

**A PARTIAL ANALYSIS OF A THREE-MAN INTERVIEW TECHNIQUE  
FOR PREDICTING AIRPLANE PILOT SUCCESS IN THE  
CIVILIAN PILOT TRAINING PROGRAM**

by

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A report on research, administered through Wesleyan University and conducted at Colgate University, New York State Agricultural and Technological Institute, Springfield College, Syracuse University, University of Rochester, and Yale University, by means of a grant-in-aid from the National Research Council Committee on Selection and Training of Aircraft Pilots from funds provided by the Civil Aeronautics Administration.

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LETTER OF TRANSMITTAL

NATIONAL RESEARCH COUNCIL

2101 Constitution Avenue, Washington, D. C.  
Division of Anthropology and Psychology

Committee on Selection and Training of Aircraft Pilots

July 19, 1946

Dr. Dean R. Brimhall  
Director of Research  
Civil Aeronautics Administration  
Room 3895, Commerce Building  
Washington 25, D. C.

Dear Dr. Brimhall:

Attached is a report entitled A Partial Analysis of a Three-man Interview Technique for Predicting Airplane Pilot Success in the Civilian Pilot Training Program, by C. J. Hill, Jr., D. L. Russell, and G. R. Wendt. This report is submitted by the Committee on Selection and Training of Aircraft Pilots with the recommendation that it be included in the series of Technical Reports, issued by the Division of Research, Civil Aeronautics Administration.

The study described in this report represents a relatively minor and incomplete investigation of the interview as an aid in the prediction of pilot performance. It is of interest, however, in terms of the procedures used for standardizing and improving the effectiveness of the interview.

Cordially yours,



Morris S. Viteles, Chairman  
Committee on Selection and  
Training of Aircraft Pilots  
National Research Council

MSV:rm

## EDITORIAL FOREWORD

The interview study reported here was designed and conducted by G. R. Wendt and his co-workers under the auspices of the Committee on Selection and Training of Aircraft Pilots early in 1942. At the same time a more extensive investigation<sup>1</sup> in the same area was being conducted by the Committee under the direction of J. W. Dunlap and M. J. Wantman. Both attempted to evaluate the usefulness of the interview as a predictor of flight proficiency. The studies differ with respect to the procedures used in the interview and more particularly with respect to the nature of the criteria employed. In addition, the research program described in this report failed to reach the stage of cross validation. In general, the incompleteness of the study places severe limits upon generalizations with respect to the usefulness of the methods employed.

Acknowledgment is due to cooperating psychologists for enlisting local cooperation of Civilian Pilot Training groups in their areas; to other colleagues at college and university centers who participated in helping to arrange and carry out the details of this research; to J. W. Dunlap, Director of Research, Committee on Selection and Training of Aircraft Pilots, for aid and advice in treatment of the data; and to students and others who participated in the study.

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<sup>1</sup>Dunlap, J. W., and Wantman, M. J. An investigation of the interview as a method of selecting aircraft pilots. Washington, D. C.: Civil Aeronautics Administration Airman Development Division, Report No. 33, August 1944.

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## SUMMARY

This is one of two interview studies carried out in 1942 under the auspices of the Committee on Selection and Training of Aircraft Pilots. A three-man interview board conducted 98 phonographically recorded interviews with accepted applicants for civilian pilot training. The design of the research provided for uniform and controlled indoctrination of the interviewers. Board members separately rated the candidate on each of the 14 scales on which the candidate was later rated by his flight instructor after the completion of flight training. The interrogator made a second set of ratings after hearing the arguments of his board.

The reliability of interviewers' judgments was assessed by (1) obtaining the correlations between ratings made by different judges and (2) by obtaining the correlations between the group discussion ratings made by the interrogators and the ratings of the other judges. The correlations between ratings made by two of the judges (Hill vs. Wendt) ranged from .82 on the scale "Recommendation for Army or Navy" to .45 on the scale "Calmness and Relaxation." The reliability coefficients between ratings of the judges, Hill vs. Russell and Wendt vs. Russell, were somewhat lower. The correlation coefficients for group discussion ratings with ratings of individual judges ranged from .46 to .97. The two lowest group discussion rating reliability coefficients were for the scale "Calmness and Relaxation," .59 (gdr (W) vs. Hill) and .46 (gdr (W) vs. Russell).

The validity of the interview ratings was determined by correlating the group discussion ratings with instructors' ratings made after the completion of flight training. The validity coefficients were positive but low, ranging from .02 for the scale "Skill" to .42 for the scale "Aircraftness." Further, group discussion ratings and instructors' ratings were correlated with scores on five pencil-and-paper tests administered to the subjects. The relationship between interview ratings and scores on the Biographical Inventory, the Personal History Inventory, and the Test of Mechanical Comprehension was in a positive direction but low. The Desire to Fly Inventory and the Otis Test, in general, showed little relationship with the rated items. The correlations with instructors' ratings of the scores on the Desire to Fly Inventory, the Personal History Inventory, the Biographical Inventory, and the Otis Test were low, except in the case of the Test of Mechanical Comprehension which when correlated with the scale "Recommendation for Army or Navy" yielded a coefficient of .45.

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INTRODUCTION

This study was carried out in February and March of 1942 at a time when there was active interest on the part of the military services in the interview as an aid in the selection of airplane pilots. At the same time a more ambitious study of the interview, sponsored by the Committee on Selection and Training of Aircraft Pilots, was underway.<sup>1</sup> The study here reported duplicated several aspects of that larger study in that accepted applicants for Civilian Pilot Training were the subjects, success in the primary CPT program was the criterion, each candidate was interviewed by a three-man board, the same general areas were covered by the interview, an aid to the interview (the Personal History Inventory)<sup>2</sup> was employed, and each interview was recorded on phonograph records. In the larger study the judgment-attitudes of the interviewers were varied by placing a psychologist, a personnel man, and a flyer on each board; in the present study the judgment-attitude was controlled by indoctrinating each interviewer with the same materials, and by group discussions following each rating. In the larger study it was endeavored to keep each rater's judgment independent of the others; in this study group discussion was required and two sets of ratings by the interviewer were recorded: the first in advance of group discussion; the second after hearing the arguments of the other two board members. In the larger study each candidate was rated on the extent to which each of eight aspects of his background was suitable for flying; in this study each man was assigned a predictive rating on his probable success in each of fourteen aspects of his future flying, the endeavor being to predict how his instructor would rate him in skill, motivation, judgment, etc. The larger study omitted certain areas, such as airsickness, which this study included.

At the time this study was designed, it appeared that the interview procedure to be employed might be a more practical one for the actual military situation and that the ratings called for could be made to yield higher correlations with criteria.

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<sup>1</sup>This study is described in: Dunlap, J. W., and Wantman, M. J. An investigation of the interview as a method of selecting aircraft pilots. Washington, D. C.: Civil Aeronautics Administration Airman Development Division, Report No. 33, August 1944.

<sup>2</sup>A study of this inventory is described in: Kogan, L. S., Wantman, M. J., and Dunlap, J. W. Analysis of the Personal History Inventory. Washington, D. C.: Civil Aeronautics Administration Division of Research, Report No. 42, February 1945.

### PROCEDURES<sup>3</sup>

A. Subjects. Table 1 shows the dates, places, number of subjects, kind of subjects, cooperating psychologists, and cooperating flying schools involved in this study. The cooperating psychologists are especially to be thanked for their voluntary aid in enlisting local administrative and CPT cooperation in providing appropriate rooms and helpers, in making all appointments and forestalling the miscellaneous troubles that afflict research. Out of 100 men scheduled for interview 98 were completed without incident. All subjects were accepted CPT applicants who had not yet begun their flight training.<sup>4</sup>

B. The Interview and Rating Procedures. The candidate was met by a receptionist who supervised the completion of a personal history inventory employed as an aid to the interview. The interrogator met the candidate, introduced him to the other two members of the interview board and then conducted the interview. The first 20 minutes were wholly under the control of the interrogator. There were then two minutes of questions by the other two members of the board. By means of a microphone concealed in a table lamp, the interview was recorded on phonograph records by an operator in an adjoining room.<sup>5</sup> During each interview the inactive members of the board took detailed notes on the replies of the candidate. Immediately after the departure of the candidate these notes were reviewed without interpretation or evaluation. Each board member then rated the candidate on each of 14 scales (see Appendix C). When all were finished the interrogator conducted 14 discussions, one for each scale. During each discussion the ratings of each judge and his arguments for assigning that rating were presented. The interrogator, after each discussion, entered a new rating which represented his own judgment as modified after listening to the arguments of the others. Recordings were made of these group discussions approximately once each day without knowledge of the interview board.

Alternate interviews were conducted by Dr. C. J. Hill and Dr. G. R. Wendt. Candidates were scheduled at 45-minute intervals.

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<sup>3</sup>The procedures of this study have been briefly reported previously. See: Wendt, G. R. Report of Wesleyan Interview project. March 1942. (Copy in the files of the Committee on Selection and Training of Aircraft Pilots.)

