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THE USE OF THE WEITZ-EVANS COMMUNITY  
CHECKLIST IN THE RETAIL APPLIANCE  
SALES FIELD: A VALIDATION STUDY

A THESIS

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By

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## CHAPTER I

### INTRODUCTION

Nowhere in the history of the development of psychological tests can there be found any single period that surpasses, in terms of both quantity and quality of contributions made, that of World War II. The valuable findings of research conducted during this period have served as the strongest impetus that psychological tests have yet received. Research of the World War II period was responsible, to a large extent, for outlining the way to innumerable possibilities for the use of the testing technique. Progressive minded individuals in the areas of business and industry were quick to note the potential of this technique. They saw, in the use of psychological tests, the solution to many of their problems, particularly those associated with the selection and placement of employees. Consequently, the use of psychological tests for purposes of personnel selection in business and industry has been steadily increasing since that time.

However, favorable experiences with psychological tests in business and industry has not always been the case. Misuse and abuse of the technique has, on occasions, given rise to some very costly and damaging effects.

Extensive use of psychological tests as a tool in personnel selection has brought about a realization on the part of business and industry that (1) when properly used, the testing technique is able to satisfy a need for objective information that is difficult to obtain from any of the other selection devices; (2) that there are definite limitations beyond which the efficacy of psychological tests rapidly decreases; (3) that a test, in order to be of real value, must conform with all the requirements of a truly scientific device; (4) that test administrators and interpreters must be more than just casually trained in the field of testing; that the predictive value of the testing device is directly related to the amount of skill possessed by the individuals handling the administration of it and the interpretation of the data obtained; and (5) that a worthwhile testing program is not inexpensive.

An indication of the high degree of popularity now being experienced by psychological tests in business and industry can be discerned from the fact that a num-

ber of business organizations have set up separate testing sections within the framework of their general personnel operations. The principle concern of these testing sections is one of research. They are constantly active in their work of modifying, altering, redesigning, re-evaluating and generally improving tests already in use, as well as developing new tests. They are genuinely interested in their search for new vistas through which they may promote their stock-in-trade. By reviewing various job areas and job classifications, these testing specialists are able to uncover many needs for their services. In so doing they create a condition in which the demand far exceeds the supply. Such a relation of demand and supply exists in the job classification that has been the inspiration for the present investigation, viz, retail appliance salesman.

Probably because of the diversity of the qualifications demanded of a good salesman, there is an ever present need for aids in the selection of same. The testing device has proved to be among the more prolific sources for providing this aid, and as a result its use in sales personnel selection is continually increasing. A recent American Management Association publication states that

Available data indicates a great increase, over the past 13 years, in the use of tests in selecting salesmen. For example, out of 178 companies responding to A.M.A.'s survey, 95 (or 53 per cent) use tests, as compared to 25 per cent of companies covered by a similar A.M.A. survey in 1941. <sup>1</sup>

The intention of the present study is to investigate the possibility of employing an established test as a means of distinguishing among personnel in a job classification never before exposed to this particular test. The test, Weitz-Evans Community Checklist - Form F, will be subjected to a series of validations that will bring forth the information necessary for determining whether or not the technique can discriminate between successful and less successful retail appliance sales personnel.

Stated more specifically, the hypothesis of this project is: the Weitz-Evans Community Checklist - Form F will not effectively discriminate between successful and less successful individuals employed in the retail appliance sales field.

The term "attitude" will appear quite frequently throughout this report. It should be understood, unless there is an indication to the contrary, that the term is meant to apply in its primary sense; that is, to represent the inclination to respond in a fairly



definite, regular manner to conditions, situations, circumstances, etc. that have to do with basic standards, values, and other regulative principles which have been established by the individual as his fundamental guides. An attitude may vary slightly from time to time but generally the pattern of responses will remain consistent. 2

It is intended that this section serve to introduce both the general and specific theme of the project, and to describe the relationship between them. It is hoped that an elaboration of this relationship can be developed through an arrangement of material in the following manner: Chapter II - a review of the literature, Chapter III - an explanation of the techniques and methodology employed, Chapter IV - presentation of findings, and Chapter V - summary and discussion of findings.

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## CHAPTER II

### A REVIEW OF THE LITERATURE

The literature of a psychological nature that is directed toward the very broad, generic problem to which this study is related has grown, especially in recent years, to voluminous proportions. There are very few text books in general psychology that do not devote at least one section of their contents to the treatment of the use of psychological tests and the problems therein; in fact, there are many text books that are dedicated entirely to the treatment of this subject. The psychological journals, bulletins and similar publications literally abound with reports and articles covering various aspects of this problem. However, as the specificity of certain aspects of the problem increases the availability of pertinent literature decreases. Such is the case with the present study. Even though there is an abundance of literature that is, in varying degrees, kindred to this study, yet none of it can be considered to be related in a direct sense.

Nevertheless, there is an area of investigation reported in the literature that does contribute to a deeper appreciation of those aspects of the general problem with which this project is concerned. The area referred to is that of attitudes and productivity. A survey of the findings of some of the studies conducted in this area will lead to a more intimate acquaintance with the relationship of attitudes to productivity and the effects of one upon the other. In order to fully understand the purpose of the present investigation, information of this type is imperative.

In the early period of the investigation of worker productivity, the physical environment commanded the center of attention; lighting, ventilation, arrangement of work benches and other predominantly physical conditions were held to be of prime importance. Since then, however, there has been a gradual shift of emphasis to the human relations factors. Even as early as 1920, there were some writers who were attempting to persuade investigators to direct their efforts toward the possibilities to be found in the area of human relations. 1, 2, 3, 4 The labor of these early champions for the importance of the role of human relations was not in vain; today they can boast of a situation

in which there is practically unanimous agreement as regards the importance of certain elements of this field in determining worker productivity.

