,27         | U |  |
| 122              | 4      | U                | 23    | U | 2,8              | U | 18               | U |  |
| 123              | 2      | U                | 23    | M | 9                | U | 23               | U |  |
| 124              | 9,10   | U                | 19    | U | 6                | U | 22,25            | U |  |
| 125              | 2      | U                | 18    | U | 6                | U | 25               | U |  |
| 126              | 13     | U                | 18    | U | not codable      | U | not codable      | U |  |
| 127              | 5,13   | U                | 18    | U | 9,13             | U | --               | U |  |
| 128              | 1      | M                | 18    | U | 2,8              | U | 27               | U |  |
| 129              | 13     | M                | 17,18 | U | 12               | U | --               | U |  |
| 130              | 2      | U                | 18    | U | 9,11             | U | --               | U |  |
| 131              | 5,13   | U                | 19    | U | 1,8              | U | not codable      | U |  |
| 132              | 8      | U                | 22    | U | 8                | U | 22               | U |  |

| SATISFACTION     |       |                  |       |   | DISSATISFACTION  |   |                  |   |  |
|------------------|-------|------------------|-------|---|------------------|---|------------------|---|--|
| 1st level factor |       | 2nd level factor |       |   | 1st level factor |   | 2nd level factor |   |  |
| Critical Episode |       | What it meant... |       |   | Critical Episode |   | What it meant... |   |  |
| 1 - 16           |       | 17 - 28          |       |   | 1 - 16           |   | 17 - 28          |   |  |
| 133              | --    | U                | --    | U | 12               | U | --               | U |  |
| 134              | 1     | U                | 18    | U | --               | U | --               | U |  |
| 135              | 1     | U                | 22,27 | U | 11               | U | 23               | U |  |
| 136              | 5     | U                | 17,23 | U | 9                | U | 27               | U |  |
| 137              | 9,13  | U                | 23    | U | 8,12             | U | 27               | U |  |
| 138              | 2,13  | U                | 18    | U | 6                | M | 25               | U |  |
| 139              | 2,8   | U                | 18    | U | --               | U | --               | U |  |
| 140              | 8     | U                | 18    | U | --               | U | --               | U |  |
| 141              | 2,8   | U                | 22    | U | 8                | U | 23               | U |  |
| 142              | 1,8   | U                | 18,23 | U | 11               | U | --               | U |  |
| 143              | 8     | U                | --    | U | 12               | U | 23               | U |  |
| 144              | 8     | U                | 18    | M | 11               | U | 22               | U |  |
| 145              | 12    | U                | 18    | U | 12               | U | 18               | U |  |
| 146              | 1     | U                | 18    | U | 11               | U | 23               | U |  |
| 147              | 2,5,9 | U                | 23    | U | 9                | U | --               | U |  |
| 148              | 13    | U                | 18    | U | --               | U | --               | U |  |
| 149              | 2     | U                | 22    | U | 2,8              | U | 18               | U |  |
| 150              | 1     | U                | 18    | U | 13               | U | 27               | U |  |
| 151              | 13    | U                | 18    | U | 12               | U | --               | U |  |
| 152              | 3,8   | M                | 18    | U | 8                | U | not codable      | U |  |
| 153              | 4     | U                | --    | U | 1,11             | U | --               | U |  |
| 154              | --    | U                | --    | U | 11               | U | 22               | U |  |

| SATISFACTION     |     |   |                  |   | DISSATISFACTION  |   |             |                  |  |
|------------------|-----|---|------------------|---|------------------|---|-------------|------------------|--|
| 1st level factor |     |   | 2nd level factor |   | 1st level factor |   |             | 2nd level factor |  |
| Critical Episode |     |   | What it meant... |   | Critical Episode |   |             | What it meant... |  |
| 1 - 16           |     |   | 17 - 28          |   | 1 - 16           |   |             | 17 - 28          |  |
| 155              | 8   | U | 18               | U | 10               | U | --          | U                |  |
| 156              | 1,8 | U | 23               | U | 8                | U | 18          | U                |  |
| 157              | 1   | U | 22               | U | 2                | U | --          | U                |  |
| 158              | 2   | U | 18               | U | 11               | U | 27          | U                |  |
| 159              | 9   | U | 19               | U | --               | U | --          | U                |  |
| 160              | 1   | U | 18               | U | 10               | U | 23          | U                |  |
| 161              | 13  | U | 18               | U | --               | U | --          | U                |  |
| 162              | 8   | M | 18,22            | M | 11               | U | --          | U                |  |
| 163              | 8   | U | 18               | U | 11               | U | 21          | U                |  |
| 164              | 13  | U | 18               | U | 11               | U | 23          | U                |  |
| 165              | 13  | U | 23               | U | 3                | U | 23          | U                |  |
| 166              | 1   | U | 18               | U | 10               | U | 26          | U                |  |
| 167              | 2   | U | 18               | U | 8,11             | U | 22          | U                |  |
| 168              | 5,8 | U | 22               | U | 11               | U | 26          | U                |  |
| 169              | 13  | U | 18               | U | 9                | U | not codable | U                |  |
| 170              | 11  | U | 25               | M | 10,14            | U | 27          | U                |  |
| 171              | 12  | U | 22               | U | 10               | U | 19          | U                |  |
| 172              | 2   | U | 27               | U | 11               | U | 22          | U                |  |
| 173              | 1   | U | --               | U | 10               | U | 22          | U                |  |
| 174              | 8   | U | 18               | U | 12               | U | 18          | U                |  |
| 175              | --  | U | --               | U | 2                | U | 18          | U                |  |
| 176              | 2   | U | 18               | U | 13               | U | 18          | U                |  |