<sup>4</sup>An attempt to study these subjects at the end of primary training in the Civilian Pilot Training course by means of a terminal interview to re-check attitude expressed in the first interview and to assess certain motivational aspects of the flight training situation was abandoned (see Appendix A).

<sup>5</sup>This work was ably performed by Mr. R. W. Leighton, who also contributed a number of worthwhile suggestions about the research procedures.



TABLE 1  
DISTRIBUTION OF INTERVIEWS

<u>Date</u>	<u>N</u>	<u>Place</u>	<u>Subjects</u>	<u>Cooperating Psychologists*</u>	<u>Schools</u>
2/19/42	3	Yale University	College students	R. R. Sears D. G. Marquis	_____
2/23/42	3	Springfield College	Physical Education Majors	H. G. Seashore	_____
2/26-28/42	18	Colgate University	College students	F. C. Berrien	Colgate University Airport
2/29-3/2/42	28	Syracuse University	Forestry and Music Majors, mainly	H. M. Hildreth	Seneca Flying School
3/3/42	10	New York State Agricultural and Technological Institute	Agricultural and Mechanical Students	F. K. Berrien**	Colgate University Airport
3/4-7/42	36	University of Rochester	3 college students 33 non-college men	M. J. Wantman***	Ralph D. Barton Page Airways Hylan Flying Service Jenkins Air Service Rochester Flying School

\*Dr. E. M. Ligon and Dr. J. L. Graham made all arrangements for conduct of interviews at their institutions, but it proved impossible to fit them into our itinerary.

\*\*Assisted by Miss Upton and Mr. Hamilton.

\*\*\*Professor H. W. Leet of the Department of Engineering also gave us extensive help.

C. Content of the Interviews. The interviews were of the directive (as opposed to non-directive) type. The areas of questioning were predetermined during the period of indoctrination of the interviewers (see below, section D, 2). In order to determine the questions actually asked and their distribution in the interview we transcribed 38 interviews, half by Dr. C. J. Hill and half by Dr. G. R. Wendt, distributed through the entire group of subjects. The questions were then classified and a time analysis made to determine their distribution as to frequency and time of occurrence. The areas of questioning could be classified as follows:

1. Interests relating to aviation
2. Personal biographical data
3. Home situation and family relations
4. Aspirations and plans other than aviation
5. Plans and aspirations in relation to aviation
6. Performance and interest in subjects believed related to ground school performance
7. Automobile driving experience and habits
8. Mechanical experience
9. Endurance
10. Sports, skills, and recreation
11. History of motion sickness<sup>6</sup>
12. General health and medical history
13. Sociability and ability to get along
14. Personality
15. Time available for flying lessons
16. Miscellaneous.

The actual questions asked in these 38 interviews are shown in Appendix B classified under the above headings. The most commonly used questions have been starred.

Table 2 gives an indication of frequency of occurrence of interview material. It shows for each interviewer the total number of 10-second periods in 19 interviews during which a discussion in the designated area was taking place. The data on time-of-occurrence of questions are not presented here. These indicated that, whereas the various areas were on the whole covered in certain portions of the allotted time (for example, area 1, interests, at the beginning of the interview; area 11, motion sickness, about the 14th minute), nevertheless there was considerable variation from interview to interview and between the two interviewers. While the interview areas were fixed, the interview procedure was flexible.

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<sup>6</sup>Studies of motion sickness conducted by Dr. G. R. Wendt and co-workers, under the auspices of the Committee on Selection and Training of Aircraft Pilots are reported in: Wendt, G. R. Motion sickness in aviation. NRC Division of Anthropology and Psychology, Committee on Selection and Training of Aircraft Pilots, May 1944. Wendt, G. R. Studies in motion sickness, Series A. Washington, D. C.: Civil Aeronautics Administration Division of Research, Report No. 40, December 1944. Wendt, G. R. Studies in motion sickness, Series B. Washington, D. C.: Civil Aeronautics Administration Division of Research, Report No. 60, April 1946.

TABLE 2

AREAS OF INTERVIEW QUESTIONS  
(38 Interviews)

<u>Area of Questioning*</u>	<u>Frequency of Occurrence (CJH)</u>	<u>Frequency of Occurrence (GRW)</u>	<u>Frequency of Occurrence (Total)</u>
1.	240	249	489
2.	157	214	371
3.	172	174	346
4.	74	50	124
5.	171	132	303
6.	116	105	221
7.	320	309	629
8.	84	75	159
9.	86	80	166
10.	242	186	428
11.	91	78	169
12.	90	40	130
13.	242	245	487
14.	65	74	139
15.	41	51	92
16.	<u>57</u>	<u>70</u>	<u>127</u>
Total	2132	2248	4380**

\*The sixteen areas of questioning are given on page 4.

\*\*The discrepancies between the total obtained time periods and the theoretical maximum (5016) are accounted for by time for introductory remarks, for questions after the interview, and for pauses during the interview.

D. Predictive Ratings. The ratings were made as described above, once for each of 14 scales by each of the three judges, again for each of the 14 scales by the interrogator alone after hearing the arguments of his board.

1. The Rating Scales. The scales were designed to be used both for the predictive ratings by the interview board and for the criterion ratings by the flight instructors. Graphic scales were used, somewhat different from those ordinarily employed. Appendix C shows the scales used. Descriptive phrases were entered along various portions of a pictured normal distribution to aid in rating. Each rating appeared on a separate sheet of paper. The questions appearing at the head of the scales were as follows:

- a. What has been (or will be) his ground school performance?
- b. " " " " " " " " interest in flying or motivation for flying?
- c. What has been (or will be) his skill in handling an airplane?

- d. Has he shown (or will he show) good judgment and foresight in the operation of an airplane?
- e. How well does he (or will he) get along with the people he meets in flying?
- f. How calm and relaxed has he been (or will he be) when operating an airplane under all conditions?
- g. What has been (or will be) his susceptibility to airsickness?
- h. To what extent do you recommend this man as an applicant for flying in the Army or Navy?
- i-n. Rate this man for suitability for each of the jobs below.
  - i. Fighter
  - j. Light bomber
  - k. Observation
  - l. Big ship
  - m. Instructor
  - n. Executive

The interview board judges attempted to predict the rating which the flight instructors would make at the end of the primary course.

The first seven scales were selected to sample what seemed to be the seven most important factors in success of students, based on E. L. Kelly's analysis<sup>7</sup> and on the analysis<sup>8</sup> of assigned causes of "washout" from primary training. Scale 8 was an over-all evaluation. Scales 9 through 14 were an attempt at analysis of the origin of certain kinds of judgments about pilot classification.

The judgments for Scales 1 through 8 were converted to numerical values by the simple technique of measuring the linear distance (in inches) from the left hand end of the scale to the rater's X-mark. The values for Scales 9 through 14 were assigned numerical values from 1 to 10, depending on the numerical position of the rating on the scale from left to right.

2. Control of the Judgment. The judgments were presumably dependent on (a) the background of the judges, (b) their specific indoctrination, and (c) the accumulative effects of the interviewing and rating experience.

- a. The judges' backgrounds were as follows: Dr. G. R. Nendt, a psychologist of 15 years' experience had experience in

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<sup>7</sup>This analysis is described in: Kelly, E. L. The development of "A Scale for Rating Pilot Competency." Washington, D. C.: Civil Aeronautics Administration Division of Research, Report No. 18, July 1943.

<sup>8</sup>Reasons for failure are presented in the following: NRC Committee on Selection and Training of Aircraft Pilots. The C.A.A.-National Testing Service: Summary of test results and comparisons with success in flight training. Washington, D. C.: Civil Aeronautics Administration Division of Research, Report No. 39, November 1944, p. 37.

civil service and clinical interviews and through membership on the Executive Subcommittee of the Committee on Selection and Training of Aircraft Pilots, had acquired detailed acquaintance with contemporary conceptions about the personal characteristics of good and bad pilot applicants. Dr. C. J. Hill was a psychologist of 6 years' experience who had had considerable experience with clinical interviews, but no previous experience with the airplane pilot selection problem. Mr. D. L. Russell was a senior college student majoring in psychology without previous experience in interviewing or in airplane pilot selection.

- b. The indoctrination of the interviewers consisted in gaining a detailed familiarity with each of four groups of material: (1) empirical findings on the item validity of the U. S. Navy Biographical Inventory, (2) source material for the development of an interview for the selection of student pilots,<sup>9</sup> (3) Guide for Interviewer (Tentative Form), and (4) a section entitled "the nature of susceptibility to airsickness" in a progress report by Dr. G. R. Wendt. Several group discussions of the characteristics of the successful pilot applicant preceded the interviewing tour.
- c. Each interview of the series was followed by 14 group discussions of the arguments supporting each rating. These discussions are presumed to have had an accumulative effect in bringing together the opinions of the judges and in defining their points of view.

The judgments were reached by use of the interview materials and the materials in the Personal History (P-H) Inventory<sup>10</sup> interpreted in the light of the points of view of each judge.