One such factor that has received particular attention is that of attitudes. Workers' attitudes are considered by the leaders of business and industry to be one of the most significant influences on the future of their fields. <sup>5</sup>

As regards the effects of job attitudes on productivity, the available literature lists the findings of twenty six studies. Of these, fourteen indicate a positive relationship between favorable job attitudes and production. Three studies present results that point to a negative relationship; that is, workers manifesting unfavorable attitudes have a production rate that is higher than those manifesting a more favorable set of attitudes. The findings of nine of the projects reveal that there is no relation whatsoever between the two factors.

The following table is presented as a summary of the above mentioned studies.

TABLE I  
 REPORTED STUDIES ON THE RELATION  
 OF JOB ATTITUDES TO PRODUCTIVITY

Classification of Job	Attitude Technique	Production Criterion	General Conclusion
Sewing Machine Opers. - N=26	Questionnaire	Supervisor Rating	Positive Relation
Mail Order House - N=61	Questionnaire	Efficiency	Positive Relation
Handicapped Mach. Ops.-N=64	Interviews - Ratings	Piece Work Pay Rate	Positive Relation
Co. Agri.- 4H Agents - N=148	Questionnaire	Supervisor Rating	Positive Relation
Farmers N=208	Questionnaire	Net Earnings	Positive Relation
High School Teachers - N=2	Questionnaire	Student Achievement	Positive Relation
Office Indl. Plant - N=80	Attitude Toward Super.	Rating by Executives	Positive Relation
Const. Trade Workers - N=18	Kerr Tear Bal. Questionnaire	Cost Per Bldg. Unit	Positive Relation
Air. Maint. Crews - N=17	Questionnaire	Test Scores and Ratings	Positive Relation
Insurance Agents - N=73	Statements and Rating of Att.	Sales and Ratings	Positive Relation
Factory Empls. N=83	"Mood" report	Percentage of Output	Positive Relation
Insurance Agents - N=115	Questionnaire	Number of Policies	Positive Relation
Ins. Agents Tenn. - N=114	Questionnaire	Number of Policies	Positive Relation

TABLE I (CONTINUED)

Classification of Job	Attitude Technique	Production Criterion	General Conclusion
Bus Conductors N=81	Questionnaire	Earnings, Ratings, Reprimands	Positive Relation
Office Ins. Co. N=185	Questionnaire Knowledge of Co. Activities	Test Scores and Ratings	No Relation
Office Ins. Co. N=98	Interview and Questioning	Group Prod. Records	No Relation
Grocery Store Clerks - N=71	Questionnaire Projectives	Work History Records	No Relation
AAF Civil. Per- sonnel - N=63	Questionnaire Morale Rating	Efficiency and Amount	No Relation
Ins. Co. IBM Ops. N=58	Questionnaire	Supervisor Rating	No Relation
Factory Semi - Skilled - N=158	Questionnaire	Record of Output	No Relation
Working College Students - N=11	Estimate of Work Group	Efficiency	No Relation
Factory Female N=108	Questionnaire	Efficiency	No Relation
Factory Air- craft - N=14	Questionnaire and Morale	Merit Rating	No Relation
Linotype Oper- ators - N=4	Questionnaire	Supervisor Rating	Negative Relation
Railroad Empls. N=99	Interview	Supervisor Rating	Negative Relation
Railroad Track Maint. - N=120	Intensive Interview	Supervisor Rating	Negative Relation

Because of the utter lack of consistency, a comparison study of these investigations is practically impossible. Each deals with a different job category in a different company; each employs a different device for measuring attitude, and it appears as though any similarity that might exist among the various standards used for determining the production criterion is the result of pure coincidence.

For anyone planning to conduct additional research on the effects of attitudes, a review of the literature will prove to be of very limited value. Due to the contradictory nature of the reported results of these investigations, there is little that the investigator is able to glean from them; this is even true of such basic features as methodology and technique. Although these reports do not supply any ready made body of positive data, they can, nevertheless, be of help by pointing out certain pitfalls to be avoided. The inconsistencies found throughout the reports should serve to impress the investigator with the importance of selecting a truly adequate measurement technique and of setting up standards of productivity that will not crumble when subjected to the rigid tests of validity and reliability. These discrepancies in the reports might also serve to indicate that there are perhaps other psychological fact-



ors that are exerting influence on the results, and that the "pure attitude" exists in the conceptual order only. There may well be such factors as group relations, opportunity for promotion, personality of the supervisor, and a myriad of other circumstances that are directly affecting attitude which in turn is thought to be affecting production. Under this arrangement, the role of attitude becomes one of an intermediary with the true causal factors being at least one step removed from their effect, viz, productivity.<sup>6</sup> It cannot be denied that the construction of any worthwhile method for examining the effects of attitudes must take into consideration the possibility of this arrangement of factors.

There is still another serious consideration that comes to light as a result of the conflicting data presented by these various reports. That is the possibility that perhaps under certain conditions some degree of unfavorableness of attitude is conducive to high productivity. It may be that some dissatisfaction is desired in all jobs. Because of the stress placed on satisfaction, there may be a tendency to view dissatisfaction as a natural barrier to output. Such a conclusion could never be substantiated in fact. This could mean that there are probably drives responsible for higher productivity that tend to lose their force when total job satisfaction has been attained, and that in most

jobs there is an optimum degree of dissatisfaction that should be sought by the worker. Here then is another possibility that should be weighed carefully during the process of constructing a method to be used for investigating attitudes and productivity.

It appears as though inquiries regarding the manner in which job attitudes affect production, and how extensive those affects may be, cannot, as yet, be answered through a review of the available literature.

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### CHAPTER III

#### EXPLANATION OF TECHNIQUES AND METHODOLOGY

##### THE TEST

Credit for the authorship of the Weitz-Evans community Checklist (WECC) belongs to Dr. Joseph Weitz and Dr. Chester Evans. The present state of the test is the result of considerable effort on the part of both authors as well as the Employe Research Section of the General Motors Corporation.