| SATISFACTION     |      |   |                  |   | DISSATISFACTION  |   |             |                  |   |
|------------------|------|---|------------------|---|------------------|---|-------------|------------------|---|
| 1st level factor |      |   | 2nd level factor |   | 1st level factor |   |             | 2nd level factor |   |
| Critical Episode |      |   | What it meant... |   | Critical Episode |   |             | What it meant... |   |
| 1 - 16           |      |   | 17 - 28          |   | 1 - 16           |   |             | 17 - 28          |   |
| 177              | 13   | U | 19               | U | --               | U | --          |                  | U |
| 178              | 6    | U | 28               | U | 6                | U | 28          |                  | U |
| 179              | 5,11 | U | 21               | M | 1                | U | 17          |                  | U |
| 180              | 13   | U | 22               | U | 11               | U | 23          |                  | U |
| 181              | 3    | U | 17               | U | 12               | U | 18          |                  | U |
| 182              | 8    | U | 18               | U | 9                | U | 17          |                  | U |
| 183              | 8    | U | 23               | U | 12               | U | 23          |                  | U |
| 184              | 13   | U | 18               | U | --               | U | --          |                  | U |
| 185              | --   | U | --               | U | 11               | U | 21          |                  | U |
| 186              | 2    | U | 18               | U | 12               | U | 18          |                  | U |
| 187              | 3    | U | 17,19            | U | 11               | U | not codable |                  | U |
| 188              | --   | U | --               | U | 3                | U | 23          |                  | U |
| 189              | 13   | U | 18               | U | 8                | U | 27          |                  | U |
| 190              | 1,2  | U | 23               | U | --               | U | --          |                  | U |
| 191              | --   | U | --               | U | 11,12            | U | --          |                  | U |
| 192              | 2    | U | --               | U | 8                | U | 23          |                  | U |
| 193              | 13   | U | 18               | U | --               | U | --          |                  | U |
| 194              | 1    | U | 18               | U | 1,12             | M | 26          |                  | U |
| 195              | 2,8  | U | 18               | U | 11               | U | 27          |                  | U |
| 196              | 2    | U | 17               | U | --               | U | --          |                  | U |
| 197              | 13   | U | --               | U | --               | U | --          |                  | U |
| 198              | 13   | U | 18               | U | --               | U | --          |                  | U |

| SATISFACTION     |        |   |                  | DISSATISFACTION |                  |   |       |                  |  |
|------------------|--------|---|------------------|-----------------|------------------|---|-------|------------------|--|
| 1st level factor |        |   | 2nd level factor |                 | 1st level factor |   |       | 2nd level factor |  |
| Critical Episode |        |   | What it meant... |                 | Critical Episode |   |       | What it meant... |  |
| 1 - 16           |        |   | 17 - 28          |                 | 1 - 16           |   |       | 17 - 28          |  |
| 199              | 8      | U | 18               | U               | 7,11             | U | 19    | U                |  |
| 200              | 2,9,13 | U | 18,19            | U               | 8,9              | U | 18    | U                |  |
| 201              | 2,8    | U | --               | U               | 9                | U | --    | U                |  |
| 202              | 2      | U | 18               | U               | 8                | U | 22,23 | U                |  |
| 203              | 2      | U | 22               | U               | 11               | U | --    | U                |  |
| 204              | 12     | U | 22,23            | U               | 12               | U | 23    | U                |  |
| 205              | 1,2    | U | 25               | U               | 7                | U | 26    | U                |  |
| 206              | 1,3    | U | 17               | U               | 11               | U | 25    | U                |  |
| 207              | 13     | U | 18               | U               | 12,13            | U | --    | U                |  |
| 208              | 1      | U | 18               | U               | 8,13             | U | --    | U                |  |
| 209              | 1,9,13 | U | 23               | U               | 11               | U | 22    | U                |  |
| 210              | 3      | U | 19               | U               | 7                | U | 19    | U                |  |
| 211              | 2,8    | U | 18               | U               | 7                | U | 17    | U                |  |
| 212              | 13     | U | 18               | U               | 12               | U | 24    | M                |  |
| 213              | 2,13   | U | 19               | U               | 12               | U | 18    | U                |  |
| 214              | 2      | U | --               | U               | 13               | U | 18    | U                |  |
| 215              | 9      | U | 22               | U               | 10               | U | 22    | U                |  |
| 216              | 2      | U | 18               | U               | 2                | U | --    | U                |  |
| 217              | 2,8    | U | 17,18            | U               | 10               | U | 22    | U                |  |
| 218              | 8      | U | 18               | U               | 8                | U | 22    | U                |  |
| 219              | 1,2    | U | 18               | U               | 7,11             | U | 18    | U                |  |
| 220              | 1      | U | 17               | U               | 7                | U | 26    | U                |  |