E. Aid to the Interview. The Personal History Inventory, a personal history questionnaire of the "Yes" or "No" form containing data believed to be related to flight success, was completed before the interview by each candidate and the answers were examined by each judge before the candidate was called in. The information so obtained to some extent modified the interview and was used in arriving at the ratings.

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<sup>9</sup>This source material, as well as the guide for interviewer and the progress report on the nature of susceptibility to airsickness are in the files of the Committee on Selection and Training of Aircraft Pilots.

<sup>10</sup>Kogan, L. S., Hartman, H. J., and Eubank, J. W. Op. cit. (Footnote 2 of this report.)

F. Other Data Available on Subjects. Most of our subjects also took the test battery of the National Testing Program<sup>11</sup> including the Biographical Inventory (B.I.)<sup>12</sup> (originally devised by E. L. Kelly and later adopted for use by the U. S. Navy), the Otis Test of Intelligence,<sup>13</sup> Higher Form, the Mechanical Comprehension Test (M.C.)<sup>14</sup> and the Desire to Fly (D-F) Inventory.<sup>15</sup> Certain of the subjects also took a special star-tracing test and a battery of ability-to-take-it tests.<sup>16</sup>

G. Ratings of Success in Flight Training. The criterion of success was the flight instructor's judgment near the end of Stage D of the primary CPT course. Each instructor rated his students on each of the 14 scales of our rating scales; e.g., he gave a rating on the question, "What has been his skill in handling an airplane?" etc. These ratings were made under the direct supervision of Dr. G. R. Wendt, who made several tours of the flying schools. Ratings were obtained for only 80 of the 98 cases. No attempt was made to get ratings for the 3 Yale University and the 3 Springfield College cases and others were lost because instructors joined the military forces.

H. Procedural Shortcomings. There were some major and some minor shortcomings of our procedures. They are listed in order of importance.

1. The instructors' ratings should be looked upon with suspicion. While they gave the impression of making an honest effort to make accurate ratings, it is our opinion that our criterion measures contain several of the common errors of rating scales.

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<sup>11</sup>This program developed by the Committee on Selection and Training of Aircraft Pilots has been summarized in a report prepared for the CAA Technical Series. See: NRC Committee on Selection and Training of Aircraft Pilots. Op. cit. (Footnote 8 of this report.)

<sup>12</sup>A study of the Biographical Inventory is being prepared for the CAA Technical Series by the Editorial Staff of the Committee.

<sup>13</sup>Published by the World Book Company, Yonkers, N. Y.

<sup>14</sup>Published by the Psychological Corporation, New York City.

<sup>15</sup>This inventory was developed by Dr. J. W. Dunlap and Mr. M. J. Wantman in collaboration with Dr. G. R. Wendt. See: Kogan, L. S., Wantman, M. J., and Dunlap, J. W. Analysis of the Desire to Fly (D-F) Inventory. Washington, D. C.: Civil Aeronautics Administration Division of Research, Report No. 50, October 1945.

<sup>16</sup>Research with this battery has been reported in: Dunlap, J. W., et al. Tests of the "Ability to Take It." Washington, D. C.: Civil Aeronautics Administration Division of Research, Report No. 11, February 1943. Also: Odibert, H. S., Festinger, Leon, and Warner, Seymour. "Ability-to-take-it" tests: examiner differences and validation. Washington, D. C.: Civil Aeronautics Administration Division of Research, Report No. 49, October 1945.

2. The interviewers began this research without skill in the specific job. Their results can hardly be considered as a definitive indication of the ultimate potential accuracy of the interview-judgment by trained personnel having also the advantage of knowledge of all research to date on the characteristics of successful airplane pilots and on the results of this and other studies.

3. Ninety-two recorded interviews were conducted in four locations in 9½ total elapsed days. Travel difficulties arising out of a severe blizzard were added to this heavy schedule. A better result could be achieved by working on a less fatiguing schedule.

4. The Personal History Inventory did not appear to be a useful aid. The candidates came before us with prepared rationalizations for some of the items and occasionally with resistance based on the personal nature of the questions. This wasted time which could have been better spent.

I. Analysis of Data. Only a partial analysis of the data was undertaken -- enough to give an indication of the trend of the findings. The task of the analysis was in part supervised by Mr. M. J. Wantman, Statistical Unit of the Committee on Selection and Training of Aircraft Pilots, University of Rochester, while other portions of the analysis were carried out at Wesleyan University.

## RESULTS

Results dealing with the interview were analyzed for 92 cases, omitting the first six interviews at Yale University and Springfield College. Results dealing with criteria were analyzed for the 80 cases for whom instructors' ratings were obtained.

A. Age, Location, and Appointment Time as Factors in Interview Ratings. The following data are presented to indicate the approximate importance of certain variables not a part of the design of the experiment. Data on the influence of age, location, and appointment time are given in terms of the means of the individual judges' ratings on Scales 1 through 8. Table 3 shows the relation of mean rating to age and Table 4 of mean rating to place. Since the mean age differed at each place (being least at the New York State Agricultural and Technological Institute, and progressively higher at Colgate University, Syracuse University, and the University of Rochester) and since our itinerary, in general, took us from young candidates at the beginning to older candidates at the end, there appears to be no ready way of assigning causes to the obtained variations.

Table 5 shows the mean ratings as affected by the time of day during which the interview took place. We gave from six to twelve interviews per day. Table 5 shows only the mean ratings for Scales 1 through 8. Those for Scales 9 through 14 were tabulated and show exactly the same trends except that the ratings on the eleventh interview are slightly higher than on the tenth, rather than lower. These data seem to indicate the possi-

bility of a generosity error in early morning interviews and again immediately after dinner in the evening.

TABLE 3

MEAN INTERVIEW RATINGS AS RELATED TO AGE

<u>Age in Years</u>	<u>N</u>	<u>Mean Rating</u>
18	6	3.81
19	11	3.51
20	30	3.74
21	18	3.68
22	13	4.17
23	6	4.10
24	6	3.78
25	2	4.04

TABLE 4

MEAN INTERVIEW RATINGS AS RELATED TO PLACE

<u>Place</u>	<u>N</u>	<u>Mean Rating</u>
Colgate University	18	3.51
Syracuse University	28	3.72
New York State Agricultural and Technological Institute	10	3.74
University of Rochester	36	4.02

B. Reliability of Interview Judgments. The reliability of interview judgments in this research is indicated by the correlation of ratings by different judges. Scatter diagrams of all of the distributions of pairs of judgments were made, but only a few coefficients of correlation were computed. Estimates were made from the scatter diagrams which aid in showing the probable central tendency of the reliability of ratings. Table 6 shows the calculated r's for correlations between the ratings of individual judges as well as between group discussion ratings by the interrogators, viz.: gdr (W) and gdr (H). Inspection of Table 6 shows that there was moderate agreement between Hill and Wendt, with highest r's for ratings of recommendation for Army or Navy, airsickness and ground school grades, lowest r for prediction of calmness and relaxation. Agreement with Russell was in general, less. The r's of group discussion ratings show the interaction of interviewers with one another. Wendt stuck to his own opinions on airsickness, but was influenced by Hill on ratings of interest and motivation. Hill stuck to his opinions on ability to get along with people,



TABLE 5

## MEAN INTERVIEW RATINGS AS RELATED TO TIME OF APPOINTMENT

Date	Order of Interview											
	1	2	3	4	5	6	7	8	9	10	11	12
2/26	3.48	5.03	2.61	3.52	3.50	4.12	4.02	3.48	4.55	3.02	2.70	
2/27	3.62	3.10	3.19	3.71	4.41	2.31	2.72					
2/28	4.44	3.82	4.08	3.61	3.01	3.35	4.49	3.58	3.74	3.95		
3/1	4.12	3.59	2.92	3.90	3.42	3.54	3.10	3.45	4.91	3.16		
3/2	3.70	3.99	3.39	3.48	3.48	3.18	5.22	3.55				
3/3	4.52	4.20	3.86	2.60	4.28	3.18	3.35	2.68	4.85	3.91		
3/4	3.95	3.51	4.88	3.38	4.76	3.3	4.82	3.69	4.51			
3/5	4.06	4.68	3.58	4.44	4.36	4.58	4.00	3.62	3.89	4.61	4.54	2.55
3/6	4.60	5.59	3.82	1.90	3.40	3.41	3.01	4.45	4.38			
3/7	3.78	3.96	5.52	2.95	3.58	4.62						
M	4.03	4.15	3.78	3.35	3.82	3.56	3.86	3.56	4.40	3.73	3.62	2.55
N	10	10	10	10	10	10	9	8	7	5	2	1

TABLE 6

CORRELATIONS BETWEEN RATINGS OF DIFFERENT JUDGES  
(N = 92)

	Ground School	Interest and Motivation	Skill	Judgment and Foresight	Ability to get Along	Calmness and Relaxation	Airsickness	Rec. for Army/Navy
Hill vs. Wendt	.72	.66	.62	.67	.63	.45	.74	.82
Hill vs. Russell	.62		.41			.43	.70	
Wendt vs. Russell	.61		.66				.72	
gdr(W)* vs. Wendt	.90	.79	.84	.88	.79	.76	.97	.85
gdr(W) vs. Hill	.83	.85	.69	.66	.64	.59	.86	.80
gdr(W) vs. Russell	.62		.67			.46	.74	
gdr(H) vs. Hill	.85	.93	.63	.70	.97	.75	.89	.81
gdr(H) vs. Wendt	.86	.88	.87	.89	.79	.77	.87	.88
gdr(H) vs. Russell	.81		.68				.84	

\*Group discussion ratings.

but was influenced by Wendt on ratings of judgment and foresight and on recommendation for Army or Navy. Correlations with Russell were generally lower.