The WECC purportedly measures attitude. It was originally intended that the test be used as a device for determining attitudes of an individual prior to employment and then rechecking those attitudes after a reasonable length of time had been spent on the job. This procedure of test and retest is predicated on the idea that increased dissatisfaction is very apt to lead to low production and/or termination. It is thought that a later check of attitudes will uncover any trouble spots - "trouble" being a potential terminator or low

producer. In view of what this test was designed to accomplish and on the strength of what it claims to measure, it has been deemed logical to presume (and, therefore, reasonable to attempt to investigate) that the WECC may be able to disclose significant differences in individual attitude among members of a homogeneous group. Providing, of course, that the factor of attitude is capable of influencing the individual performance of those within the group.

Responses to test items in the WECC are obtained by having the subject place a check mark in the box located in the column headed with the facial expression that most closely defines the way he "feels" about the situation as stated. The use of the facial expressions to indicate degrees of satisfaction, i.e., from "very satisfied" to "very dissatisfied", is merely a matter of preference on the part of the authors of the test. Actually, the question of whether the more commonly used adjectival expressions or facial expressions produce the best results is still very much open.<sup>1</sup> However, the findings of a study conducted by T. Kunin indicate that the use of facial expressions has very promising possibilities.<sup>2</sup>

A sample copy of the WECC is presented in Appendix A.

The forty seven items that make up WECC have been purposely worded and arranged so as to present a wide variety of situations; some are directly related to a specific aspect of the job whereas others deal in a very general manner with everyday, common place conditions. The selection and layout of the items is based on a hypothesis that was tested by Dr. Weitz and has to do with the relationship of general satisfaction, job satisfaction and job performance. 3

Included in WECC is a provision for the signature of the testee. Such a provision is considered to be unusual in an attitude questionnaire. There are authorities who hold that the truthfulness of responses is highly doubtful when the identity of the subject must be revealed. Yet, one of the principle findings of an investigation conducted by Dr. Evans with employees of the General Motors Corporation was that in attitude testing

employees are not particularly concerned about anonymity. ... The unwarranted popular assumption that employees must be anonymous is open to serious question. 4

A project such as the present one could never have been undertaken if the identity of the subjects was not available, or if there was any reason to suspect that the value of the responses was seriously impaired because the subjects' identity was known.

## THE SUBJECTS

All subjects used in this study were selected from the same company, an organization that is considered to be the largest of its kind in the entire midwest area. They are all classified and gainfully employed as retail appliance salesmen. The decision to select all the subjects from the same company was made in the interest of arresting certain variables that would otherwise render an investigation of this type wholly impractical. It was further decided that to be eligible for participation in this study a subject must have been on the active payroll of the company, in the classification of retail appliance salesman, for no less than one full year.

After imposing the above described restriction, the list of eligible subjects was set at fifty one. However, three of those eligible refused to complete the form as requested and had to be excluded from the project. This resulted in a final net population of forty eight.

All raw data on this population will be found in Appendixes C, D and E.

The mean figures for statistics listed in Appendix D are: Age - 42.1 years, Education - High School, Number of Years in Sales - 14.6, Number of Years with Present Company - 8.4.

## CRITERIA OF PROFICIENCY

The most fundamental and most difficult problem in any selection research program is to obtain satisfactory criterion measures of performance on the job, against which to validate selection procedures. This problem is absolutely central, for other research can hardly proceed until a criterion is provided, and the program of research can be only as good as that criterion. <sup>5</sup>

For purposes of this investigation, two criteria of an intermediate nature have been employed for determining proficiency.

Cognizance has been taken of the fact that an ultimate standard for the measurement of proficiency is the only means through which a truly valid determination of an individual's performance can be made. Intermediate criteria permit only an approximate determination of job performance. However, in most job classifications the task of securing data upon which to base an ultimate standard of proficiency is one that requires unlimited time and becomes so complex that it renders the undertaking completely impractical. This situation forces the use of the less desirable but more practical intermediate criteria.

Of those criteria that come under the definition of intermediate, the one that comes closest to an ultimate



is that of production. This is a criterion that possesses relatively high objectivity and is based generally on information that is readily accessible.

But the use of the criterion of production is not without its problems and pitfalls. It is fairly common practice to prepare an individual's production record in numerical terms; but improper and inaccurate postings can contaminate that record to a point where it becomes totally unusable. It is, therefore, of the utmost importance that an investigator check, even to the most insignificant detail, the manner in which the production record he proposes to use has been developed.

Another source of serious difficulty in the use of the production standard for purposes of measuring job performance is found in the interpretation of the term "production". Too often in the interpretation of the term the aspect of quantity is so over emphasized that it results in a minimizing or complete exclusion of the factor of quality. One of the most common errors in the handling of records pertaining to output is the omission of information about quality of work. Data regarding the qualitative aspects of an individual's production are usually not amenable to simplified record keeping, and consequently much of this vitally important information goes unrecorded and perhaps even unnoticed. In cases

where the quality of work is not a matter of record, the information must then be secured through less objective sources such as a supervisor rating scale.

Difficulty in the maintenance of this type of information seems to be particularly true of the sales field. To obtain facts about how proficiently one may have handled a sales transaction is not a simple matter. There are so many intangibles and ramifications to such a transaction that one becomes lost in a maze of uncertainties.

It is possible though, to make a valid assumption that by virtue of the fact that a "sale" was made the salesman has exhibited some degree of proficiency.

On the basis of this assumption, the conclusion may be made that whatever measures sales will also measure, to some extent, sales proficiency. In this company, sales are measured in terms of total sales dollars. It should then logically follow that sales proficiency can be measured from the factor of total sales dollars. Therefore, the criterion of production that is being used in this investigation is the company record of total sales dollars. Under this criterion successful salesmen can be distinguished from less successful salesmen on the basis of individual contributions made to the total sales dollar figure. For example, salesman "A" is

responsible for \$50,000 of the total sales figure, salesman "B" is responsible for \$25,000; on the basis of individual contribution, salesman "B" is less successful than salesman "A". See Appendix F for data on total sales.