| SATISFACTION     |      |                  |       |   | DISSATISFACTION  |   |                  |   |  |
|------------------|------|------------------|-------|---|------------------|---|------------------|---|--|
| 1st level factor |      | 2nd level factor |       |   | 1st level factor |   | 2nd level factor |   |  |
| Critical Episode |      | What it meant... |       |   | Critical Episode |   | What it meant... |   |  |
| 1 - 16           |      | 17 - 28          |       |   | 1 - 16           |   | 17 - 28          |   |  |
| 221              | 1,7  | U                | 19,22 | M | 7,9              | U | 23               | U |  |
| 222              | 1    | U                | 18    | U | 12,13            | U | 18               | U |  |
| 223              | 7    | U                | 18    | U | 9                | U | 22               | U |  |
| 224              | 13   | U                | 18    | U | 12               | U | 23               | U |  |
| 225              | 13   | U                | 18    | U | --               | U | --               | U |  |
| 226              | 2,13 | U                | 22    | U | 7,11             | U | 23               | U |  |
| 227              | 2    | U                | 18    | U | 11               | U | 26               | U |  |
| 228              | 11   | U                | 22    | U | 11               | U | --               | U |  |
| 229              | 13   | U                | 18    | U | 10               | M | 22               | U |  |
| 230              | 2    | U                | 18    | U | --               | U | --               | U |  |
| 231              | 1    | U                | 18    | U | 2                | U | --               | U |  |

APPENDIX 5

ABSTRACT OF

AN APPLICATION OF HERZBERG'S MOTIVATOR-HYGIENE THEORY  
TO TEACHER JOB SATISFACTION



## ABSTRACT OF

An Application of Herzberg's Motivator-Hygiene Theory  
to Teacher Job Satisfaction<sup>1</sup>

In 1959 Herzberg published a theory of job satisfaction called the motivator-hygiene theory. It stated that job satisfaction and job dissatisfaction are two separate experiences. Job satisfaction is the result of motivators, which are factors concerned with the performance of the work. Job dissatisfaction is the result of hygiene factors, which are concerned with the work environment.

The critical episode technique has been demonstrated to be the appropriate test of the theory. It is based on an analysis of factors found in unusually satisfying or dissatisfying job experiences related by employees. Herzberg tested his theory on accountants and engineers, in the Pittsburgh area, who were ideal subjects because they were articulate and the nature of their work allowed them to give vivid accounts of their work experiences. Herzberg recommended replications in other occupations.

In education the theory has received little attention. Sergiovanni tested teachers in New York State but his method of factor selection differed. Wickstrom conducted

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<sup>1</sup> Elizabeth Strachan, Master thesis presented to the School of Graduate Studies of the University of Ottawa, 1975, x-120 p.

a test in Saskatchewan but he used a rating scale method.

Since a satisfactory test of the motivator-hygiene theory on a sample of teachers had not yet been accomplished, that became the purpose of this study.

The research hypotheses were:

- The factors contributing to job satisfaction of teachers are different than the factors contributing to the dissatisfaction of teachers, and further that,
- a) The factors contributing to the job satisfaction of teachers are related to the performance of the job.
  - b) The factors contributing to the job dissatisfaction of teachers are related to the work environment.

The subjects were 179 teachers, 27 principals and 25 vice-principals working for the Carleton Board of Education.

Herzberg's critical episode technique was followed as closely as possible except that the technique used was a questionnaire rather than an interview.

The conclusions demonstrated that the motivation-hygiene theory can be applied to teachers.

Because there was some difficulty in applying Herzberg's analysis of factors to the educational scene, suggestions for future research included an a posteriori method of analysis of the teachers' episodes.

The implication of the study to teacher administration results in two separate areas of concern: the prevention of job dissatisfaction, and the motivation and satisfaction of teachers.