C. Validity of Interview Ratings. Correlations of interview ratings and instructor's ratings were calculated only for the group discussion ratings. These are shown in Table 7. It will be observed that all r's are positive, but low. The best predictions were for airsickness and actual ground school grades, the poorest for skill and for calmness and relaxation.

TABLE 7

## CORRELATIONS OF GROUP DISCUSSION RATINGS WITH INSTRUCTOR'S RATINGS

Questions Rated	Group Discussion Rating			Instructor's Ratings		
	N	Mean	Standard Deviation	Mean	Standard Deviation	r
1. Ground school grades	17	3.8	1.2	4.0	0.9	.33
2. Interest and motivation	80	4.3	1.0	4.3	1.0	.27
3. Skill	79	3.8	1.0	3.8	1.2	.02
4. Judgment and foresight	80	3.9	1.0	3.8	1.2	.17
5. Ability to get along with people	79	3.5	0.9	4.1	0.9	.24
6. Calmness and relaxation	79	3.9	0.9	4.1	1.2	.03
7. Airlsickness	79	4.2	1.0	4.5	1.1	.42
8. Recommendation for Army, Navy	73	3.8	1.0	3.9	1.4	.27
9. Fighter	72	5.8	1.7	5.1	2.2	.26
10. Light bomber	78	5.7	1.7	5.3	2.1	.28
11. Observer	77	5.3	1.5	5.7	1.7	.16
12. Big ship operator	77	5.1	2.0	5.3	2.0	.13
13. Instructor	77	5.5	1.7	5.4	2.1	.15
14. Executive	77	5.2	1.7	5.1	1.8	.20

Table 8 and Table 9 show correlation of interview ratings and instructor's ratings with predictive scores on five of the paper-and-pencil tests administered to these subjects. The tests were administered as part of the selection program and before the interview, except for the Rochester cases who took them after the interview. The Personal History Inventory (Repeat) was administered as an aid to the interview. It will be observed that interview ratings correlate positively with the Biographical Inventory, Personal History Inventory, and Test of Mechanical Comprehension as would be expected since these constituted part of the indoctrination of the interviewers. The absence of correlation with the Desire to Fly Inventory is most likely a result of the scoring key used, rather than of any failure to give weight in the interview to the materials covered by that test. The correlations with instructor's ratings are insignificant in the cases of the scores of the Desire to Fly Inventory and Personal History Inventory, low positive for the Biographical Inventory and Otis Test and as high as .45 for the

TABLE 8

CORRELATIONS OF PAPER-AND-PENCIL TESTS WITH GROUP  
DISCUSSION RATINGS ON INTERVIEW SCALES  
(N = 79)

<u>Questions Rated</u>	<u>B.I. +1% Rights</u>	<u>Otis Rights</u>	<u>M.C. Rights</u>	<u>D.F. ± 20%</u>	<u>P-H* ± 85%</u>	<u>P-H+ 85% (Repeat)</u>
1. Ground school grades	.25	.31	.27	-.09	.17	.10
2. Interest and motivation	.33	-.07	.27	.03	.31	.38
3. Skill	.36	.10	.20	.03	.27	.34
4. Judgment and foresight	.27	.12	.25	-.01	.25	.21
5. Ability to get along with people	.25	.03	.12	-.01	.20	.06
6. Calmness and relaxation	.27	.04	.16	.21	.30	.27
7. Airsickness	.24	.01	.11	.11	.30	.31
8. Recommendation for Army, Navy	.33	.10	.17	.08	.28	.23
9. Fighter	.23	-.09	.03	.12	.29	.28
10. Observer	.40	.10	.33	-.02	.18	.21
11. Big ship operator	.37	.19	.24	-.05	.28	.17
12. Instructor	.23	.13	.16	-.14	.14	.08
13. Executive	.25	.26	.23	-.01	.22	.11
14. Light bomber	.36	-.03	.11	.00	.30	.29

\*Based on initial keys of D-F and P-H; these keys were revised after second item analysis was completed.

TABLE 9

CORRELATIONS OF PAPER AND PENCIL TESTS WITH INSTRUCTOR'S  
RATINGS ON INTERVIEW SCALES  
(N = 65)

<u>Questions Rated</u>	<u>B.I. +1% Rights</u>	<u>Otis Rights</u>	<u>M.C. Rights</u>	<u>D.F.* ± 20%</u>	<u>P-H* ± 85%</u>	<u>P-H+ 85% (Repeat)</u>
1. Interest and motivation	.16	.06	.33	.04	-.02	.06
2. Skill	.11	.14	.34	.14	.07	.06
3. Judgment and foresight	.04	.18	.36	.18	.09	.10
4. Ability to get along with people	.09	.28	.35	.07	-.02	.04
5. Calmness and relaxation	.05	.14	.22	-.05	.07	.00
6. Airsickness	.35	.01	.25	-.03	.17	.08
7. Recommendation for Army, Navy	.20	.23	.45	.16	.20	.13
8. Fighter	.14	.15	.25	-.04	.20	.10
9. Light bomber	.17	.20	.31	.07	.19	.16
10. Observer	.22	.08	.22	.05	.02	.01
11. Big ship operator	.16	.12	.32	.04	.10	.08
12. Instructor	.21	.16	.32	.02	.08	.06
13. Executive	-.02	.21	.09	-.08	.04	-.04

\*Based on initial keys of D-F and P-H; these keys were revised after second item analysis was completed.

Test of Mechanical Comprehension when correlated with the scale, Recommendation for Army or Navy.

Table 10 shows intercorrelations of the scores on the paper-and-pencil tests. It shows the expected correlations of Test of Mechanical Comprehension and Otis Test and of Biographical Inventory and Personal History Inventory. The retest reliability of the Personal History Inventory (uncorrected) was indicated by  $r = .68$ .

TABLE 10  
INTERCORRELATIONS OF PAPER-AND-PENCIL TESTS  
(N = 79)

	B.I. +1% A	Otis Rights	M.C. Rights	D.F.* ± 20%	P-H* ± 85%	P-H ± 85% (Repeat)
B.I. +1% A	-	-.06	.27	.23	.43	.36
Otis (Rights)		-	.45	.12	-.05	.02
M.C. (Rights)			-	.08	.14	.25
*D-F ± 20%				-	.19	.11
*P-H ± 85%					-	.68
*P-H ± 85% (Repeat)						-
Mean	9.6	52.8	50.3	20.7	23.0	24.5
Standard deviation	2.6	10.3	7.4	7.6	10.2	8.9

\*Based on initial keys of D-F and F-H; these keys were revised after second item analysis was completed.

D. Intercorrelations of Rating Scale Judgments. Table 11 and Table 12 show the intercorrelations of ratings on each of the 14 scales for interview ratings (gdr only) and for instructor's ratings. These reveal both the common factors operating in the judgments and the specific traits judged important by the interviewers. Common factors are indicated by the fact that all  $r$ 's are positive, the lowest obtained  $r$  being .17 between interview ratings of ground school grades and airsickness. Specific traits affecting judgment are indicated. For example, the interviewers tended to rate candidates high as potential instructors whom they had also rated high in ability to get along, while the correlation of ratings between the instructor scale and the calmness and relaxation and skill scales was lower. The mean intercorrelations on all scales for the interview ratings was .54 and for the instructor's ratings was .54.

## DISCUSSION

The interpretation of the results of such interview research ought, it appears, to take into account that in practice it should be possible

### INTERCORRELATIONS OF GROUP DISCUSSION RATINGS (N = 79)

[illegible]

INTERCORRELATIONS OF INSTRUCTOR'S RATINGS  
(N = 65)

[illegible]

to do a better job than is done in the research trial. By close control of the interview technique, interview judgment and criterion ratings, including a continuing check on the obtained predictiveness of each interviewer's ratings, a considerably higher level of reliability and validity ought to be obtainable. Interview research, designed to develop the highest possible predictiveness, should give a team of interviewers opportunity for repeated tours, each tour taking advantage of the successes and errors of the preceding tour. Interview research stopped after its beginning, as this project was, is like paper-and-pencil test research which never progresses from the stage of a priori scores to the stage of item validation.

It may be noted that the reliability of judgments in this study, as indicated by the correlations of judgments between Hill and Wendt, was as high as any reliabilities obtained in the study reported by Dunlap and Wantman.<sup>17</sup> The indicated validity is also of about the same order of magnitude as in that study. The predictiveness of the judgments on two scales in which the experimenters had special interests, airsickness and interest and motivation for flying, was among the highest obtained. The correlation of  $r = .42$  between interviewer's and instructor's ratings of airsickness indicates that the mean of 44 seconds per man spent on this topic may yield as good a prediction as has been achieved by paper-and-pencil inventories.