In an effort to supplement this criterion with a device that will reveal information concerning the quality of job proficiency, a supervisory rating technique was introduced. As a result of the organizational set up of the company from which the subjects for this study were selected, it was possible to obtain a rating of each subject from three different supervisors. Each of the supervisors has control over a different phase of the overall work performed by each salesman. Rater "A" manages the delivery, service and customer complaint activities, rater "B" is in charge of the credit, billing, inventory and order departments, rater "C" is the general sales manager. It was presumed that each of the supervisors would appraise a salesman in the light of how he performed those duties that are germane to the area for which the supervisor is responsible. Later interviews with each rater bore out this fact. The three individual ratings were then organized into a composite rating for each subject.

The rating scale form that was used in this project is one that has been in general use in the company for

quite some time. The supervisors are familiar with the scale and have used it on other occasions. The form consists of six traits to be evaluated, and allows for five possible performance ratings for each, i.e., superior, good, satisfactory, poor, and unsatisfactory. By assigning a corresponding numerical value of 5, 4, 3, 2, and 1, a score can be obtained for each trait and a total score for the overall rating.

The six traits to be rated, together with some of the considerations to be made when evaluating same, are as follows: 1. Quantity of Work - this item is self explanatory and should be based on whatever objective data the rater may have at his disposal. Quality of Work - an evaluation of this trait should be based on the rater's opinion of how well the individual performs his job; how thorough and free from error is the individual's work? 3. Ability to Learn - does the ratee follow instructions well; does he perpetuate his mistakes or is he able to overcome them; does he assimilate new techniques and procedures without difficulty? 4. Ability to "Get Along" with Other Employees - information for evaluating this item can be obtained from the individual's reputation among his fellow employees; how do the other employees and other supervisors react to him; is he friendly, congenial, cooperative? 5. Job Interest - does he approach

his duties with enthusiasm; does he offer worthwhile contributions toward improving the job; is he inquisitive about the job? Often times poor attendance might be an indicator of a lack of job interest. 6. General Attitude - this trait is the most difficult to center, the sources of information that eventually lead the rater to his opinion are so innumerable that the appraiser himself finds it difficult to "put his finger on it".

A sample copy of the rating form is presented in Appendix B.

As was stated previously, it is felt that as a result of having selected all the subjects for this project from the same company a relatively high degree of reliability has been maintained. The criteria of proficiency used would never have been possible under any other circumstances. Variables that definitely influence sales productivity such as amount and quality of advertising, prices of goods, amount of buying traffic, etc., could never be held constant under any other method of subject selection. All subjects are equally exposed to the benefits as well as the limitations that arise from certain basic company sales policies, and which do have an effect on productivity.

## ADMINISTRATION

The completion of the form followed immediately. The average time required to complete the form was twelve minutes.

A personal interview was conducted with each subject in this investigation. The interview took place in the area in which the subject regularly performs his work. The physical conditions were purposely arranged so as to obtain a maximum of privacy and a minimum of distraction.

In the interest of establishing good rapport, each subject was informed of the general purpose of the project and was assured that the confidential nature of the information received would be completely respected; that no one in the company would ever be permitted to review any of the confidential data. Each was further assured that individual identification would be thoroughly lost in the process of consolidating the information for statistical treatment and presentation. The subject was also informed that participation was on a strictly voluntary basis and refusal would not lead to any repercussion.

Instructions regarding the completion of the questionnaire were given orally, and the subject was requested to make mention of any point that did not seem clear to him. He was also asked to insert at the bottom of the form the information covering age, education, marital status, number of years in the sales field, and number of

years with present company.

The completion of the form followed immediately. Average time required to complete the form was twelve minutes.

It is felt that the conditions under which the attitude form was administered were, in general, quite acceptable. Less than six per cent of the eligible subjects refused to cooperate.

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## CHAPTER IV

### PRESENTATION OF FINDINGS

In order to translate the results of the WECC into terms that could be treated statistically, it was necessary to assign a numerical value to each possible answer, and on the basis of such values develop a total score for each WECC. This was done by allowing a value of 5 for each check mark placed in column one, 4 for each check mark in column two, 3 for check marks in column three, 2 for check marks in column four, and 1 for check marks in column five (column numbers are designated by moving from left to right on the questionnaire). Through such a scoring arrangement it is possible to have a maximum score of 235. The mean WECC score for the total subject population was 173.1.

A t ratio between the criterion of production and the WECC scores was obtained by ranking the population according to total sales dollars for the year of 1957, and then forming a "high" and a "low" group from that ranking. The establishing of groups was accomplished by assigning the first 19 subjects according to production

to the "high" group and the last 19 to the "low" group. Each group represents 40 per cent of the total population. The WECC scores for each group were then analyzed statistically to determine the standard deviation and the standard error of each. These results were then further analyzed to establish the standard error of the difference between the groups, and finally to arrive at a t ratio figure.

The formulae used in this study were suggested by Dr. Guilford and are as follows: <sup>1</sup>

Standard Deviation - 
$$\sigma = \frac{1}{N} \sqrt{N \sum X^2 - (\sum X)^2}$$

Standard Error - 
$$\sigma_m = \frac{\sigma}{\sqrt{N-1}}$$

Standard Error of the Difference - 
$$\sigma_{dm} = \sqrt{\sigma_{m_1}^2 + \sigma_{m_2}^2}$$

t Ratio - 
$$t = \frac{M_1 - M_2}{\sigma_{dm}}$$

The following table is presented to demonstrate the statistical procedure that was employed.