The group discussion rating made by the interrogator after listening to the opinions of his board, was designed to simulate a situation in which a superior officer would be responsible for the final judgment after listening to the arguments of his staff. Although this incomplete analysis is insufficient to give a definitive answer on the effectiveness of this method for increasing validity, it may be noted that it was found to be a workable procedure.

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<sup>17</sup>See: Dunlap, J. W., and Wantman, M. J. Op. cit. (Footnote 1 of this report.)

APPENDIX A

A NOTE ON THE INVESTIGATION OF AN INTERVIEW AT  
TERMINATION OF PRIMARY FLIGHT TRAINING

## APPENDIX A

### A NOTE ON THE INVESTIGATION OF AN INTERVIEW AT TERMINATION OF PRIMARY FLIGHT TRAINING

This note records an attempt to devise an interview for pilots who had reached the end of primary training in the Civilian Pilot Training course. The flyers to be interviewed were those who had previously been interviewed at the beginning of flight training.<sup>18</sup> The purpose of the interview was exploratory, with special emphasis to be placed on study of the motivational aspects of the flight training situation, and on a recheck of the attitudes expressed in the first interview. A second objective was to assess the possibilities of making, on the basis of the interview, a prediction of success in military flight training. The interviews were to be conducted by a single interviewer in each area and were to be recorded on phonograph records.

After several interviews, the project was abandoned because of two unforeseen factors. First, the rapid development of the military situation was such that appointments were difficult and the flyers were so preoccupied with their immediate problems that they were unable to give a satisfactory account of their attitudes or plans. Second, our plan to use non-flyers as interviewers appeared to be ineffective because of difficulties in development of rapport between the newly trained flyers and the groundling who was conducting the interview.

Thanks are due Dr. C. W. Young, Dr. H. M. Hildreth, and Dr. H. C. Mills, who cooperated in setting up the arrangements and who planned to conduct the interviews.

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<sup>18</sup>The main study was concerned with this analysis.



APPENDIX B

INTERVIEW QUESTIONS ACCORDING  
TO AREA OF QUESTIONING

## APPENDIX B

### INTERVIEW QUESTIONS ACCORDING TO AREA OF QUESTIONING

#### A. INTEREST BACKGROUND

\*1. Why did you go into CPT?

- a. What influenced you to go into flying?
- b. Why are you interested in flying?
- c. Any special motive? Is it because of the war situation?

\*2. How long have you been interested in flying?

- a. How long ago did you register for CPT?
- b. Have you always wanted to fly?
- c. What is your attitude towards flying?

\*3. Have you ever built models?

- a. Flying models?
- b. Have you belonged to any model airplane club?
- c. Have you made gas-powered models?
- d. Do you still make them?

\*4. Do you do much reading on aviation? How much?

- a. What kind of reading do you do?
- \*b. Popular or technical reading?
- c. Have you read technical material on aviation? How much?
- d. What magazines do you read?
- e. Do you subscribe to any of the popular magazines?
- \*f. Do you read Aero Digest? Popular Mechanics? Popular Science? Popular Aviation?
- g. Do you read in the newspapers on aviation?
- h. Do you read any books on aviation? What books have you read?

\*5. Have you ever hung around airports?

- a. Do you know the instructors?
- b. Do you know your instructor?
- c. Do you know people at the airport? Pilots?

\*6. Do any of your friends fly?

- \*a. Does your family fly? Father? Brother?
- b. Do your relatives fly?
- \*c. Do any of your close friends fly?
- d. Do you think they may have influenced you?
- e. Do you think other pilots may have influenced you?
- f. Do you know any CPT logs? Are they in the course this year?

\*7. Have you ever been up?

- \*a. How many times have you been up? How many hours?
- b. How often do you fly?
- c. Have you flown in transports? How many times?
- \*d. Have you handled the controls? How often?
- \*e. What kind of plane were you up in?
- f. Did you like flying?
- g. Have you had instruction? How much instruction have you taken?

8. Had you planned to take secondary flight training?

## B. PERSONAL HISTORY

\*1. What have you been doing since high school?

- \*a. What jobs have you held? What work have you done?
- b. Why did you leave \_\_\_\_\_ job? Why did you leave school?
- c. Where did you work before your present job?
- \*d. What are you doing now?
- e. Why haven't you gone on to college?
- \*f. What other work have you done?
- g. Why are you here?
- h. When did you leave high school? How long have you been out of school?

\*2. Where do you live?

- a. Where do you come from?
- b. Do you live in the city?
- c. Do you live in the country?

\*3. Where do you stand in the draft?

- a. What is your draft status?
- b. Do you have draft classification?
- c. Can you be deferred for occupational reasons?
- d. Are you taking GPT to avoid the draft?

4. Are you married?

- a. Does your wife work?
- b. What is the attitude of your wife to flying?
- c. Do you live with your wife?

5. Are you self-supporting?

- a. Are you working your way through college?

6. What kind of work do you like?

7. What is the furthest you have been from home?
  - a. Have you been around a lot and done things?
8. What education have you had?
  - a. Where did you go to high school?
  - b. Why did you leave high school?
  - c. Where are you in college?
  - \*d. What are you doing? What are you majoring in?

### C. HOME SITUATION

- \*1. Do you live at home?
  - a. Who is at home?
  - b. Do you get home often?
  - c. What kind of home do you have? Do your parents have cultural or material interests? What kind of interests do they have?
- \*2. Are your mother and father alive?
  - \*a. How do your folks feel about your going into flying?
  - b. Are your mother and father of the same religion?
  - c. What is the attitude of your parents to the war? Are they intensely patriotic?
  - d. How do you get along with your parents?
  - \*e. Does your mother worry about your flying?
  - \*f. What does your father do?
  - g. Do your parents run your affairs, or do they leave you pretty much alone? How independent of your family are you?
  - h. How old are your parents?
  - i. What is the nationality of your parents? What is your racial background?
  - j. How much education did your parents receive?
- \*3. Do you have any brothers and sisters?
  - \*a. How many?
  - \*b. What do they do?
  - c. How do you get along with them?
  - d. Are you an only child? Are you a favorite child?
  - e. What are the ages of your brothers and sisters?
- \*4. How are things at home?
  - a. How are they financially?
  - b. How are things socially? Everybody happy?
- \*5. Is yours a close knit family?

- a. Do you have a large family?
- b. How would you like to spend your leisure time?

\*6. Do you have a mother-in-law?

- a. Does she have a right to have an opinion about your flying?
- \*b. What does she think of your flying? What is her attitude to your flying?
- c. Does she approve?

#### D. AMBITION

1. What had you planned to do before the war?

- a. Why are you majoring in \_\_\_\_\_?
- \*b. Had you thought of trying in your training with aviation?

\*2. Have you considered aviation as a career?

- a. Do you plan to make aviation your life work?
- b. Do you think you would like aviation as a career?

\*3. What had you in mind for the future?

- a. Would you stay in the work you are in?
- b. Had you thought of going into the Army or the Navy?

#### E. TYPE OF PLANE OR JOB

\*1. What type of flying are you interested in?

- a. Which do you like, Army or Navy flying?
- b. Do you like commercial flying?
- c. Do you like military flying?
- \*d. Which would you prefer: commercial or military flying?
- e. Would you like to go into the Air Corps?

\*2. Would you like ground work?

- a. Are you interested in aeronautical engineering?
- b. Are you interested in airplane design?
- f. Are you interested in the business end of flying? Flight management? Executive work?
- h. Why aren't you interested in the business side of flying?
- i. How would you like navigation work?

\*3. Would you like being an instructor? Had you thought of being an instructor?

- a. Do you like teaching?

- \*b. Have you had teaching experience? What experience have you had?
- c. Why do you want to be an instructor?
- \*4. What kind of plane would you want to fly?
  - \*a. Would you want to fly a pursuit plane? A combat plane?
  - b. Which do you prefer: light or heavy planes?
  - c. Would you like a light bomber? A dive bomber?
  - \*d. Would you like a big ship?
  - e. Would you like a bomber?
  - f. How would you like observation or scouting? Photography?
  - \*g. Do you think you could handle the technical details of a big ship?
  - h. Why wouldn't you like the small planes?
  - \*i. Why wouldn't you like the big planes?
- \*5. What job are you interested in?
  - a. Is there any particular job in flying which you wouldn't want?
  - b. Do you think pilots are well paid?

#### F. GROUND SCHOOL

- \*1. What sciences have you had in school?
  - \*a. What grades did you get in them?
  - b. What were your Regent's grades?
  - c. Did you do well in them?
  - d. What sciences did you have in high school?
  - \*e. What sciences have you had in college?
- \*2. How do you think you will get along in ground school?
  - a. Have you had ground school?
  - b. Do you worry about ground school?
- 3. What do you get your best marks in?
  - a. What courses do you like?
  - b. What courses do you dislike?
  - c. What are your worst subjects? Which subjects do you do poorest in?
  - \*d. What is your college average? What marks have you received in college?
  - e. Did you have much competition in school? Was yours a large high school?
  - f. What were your grades in school?
- \*4. Have you had enough mathematics?
  - a. How much have you had?
  - b. What marks did you receive in high school mathematics?

\*5. List the sciences you have had. Geology? Biology? Physics? Chemistry? Astronomy? Botany? Etc.?

6. Have you had sufficient background to do well in ground school?

#### G. DRIVING

\*1. Do you drive?

- a. Whose car do you drive?
- \*b. Do you own a car?
- \*c. What kind of a car is it?
- \*d. How much do you drive? How many miles would you say you had driven?
- \*e. How long have you been driving?

\*2. How fast do you usually drive?

- \*a. How fast would you drive on the Cherry Valley turnpike on a clear day with an open road? How fast do you go on an open highway?
- \*b. What is your normal driving speed?
- c. Do you ever go faster?
- d. Why don't you go faster?

\*3. What is the fastest you have driven?

- a. Were you driving when you went the fastest you have gone?
- b. What is the fastest you have gone with someone else at the wheel?
- c. Do you like to go fast?

\*4. Are you ever bothered when someone else is driving?

- a. Have you ever ridden with someone who was obviously a poor (or reckless) driver?
- \*b. How do you react when someone at the wheel is a reckless driver?
- c. Is your father a good driver? Is your mother a good driver?
- \*d. Why are you bothered when someone else is at the wheel? Have you had some unpleasant experience when someone else was driving?

\*5. Have you ever had an accident?

- b. Have you had any minor accidents -- fender brushes, bumper dents, etc.?
- c. Have you ever smashed up a car?
- d. Have you been in an accident with someone else driving?
- e. What caused the accident?
- f. Was it your fault or the fault of the other person?
- g. How did it affect you?
- h. Did it make you nervous?
- \*i. How many accidents have you had? Recently?
- j. Would you say you were reckless?

\*6. How do you like driving on ice? Have you driven on ice?

- \*a. Does it bother you?
- \*b. How fast would you go on a day like this? (Icy day?) (Slushy day?) (Hard-packed snow day?)
- c. Would you go fifty on ice?
- d. Would you go more than fifty on ice?
- e. Why wouldn't you?
- f. Are you good at driving on ice?

\*7. Does skidding bother you?

- a. Do you like to skid?
- \*b. Do you practice skidding?
- c. Where have you practiced skidding?
- d. Have you ever had a bad skid?
- \*f. Have you ever skidded intentionally?
- g. Are you calm in a skid?

\*8. Have you ever ridden on a motorcycle?

- a. Would you like to?
- b. Do you own one?
- c. Have you had one?
- d. Are you good on it?

\*9. Have you ever been arrested?

- a. What have you been arrested for?
- b. Have you been caught for speeding?
- \*c. Have you ever been stopped? What for?
- d. Have you been stopped for going through a red light?
- \*e. How do you account for the fact you have never been stopped?
- \*f. Do you use your rear-vision mirror constantly?
- g. Have you ever been fined for traffic violations?

\*10. Have you ever run out of gas?

- a. When was the last time?
- b. Do you do it frequently?
- c. Why did you run out of gas?
- d. How many times have you run out of gas? How often do you run out of gas?

\*11. What other things do you drive?

- \*a. Do you drive (or have you driven) a truck?
- \*b. Do you drive (or have you driven) a tractor? Farm machinery?
- \*c. Do you drive a motorboat? Do you drive an outboard?
- d. Do you handle them well?

12. Was it easy for you to learn how to drive?



## F. MECHANICAL

- \*1. How mechanical are you? What mechanical interests have you?
  - a. Have you done work on a lathe? Are you good at it?
  - b. Have you done woodwork? Are you good at it?
  - c. Do you like mechanical work?
  - d. Do you have any mechanical hobbies?
  - \*e. Have you done mechanical work? Have you done any shop work?
  - \*f. Are you good at mechanical work?
2. Did you have an Erector set when you were a child? A Mechanical set?
- \*3. Do you tinker with motors and cars? Do you like to?
  - \*a. Do you fix your own car?
  - \*b. Do you do any complicated repairs on your car?
    - c. Have you ever performed a ring-job on your car?
    - d. Have you worked with electrical things?
    - e. Have you worked as a garage mechanic?
    - f. Is this a good course in auto mechanics? Do you like the course?
- \*4. Do you like to do simple repairs around the home?
  - a. Have you ever worked on a farm?
- \*5. Have you worked with machines?
  - \*a. What machines have you worked with?
  - b. Are you good in handling machines?
  - \*c. Do you break very much machine work? How is your breakage rate?
  - d. Have you worked with farm machinery?
6. What mechanical things have you worked with?
  - a. Have you done any radio work?

## I. ENDURANCE

- \*1. What is the longest bit of consecutive driving you have done?
  - a. What is the longest distance you have gone in, for example: a day and a night?
  - \*b. How did you feel at the end? How did you stand up under it?
    - c. Were you running through stoplights and missing turns at the end?
    - d. Could you take 14 hours at a stretch, in a bomber, for example?
  - \*e. Do you have trouble keeping awake at the wheel? Do you tire easily at the wheel?
  - f. Were you alone when you took your longest drive?
  - g. Could you have gone 200 miles more at the end? 400 miles?

2. Could you take long hours with little sleep?

- \*a. Have you worked long hours of hard physical labor?
- b. How long have you worked in one day?
- c. How did you bear up under it?

\*3. How do you regard your endurance?

- a. Have you had a chance to test it?
- b. Have you mental endurance?

#### J. SPORTS, SKILLS, AND RECREATION

\*1. How good a pilot do you think you'll be?

- a. Think you'll pick up flying readily?
- b. What is your reason for thinking you will make a good pilot?
- c. Do you like acrobatics? Will you like acrobatics?

\*2. What sports have you participated in?

- a. Which sports do you like?
- b. Which (or are there any) do you particularly dislike? Why?
- \*c. Are you good in sports? Which are you good in?
- d. Did you go out for the team?
- e. Why did you drop it?
- f. Did you get your letter?

\*3. Do you swim?

- a. Do you swim well? How good a swimmer are you?
- b. Do you like to swim?
- \*c. Do you dive?
- \*d. Do you do any fancy diving?
- e. What dives can you do?
- \*f. Do you like to do high diving?
- g. From what height do you like to dive?
- \*h. What is the highest dive you have made?

\*4. List the sports you have participated in: (football, handball, basketball, soccer, baseball, tennis, track, etc.)

- \*a. Do you skate? Are you good at it?
- \*b. Do you ski? Are you good at it?
- c. Do you bowl? What score do you usually make?
- d. What sports are you good in?

\*5. Do you sail?

- a. How good a sailor are you?
- b. Have you ever capsized?
- c. What kind of boat have you sailed?

\*6. What skills do you have?

- a. Do you shoot? Are you a good shot?
- \*b. Do you hunt? What do you usually hunt for?
- c. Can you hunt with a rifle? What kind of gun do you use? Can you hit a pheasant with a .22?
- \*d. Do you fish? What kind of fishing do you do?
- e. Do you do any baitcasting? Flycasting? Still fishing?

\*7. Are you well coordinated?

- a. Have you hurt yourself while working with machinery?
- b. Do you pick things up readily?

\*8. What do you do for recreation?

- a. What hobbies do you have?

#### H. AIRSICK

\*1. Are you worried about getting airsick?

- \*a. What are the chances you will be airsick?
- b. Have you ever been airsick?
- c. Do you think you will be all right in the air?

\*2. Have you ever been sick in automobiles?

- \*a. Have you been sick on trains?
- b. Have you been sick on streetcars?
- c. Have you been sick on subways?
- \*d. Have you been sick on buses?
- \*e. Were you sick on any vehicles as a child?

\*3. Have you been sick on amusement park devices?

- \*a. Have you been on the LOOP-o-PLANE? Were you sick?
- b. Have you been on the roller-coasters? Were you sick?
- \*c. Do you like the amusement park devices?
- d. Do you get a thrill out of them?
- e. Do you spend much money on amusement park devices?

\*4. Have you ever been seasick?

- \*a. Were you seasick as a child?
- b. When were you last seasick? How long ago were you seasick?

#### M. SOCIABILITY

\*1. Do you smoke?

- \*a. How much do you smoke? A pack a day?
- b. Why don't you smoke? Why don't you smoke more?
- c. Do you have moral or religious scruples against smoking?

\*2. Do you drink?

- \*a. How much do you drink?
- b. How often do you drink?
- \*c. When do you drink? Do you drink alone or with the boys?
- d. Do you drink to forget?
- e. What do you have to forget?
- f. Why not drink?
- \*g. Do you have moral or religious reasons for not drinking?
- h. Do you object to other people's drinking?
- i. Have you ever been drunk? Have you ever had a hangover? How many hangovers a week do you have?