TABLE II

t Ratio Between Production Criterion and WECC Scores

High Group -		Low Group -	
Subjects	WECC Scores	Subjects	WECC Scores
1	162	30	156
2	183	31	164
3	157	32	181
4	179	33	138
5	173	34	168
6	174	35	153
7	171	36	186
8	171	37	144
9	169	38	160
10	205	39	159
11	190	40	160
12	165	41	146
13	187	42	181
14	179	43	158
15	217	44	152
16	159	45	174
17	188	46	189
18	195	47	175
19	190	48	171
M = 179.6		M = 163.9	
$\sigma$ = 15.25		$\sigma$ = 14.13	
$\sigma_m$ = 2.27		$\sigma_m$ = 2.14	
$\sigma_{dm} = 3.11$			
<u>t</u> = 5.05			

The t ratio of 5.05 that exists between the criterion of production and the WECC scores is significant well beyond the .001 level of confidence.

It was decided, when setting up plans for the development of this project, that the efficiency of the rating criterion to be used could be strengthened by having three separate supervisors prepare a rating form for each of the subjects. From the three a composite rating could be prepared which would enable this measure of proficiency to have even greater utility. The reasoning used was that the composite would serve as a means of compensating for slight individual differences that might exist among the raters. However, the actual results of the ratings were not at all in keeping with these original presumptions. The reliability among the raters proved to be wholly inadequate and, consequently, the composite rating was rendered less useful. Instead of reconciling the individual differences among the raters, the composite actually emphasized the degree to which the ratings were affected by the presence of those differences.

TABLE III  
PEARSONIAN RELIABILITY COEFFICIENT AMONG RATERS.

	Rater "A"	Rater "B"	Rater "C"
Rater "A"	---	.395	.373
Rater "B"	---	---	.170
Rater "C"	---	---	---

The low reliability among the raters is probably due, in addition to the usual causes of low reliability, to the fact that each rater was inclined to over stress his area of responsibility when considering the ratee's overall performance.

In an effort to overcome some of the limitations that resulted from this low reliability factor, it was decided that each item for each rater as well as the composite would be considered as individually independent criteria. For instance, item 1 as scored by rater "A" was established as a separate criterion. All subjects were ranked according to the score received on this item from rater "A", then "high" and "low" groups were formed. The WECC scores of each group were then statistically analyzed in the same manner as previously described for the production criterion (see Table II). This approach to the rating form resulted in the setting up of twenty eight individual criteria. Table IV shows the  $t$  ratio between each of the criteria and the WECC scores. Table IVb shows the number of cases involved with each criterion. These tables appear on the following page.

TABLE IV  
 t RATIOS BETWEEN RATING FORM CRITERIA AND WECC SCORES.

	Rater "A"	Rater "B"	Rater "C"	Composite
Item 1	1.75 x	1.31 x	1.19	1.71 x
Item 2	- .10	- .03	1.63 x	.05
Item 3	4.30 xxx	- .06	1.69 x	.03
Item 4	- .12	- .06	2.56 xx	- .02
Item 5	- .50	- .04	2.02 xx	.03
Item 6	1.06	- .56	.75	.08
Comp.	.47	- .41	2.44 xx	.55

x - Significant at .20 level  
 xx - Significant at .05 level  
 xxx - Significant at .01 level

TABLE IVb  
 NUMBER OF CASES USED IN TABLE IV  
 (N HIGH PLUS N LOW)

	Rater "A"	Rater "B"	Rater "C"	Composite
Item 1	34	26	28	26
Item 2	24	26	20	24
Item 3	18	24	32	15
Item 4	42	24	40	26
Item 5	36	18	44	30
Item 6	42	28	42	28
Comp.	34	26	26	36

A review of Table IV indicates that in the case of each rater as well as the composite, using item 1 as the criterion, WECC scores show a relatively high discrimination power between "high" and "low" groups. The con-

sistency among the raters on this item is probably due to the objective nature of the trait under consideration, viz, quantity of production. Item 2 as a criterion discriminates between "high" and "low" only with rater "C". Item 5 shows a similar discrimination. Item 3 - Ability to Learn - has an exceptionally high  $t$  ratio in the case of rater "A". This  $t$  of 4.30 is the highest obtained with the criteria of ratings and is the only ratio that is significant beyond the .01 level of confidence.

Under rater "A", item 1 at 1.75 shows a .10 significance level, and item 6 at 1.06 has a .30 level of significance. Rater "B", item 1 at 1.31 shows a .25 level of significance. For rater "C" the various levels of confidence are as follows: item 1 at 1.19 is .30, item 2 at 1.63 is .15, item 3 at 1.69 is .15, item 4 at 2.56 is .05, item 5 at 2.02 is .05, item 6 at 2.44 is .05. For the composite rating, item 1 at 1.71 is significant at the .10 level of confidence.

sistency among the raters on this item is probably due to the objective nature of the trait under consideration, viz, quantity of production. Item 2 as a criterion discriminates between "high" and "low" only with rater "C". Item 5 shows a similar discrimination. Item 3 - Ability to Learn - has an exceptionally high  $t$  ratio in the case of rater "A". This  $t$  of 4.30 is the highest obtained with the criteria of ratings and is the only ratio that is significant beyond the .01 level of confidence.

Under rater "A", item 1 at 1.75 shows a .10 significance level, and item 6 at 1.06 has a .30 level of significance. Rater "B", item 1 at 1.31 shows a .25 level of significance. For rater "C" the various levels of confidence are as follows: item 1 at 1.19 is .30, item 2 at 1.63 is .15, item 3 at 1.69 is .15, item 4 at 2.56 is .05, item 5 at 2.02 is .05, item 6 at 2.44 is .05. For the composite rating, item 1 at 1.71 is significant at the .10 level of confidence.



## REFERENCES

1. Guilford, J. P.. Psychometric Method.  
New York (McGraw - Hill), 1936.

## CHAPTER V

### SUMMARY

This project was designed to test the validity of the Weitz-Evans Community Checklist as a device for distinguishing between successful and less successful retail appliance sales personnel. The plan was to subject the form F of this technique to a series of validations that would bring out the necessary information upon which to base a determination regarding the reasonableness of using the form for this purpose. For subjects, 48 individuals working in the classification of retail appliance salesman were selected from an organization engaged solely in the sale of appliances. The form F of the WECC was completed by each of the subjects. The criteria of proficiency that were employed as the standards of measurement for this project were the total sales dollar record of the company and supervisory ratings. For the rating criterion, three supervisors prepared separate ratings for each subject and from them an individual composite rating was formed. However, this approach to the rating criterion proved to be quite inadequate and had to be

altered. This was done by establishing each item under each rater, including the composite, as an individually criterion; this approach resulted in the formation of twenty eight separate criteria.

The WECC scores and all criteria were then subjected to statistical analysis. This was accomplished by computing t ratios between WECC scores and each criterion.

The original hypothesis of this project stated that the WECC could not effectively discriminate among retail appliance salesmen. However, on the basis of the statistical results of this investigation, the original hypothesis must be rejected. Evidence to support the contention that the WECC does discriminate in this job classification will be found primarily in the fact that the important criterion of production showed exceptionally high discriminative power. The t ratio of 5.05 that was found to exist between this criterion and the WECC scores is significant well beyond the .001 level of confidence.

Additional support in favor of the ability of the WECC to discriminate among the subjects used in this project may be obtained from the fact that in one of the rating criteria, rater "A" - item 3, a t ratio of 4.30 was found between that criterion and the WECC scores. This ratio is significant beyond the .01 level of con-

fidence. Other rating criteria revealed  $t$  ratios that are significant beyond the .05 level of confidence.

This study has not been able to uncover any information regarding the manner in which attitudes may affect production. In fact, it cannot even be inferred from this study that attitudes do affect production. It could very well be that the reverse condition is operating; that is, that high favorable attitude is a consequence of high production. But, irrespective of what cause and effect relationship may be operating, the WECC has demonstrated, in this case, an ability to distinguish among members of the same group.

It is recognized that the usual limitations inherent in a study of this size and scope definitely prohibit any generalization regarding the results obtained. It is also recognized that this study has done little more than introduce some of the broad possibilities for psychological research that are associated with both the sales field, and the use of the WECC. These possibilities are promising and should encourage more investigation along similar lines.

The utilization of the WECC in this investigation serves to illustrate the unusual potential of this technique. By making slight alterations, this form could be developed to a point where its use as a tool in the area

of selection and placement would be invaluable.

As was previously stated, there is an alarming dearth of worthwhile psychological techniques available for use in the general sales field. The lack of such techniques in a field so essential to the continued growth of the American economy is a matter that should be of serious concern to all personnel psychologists.

APPENDIX A

WEITZ-EVANS COMMUNITY CHECKLIST - F

Please check  under the face that shows how you feel about each of the things listed below. Skip any that do not apply to you.



The city you live in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The high school you went to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bus or streetcar service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How long it takes you to get from home to your job here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gas station service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schools in your town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your first name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Charity drives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greeting cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Our dealings with other countries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holidays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



How much time you have for fun and play	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your chances to get ahead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Today's automobiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local newspapers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your boss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How handy the stores are where you shop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Movies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your mother's cooking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automobile dealers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The way automobile traffic in your town is handled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The way you were brought up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radio commercials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company you are working for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your neighborhood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Store hours in your town	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Telephone service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Going to night school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The food you get at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Automobile prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your father	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your pay on your job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your telephone number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hospital care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Popular music	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your husband (or wife)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How much work you have to do on your job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of highways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retirement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The place you live in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People in general	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---

Your name.....

Today's date.....

APPENDIX B

EMPLOYEE RATING FORM

Name \_\_\_\_\_ Department \_\_\_\_\_

Date \_\_\_\_\_

Trait to be Rated	SUPERIOR	Good	SATISFACTORY	POOR	UNSATISFACTORY
Quantity of Work					
Quality of Work					
Ability to Learn					
Ability to "Get Along" with Other Employees					
Job Interest					
General Attitude					

Comments \_\_\_\_\_

\_\_\_\_\_

Rater \_\_\_\_\_ Score \_\_\_\_\_

(Signature)



APPENDIX C

WECC SCORES OF SUBJECTS

Subject	WECC Score	Subject	WECC Score
1	162	25	180
2	183	26	170
3	157	27	175
4	179	28	203
5	173	29	191
6	174	30	156
7	171	31	164
8	171	32	181
9	169	33	138
10	205	34	168
11	190	35	153
12	165	36	186
13	187	37	144
14	179	38	160
15	217	39	159
16	159	40	160
17	188	41	146
18	195	42	181
19	190	43	158
20	199	44	152
21	204	45	174
22	182	46	189
23	172	47	175
24	168	48	171

Mean WECC Score - 173.1

## APPENDIX D

## VITAL STATISTICS OF SUBJECT POPULATION

Subject	Age	Education	Marital Status	Years in Sales	Years with Company
1	42	College	M	20	7
2	40	8th Grade	M	10	5
3	42	2 yr. HS	M	16	10
4	37	College	M	3	3
5	35	H. S.	M	5	2
6	45	H. S.	M	18	10
7	49	2 yr. Col	M	20	11
8	49	2 yr. Col	M	10	5
9	39	1 yr. Col	M	20	11
10	50	H. S.	M	25	10
11	52	H. S.	M	20	13
12	37	H. S.	M	10	2
13	47	H. S.	M	10	10
14	32	1 yr. Col	M	5	4
15	54	H. S.	M	28	2
16	30	H. S.	M	3	2
17	40	2 yr. HS	M	10	7
18	48	H. S.	M	16	12
19	29	H. S.	M	8	5
20	49	H. S.	M	14	12
21	37	H. S.	M	11	10
22	43	H. S.	M	23	10
23	32	H. S.	M	9	9
24	55	8th Grade	M	25	13
25	49	2 yr. Col	M	15	10
26	26	2 yr. Col	M	10	5
27	28	H. S.	S	5	3
28	34	2 yr. Col	M	14	1
29	48	8th Grade	M	22	13
30	48	H. S.	M	15	8
31	32	1 yr. Col	M	10	9
32	55	H. S.	M	15	11
33	36	8th Grade	M	10	3
34	47	H. S.	M	30	24
35	50	H. S.	S	10	9