\*3. How do you get along with people?

- a. How often do you date?
- b. How much social life do you have? What social life do you have?
- \*c. Do you have any trouble meeting people? Do you like to meet people?
- \*d. How would you rate yourself: as a lone wolf or towards the social end of the scale?
- \*e. Do you consider yourself to be a sociable person? How sociable are you?
- \*f. Would you call yourself a shy person? Do you think others think of you as being shy?
- \*g. How would other people rate you: as a lone wolf or as a sociable person?
- h. Do your parents approve of your social life?
- \*i. How many close friends do you have?
- \*j. How do you get along with women? With girls?
- \*k. Would you say you had few or many friends?

\*4. Did you have any disciplinary trouble in school?

- \*a. How did you get along with your teachers and coaches?
- b. Have you ever been bawled out in class?
- c. Have you ever been thrown out of class?
- d. Have you ever been thrown off the squad? Have you ever been suspended?
- e. Have you had any trouble with the dean?
- f. How would you react to a tough army sergeant who would never praise you and only bawl you out?

\*5. Do you belong to any fraternity?

- a. Which one do you belong to?
- \*b. How would your brothers rate you, as a lone wolf or as a sociable fellow?
- c. Have you been an officer of the fraternity?

- d. How long have you been in the fraternity?
- \*e. How do you get along with the fellows in the fraternity?
- 6. Do you know any of the boys taking the OPT course?
- \*7. Do you get in many fights?
  - \*a. When was the last one?
  - b. What was the fight over?
  - c. Do you have many enemies?
- \*8. Do you belong to many clubs?
  - a. Which clubs do you belong to?
  - b. Why don't you belong to any clubs?
  - \*c. What activities did you participate in in school? Debating? Dramatics? Band? Orchestras? Etc.?
- 9. Have you done any public speaking?
- \*10. Have you participated in any student government activities?
  - \*a. What offices have you held?
- \*11. Are your parents social people?
  - a. Do your parents belong to clubs and groups? Do they participate in any civic affairs?
  - b. Do they have people in for tea and bridge, etc. quite often?

#### N. PERSONALITY

- \*1. Would you say you were touchy on some subjects?
  - \*a. What kind of subjects are you touchy on?
  - b. Are you touchy about women?
  - c. Are you touchy about matters concerning your family?
  - d. Are you touchy about your race?
  - e. Are you touchy about your religion?
  - f. Are you touchy about your personal life?
  - g. Are you touchy about your ability?
  - h. Are you touchy about sex?
- 2. Are you sensitive? Do you consider yourself to be sensitive?
  - a. Are you sensitive to criticism and praise?
  - b. Are you sensitive to disapproval?
- 3. Do you worry about making the grade in flying?
  - a. Do you worry about other things? What do you worry about?

- \*4. How would you describe yourself?
  - a. Do you feel inferior? What do you feel inferior about?
  - b. Would you say you were emotionally stable? Are you moody?
- \*5. Do you worry over the danger in flying? How do you feel about the danger in flying?
- 6. Are you a very religious person? Do you take your religion seriously?
  - a. How many times do you go to church in a week?

O. TIME FOR FLYING

- \*1. Are you going to have time for flying?
  - a. Have you planned it so that you will have time to fly?
  - b. Will it bother your studies?
- \*2. How much outside work and activities cut into your time?
  - a. Is there anything which will interfere with your flying time?
- 3. Do you have a heavy course load?

P. MISCELLANEOUS

- 1. How often do you break your watch crystal?
  - a. Is it broken now?
  - b. How did you break it? How do you usually break it?
- \*2. Unclassified comments, not having bearing in the interview.
- \*3. Is there anything you can add which would tell us about yourself which would help us to rate you?
  - a. Have we forgotten anything?
- 4. What is your attitude towards the war?
- 5. How do you feel about skill versus judgment in flying?

APPENDIX C

GRAPHIC RATING SCALES EMPLOYED FOR OBTAINING PREDICTIVE  
RATINGS BY THE INTERVIEW BOARD AND CRITERION  
RATINGS BY FLIGHT INSTRUCTORS

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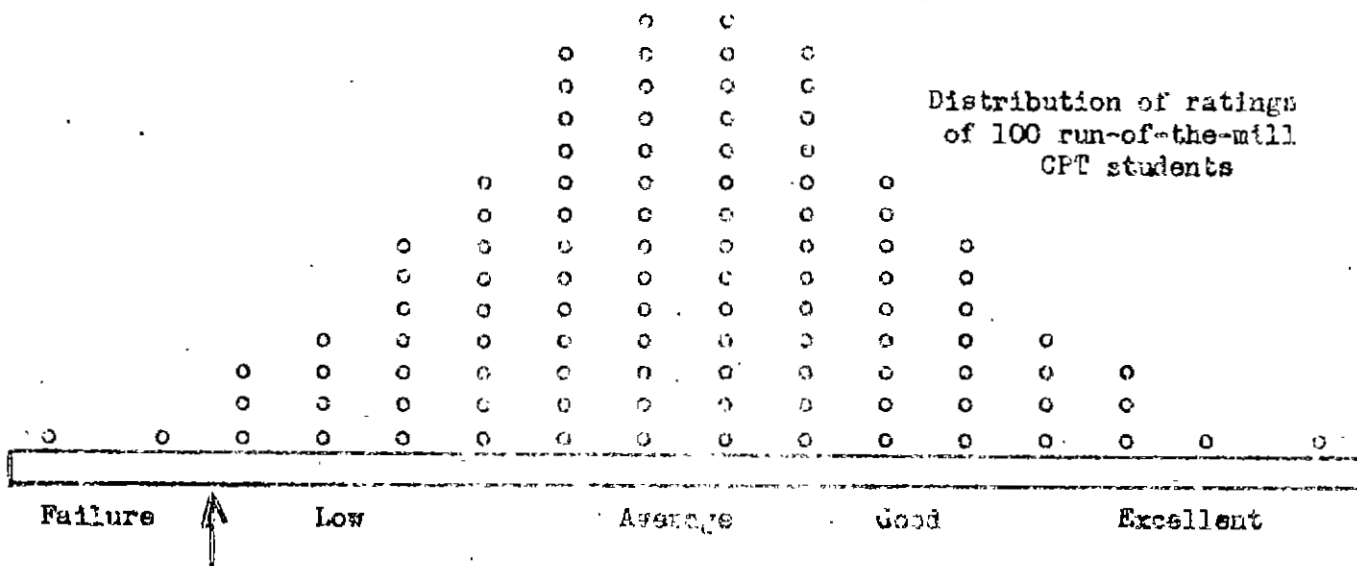
Name \_\_\_\_\_

Date \_\_\_\_\_

Institution \_\_\_\_\_

Rating \_\_\_\_\_

What has been (or will be) his ground school performance?



Explanation of rating.



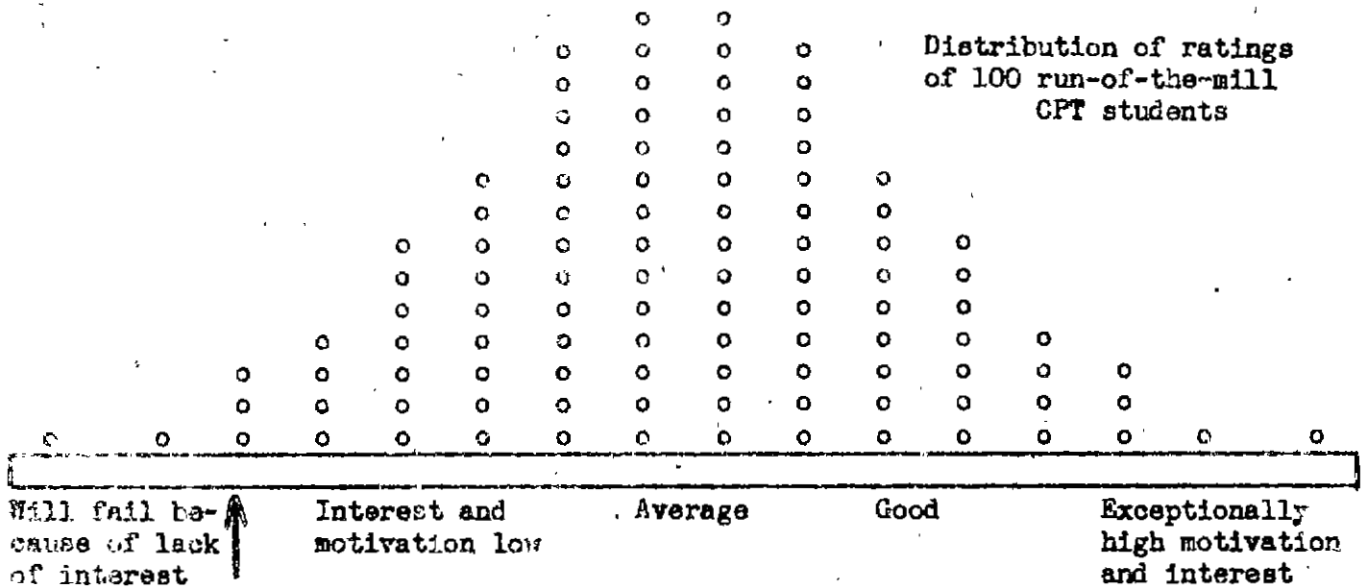
Name \_\_\_\_\_

Date \_\_\_\_\_

Institution \_\_\_\_\_

Rater \_\_\_\_\_

What is (or will be) his interest in flying and motivation for flying?