## APPENDIX D (CONTINUED)

Subject	Age	Education	Marital Status	Years in Sales	Years with Company
36	50	2 yr. Col	S	24	23
37	39	H. S.	M	2	1
38	54	2 yr. HS	M	22	22
39	41	H. S.	M	19	10
40	31	1 yr. HS	M	11	2
41	45	H. S.	M	12	9
42	42	2 yr. Col	M	12	1
43	34	H. S.	M	12	12
44	35	2 yr. Col	M	11	7
45	47	H. S.	M	23	11
46	58	8th Grade	M	29	5
47	55	H. S.	M	35	15
48	38	2 yr. Col	M	10	7

Note - Subjects are listed according to production rank.

APPENDIX E

RATING SCORES OF SUBJECTS

1. Rater "A".

Subject	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Total
1	5	3	3	2	4	4	21
2	5	3	3	2	3	3	19
3	5	4	4	5	5	5	28
4	4	3	2	3	3	2	17
5	4	3	3	3	3	4	19
6	4	3	3	3	4	4	21
7	3	3	3	4	3	3	19
8	4	3	4	4	5	5	25
9	5	3	3	2	3	3	19
10	4	3	2	3	3	3	18
11	4	3	3	4	3	3	20
12	4	3	3	3	4	4	21
13	4	3	3	4	3	4	21
14	3	3	3	3	3	3	18
15	3	3	4	3	3	4	20
16	4	4	3	3	4	4	22
17	3	3	3	4	3	4	20
18	3	2	2	2	5	5	19
19	4	3	3	4	4	4	21
20	3	3	3	3	3	4	19
21	3	3	2	3	5	5	21
22	4	4	3	4	4	5	24
23	4	3	3	4	4	4	21
24	3	3	3	3	2	3	17
25	4	3	3	4	3	3	20
26	3	3	3	4	3	4	20
27	3	2	2	3	3	3	16
28	3	3	3	4	4	4	21
29	3	3	3	2	2	2	15
30	3	3	3	4	3	4	20
31	3	4	4	3	3	3	20
32	2	3	4	3	3	3	17
33	3	3	2	4	3	2	18
34	3	2	2	2	3	3	15
35	3	2	2	4	4	5	20

## APPENDIX E (CONTINUED)

Subject	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Total
36	3	2	3	3	3	4	18
37	3	3	3	2	3	3	17
38	3	3	3	4	4	5	22
39	3	3	4	4	4	5	23
40	2	3	3	4	3	3	17
41	2	3	3	4	3	3	18
42	2	3	4	4	4	4	21
43	3	3	4	5	4	4	23
44	2	3	3	3	2	2	15
45	3	3	2	2	3	4	17
46	3	3	3	3	3	3	18
47	2	3	3	3	3	3	17
48	2	4	4	5	5	5	25

## 2. Rater "B".

Subject	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Total
1	5	2	1	2	5	3	18
2	5	1	2	2	4	3	17
3	5	4	4	5	5	5	28
4	4	4	4	4	4	4	24
5	3	3	3	4	4	4	21
6	5	3	3	4	4	4	23
7	3	3	3	4	3	3	19
8	3	3	3	3	4	4	20
9	4	1	2	4	4	4	17
10	3	2	3	4	4	4	20
11	3	3	3	3	2	2	16
12	3	3	4	4	4	4	22
13	3	3	3	3	3	3	18
14	3	3	2	5	5	5	23
15	3	3	3	3	4	4	20
16	3	3	3	4	4	4	21
17	3	2	3	4	4	4	20
18	4	1	1	2	4	2	14
19	4	3	3	4	4	4	22
20	3	4	4	4	4	4	23

## APPENDIX E (CONTINUED)

Subject	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Total
21	4	2	2	5	5	4	22
22	4	2	2	4	5	4	21
23	4	4	3	4	4	4	23
24	3	4	4	5	4	4	24
25	3	2	2	4	2	3	16
26	3	4	4	5	5	4	25
27	3	3	3	4	4	4	21
28	3	4	4	4	4	4	23
29	3	3	2	4	3	3	18
30	3	4	4	5	5	5	26
31	4	3	3	4	4	3	21
32	3	3	3	3	3	3	18
33	2	2	2	3	3	3	15
34	3	3	2	4	3	3	18
35	3	3	3	3	4	4	20
36	3	3	3	4	5	4	22
37	3	3	3	4	4	4	21
38	3	4	4	4	4	4	23
39	4	3	4	4	4	4	23
40	2	3	3	4	4	4	20
41	2	2	3	4	4	4	19
42	3	3	3	4	4	4	21
43	3	3	3	4	4	5	22
44	2	2	2	3	4	3	16
45	3	3	3	4	4	4	21
46	2	2	3	3	3	3	16
47	3	3	3	4	4	4	21
48	3	3	4	5	5	5	25

## 3. Rater "C".

Subject	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Total
1	5	5	5	5	5	5	30
2	4	5	5	3	4	4	25
3	4	5	5	5	5	5	29
4	4	5	5	4	4	5	27
5	4	5	5	4	4	4	26

## APPENDIX E (CONTINUED)

Subject	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Total
6	4	5	5	5	5	5	29
7	3	4	4	3	3	3	20
8	3	5	4	3	4	4	23
9	3	4	4	3	4	4	22
10	3	4	3	4	4	4	22
11	3	4	3	3	3	3	19
12	3	3	3	3	3	3	18
13	4	4	3	3	3	3	20
14	3	4	3	4	4	4	22
15	3	4	3	3	4	4	21
16	3	3	3	4	4	3	20
17	4	3	3	4	4	4	22
18	4	5	4	5	5	5	29
19	4	5	4	4	5	5	27
20	3	4	3	4	4	3	21
21	5	5	5	5	5	5	30
22	4	4	4	4	4	4	24
23	3	4	4	3	3	3	20
24	3	3	4	4	2	3	19
25	3	2	3	3	1	4	13
26	3	3	3	3	3	3	18
27	3	3	2	4	3	3	18
28	4	4	4	4	3	4	23
29	3	2	2	3	3	2	15
30	3	3	3	3	3	3	18
31	3	3	3	3	2	2	16
32	3	4	3	2	3	3	18
33	3	2	3	3	2	3	16
34	3	3	3	3	4	3	19
35	3	4	2	3	4	3	19
36	3	4	2	4	5	4	24
37	3	3	3	3	3	3	18
38	3	3	2	3	4	4	19
39	3	4	3	4	4	4	22
40	3	3	2	3	3	3	17
41	3	2	2	3	2	2	14
42	3	2	2	3	3	3	16
43	3	3	3	4	4	4	21
44	3	3	2	3	3	3	17
45	3	2	2	3	3	3	16
46	3	3	3	3	3	3	18
47	3	2	2	3	4	3	17
48	3	3	3	3	4	3	19

## APPENDIX E (CONTINUED)

## 4. Composite Rating.

Subject	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Total
1	5.0	3.3	3.0	3.0	4.6	4.0	23.0
2	4.6	3.0	3.3	2.3	3.6	3.3	20.3
3	4.6	4.3	4.3	5.0	5.0	5.0	28.3
4	4.0	4.0	3.6	3.6	3.6	3.6	22.6
5	3.6	3.6	3.6	3.6	3.6	4.0	22.3
6	4.3	3.6	3.6	4.0	4.3	4.3	24.3
7	3.0	3.3	3.3	3.6	3.0	3.0	19.3
8	3.3	3.6	3.6	3.3	4.3	4.3	22.6
9	4.0	2.6	3.0	3.0	3.6	3.6	20.0
10	3.3	3.0	2.6	3.6	3.6	3.6	20.0
11	3.3	3.3	3.0	3.6	3.0	3.0	19.3
12	3.3	3.3	3.3	3.3	3.6	3.6	20.6
13	3.3	3.0	3.0	3.3	3.0	3.3	19.0
14	3.3	3.3	2.6	3.6	3.6	3.6	20.3
15	3.0	3.3	3.3	3.0	3.6	4.0	20.3
16	3.3	3.3	3.0	3.6	4.0	3.6	21.0
17	3.3	2.6	3.0	4.0	3.6	4.0	20.6
18	4.0	2.6	2.3	3.0	4.6	4.0	20.6
19	4.0	3.6	3.3	4.0	4.3	4.3	23.6
20	3.0	3.6	3.3	3.6	3.6	3.6	21.0
21	4.0	3.3	3.0	4.3	5.0	4.6	23.3
22	4.0	3.3	3.0	4.0	4.3	4.3	23.0
23	3.6	3.6	3.3	3.3	3.6	3.6	21.3
24	3.0	3.3	3.6	4.0	2.6	3.3	20.0
25	3.3	2.3	2.6	3.6	2.0	2.3	16.3
26	3.0	3.3	3.3	4.0	3.6	3.6	21.0
27	3.0	2.6	2.3	3.6	3.3	3.3	18.3
28	3.3	3.6	3.6	4.0	3.6	4.0	22.3
29	3.0	2.6	2.3	2.6	3.0	2.3	16.0
30	3.0	3.3	3.3	4.0	3.6	4.0	21.3
31	3.3	3.3	3.3	3.3	3.0	3.6	20.0
32	2.6	3.3	3.3	2.6	3.0	3.6	18.6
33	2.6	2.3	2.3	3.3	2.6	3.0	16.3
34	3.0	2.6	2.3	3.0	3.6	3.0	17.6
35	3.0	3.0	2.3	3.3	4.0	4.0	19.6
36	3.6	3.0	2.6	3.6	4.3	4.0	21.3
37	3.0	3.0	3.0	3.0	3.3	3.6	19.0
38	3.0	3.3	3.0	3.6	4.0	4.3	21.3



## APPENDIX E (CONTINUED)

Subject	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Total
39	3.3	3.3	3.6	4.0	4.0	4.3	22.6
40	2.3	3.0	2.6	3.6	3.6	3.6	19.0
41	2.3	2.3	2.6	3.6	3.0	3.0	17.0
42	2.6	2.6	3.0	3.6	3.6	3.6	19.3
43	3.0	3.0	3.6	4.3	4.0	4.0	22.0
44	2.3	2.6	2.3	3.0	3.0	2.6	16.0
45	3.0	2.6	2.3	3.0	3.3	3.6	18.0
46	2.6	2.6	3.0	3.0	3.0	3.0	18.3
47	2.6	2.6	2.6	3.3	3.6	3.3	18.3
48	2.6	3.3	3.6	4.3	4.6	4.3	23.0

## APPENDIX F

### INFORMATION REGARDING PRODUCTION RECORDS

The organization that so willingly supplied the subjects and data for this project did so with the understanding that absolutely no confidential information would be published. In view of the extreme competitiveness that presently exists in the retail appliance sales field, it seems quite reasonable that this condition be imposed.

Also, the subjects that participated in this study were assured that the confidentiality of certain information would prevent that information from ever being made public through this study.

Therefore, all data pertaining to total sales and the company sales records for 1957, have purposely been excluded from the publishable portion of this thesis. However, these records have been reviewed by the thesis advisor and the psychology department and are on file with them. This confidential information can be made available to interested readers at the discretion of the psychology department.

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