Explanation of Rating

Name \_\_\_\_\_

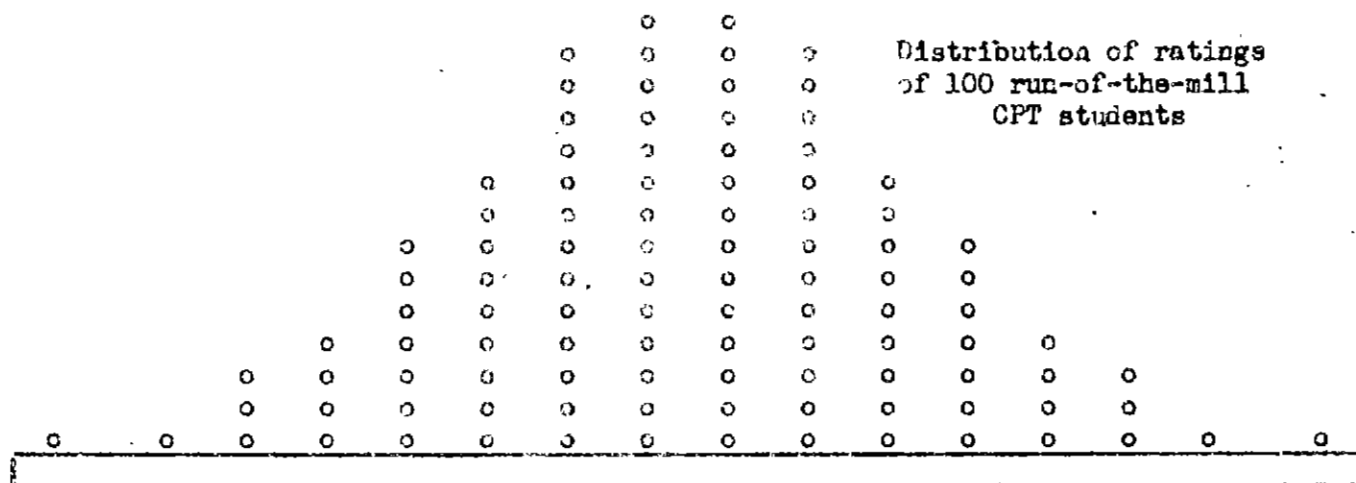
Date \_\_\_\_\_

Institution \_\_\_\_\_

Rater \_\_\_\_\_

What has been (or will be) his skill in handling an airplane?

Distribution of ratings  
of 100 run-of-the-mill  
CPT students



Washout for  
ineptitude



Passable

Average

Good

Excellent

Explanation of rating

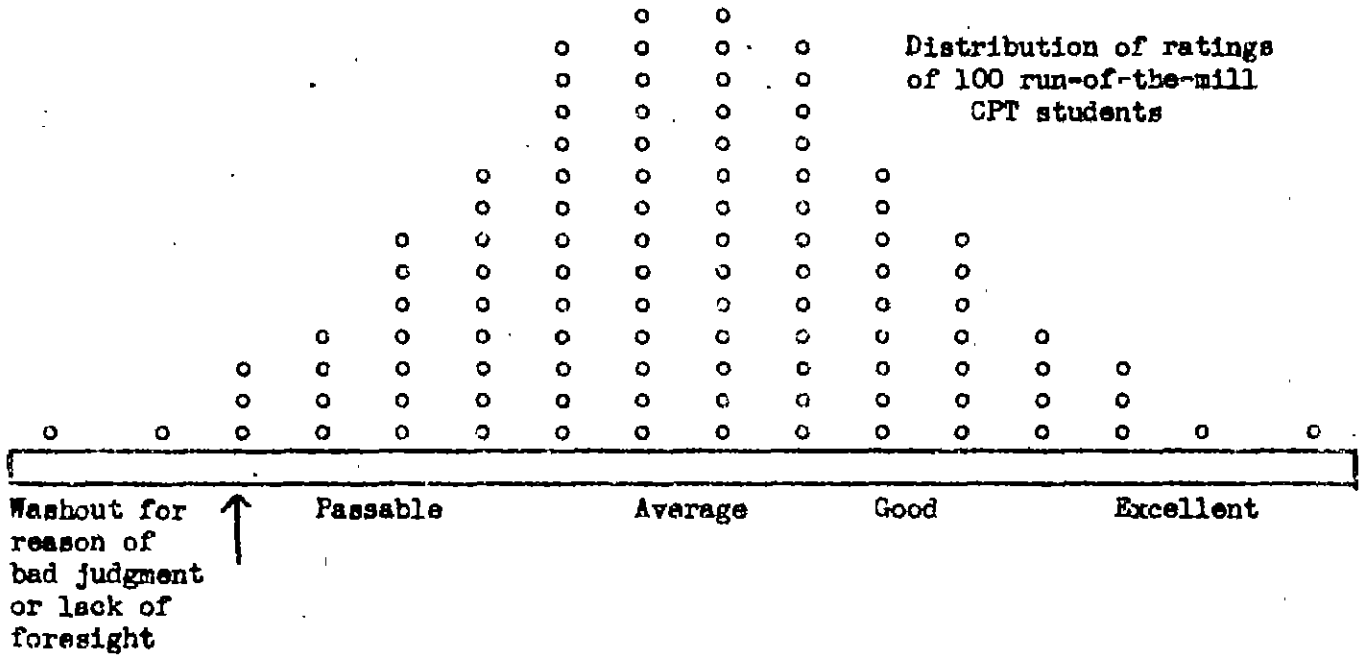
Name \_\_\_\_\_

Date \_\_\_\_\_

Institution \_\_\_\_\_

Rater \_\_\_\_\_

Has he shown (or will he show) good judgment and foresight in the operation of an airplane?



Explanation of rating

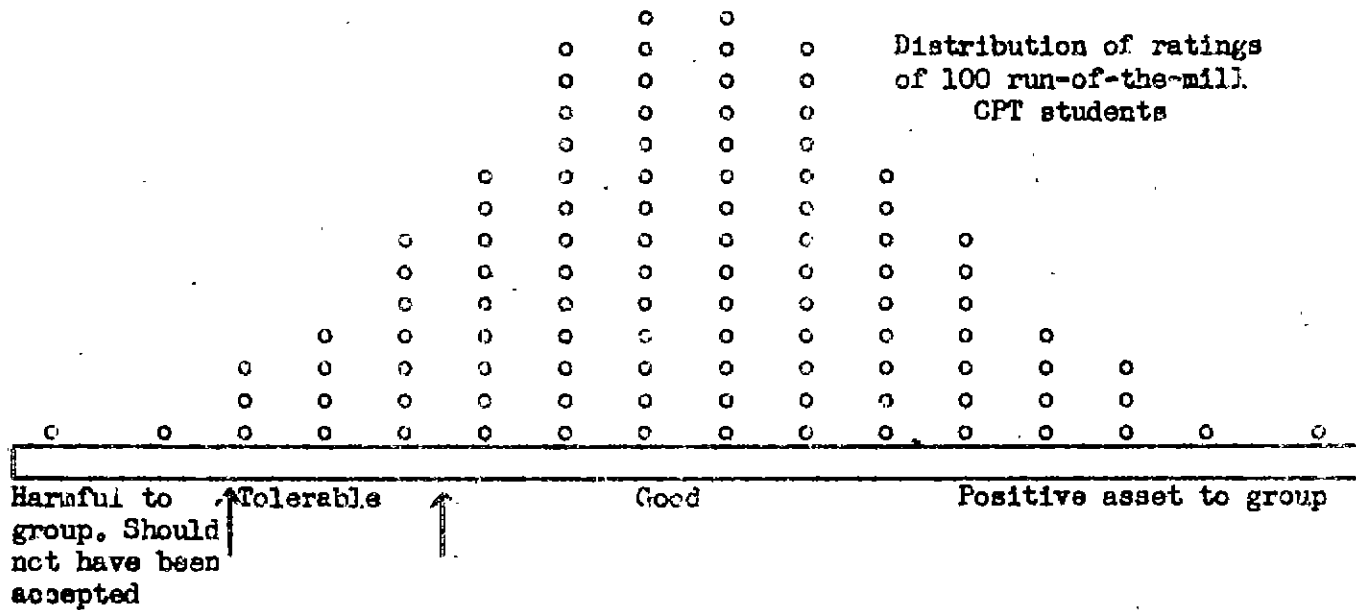
Name \_\_\_\_\_

Date \_\_\_\_\_

Institution \_\_\_\_\_

Rater \_\_\_\_\_

How well does he (or will he) get along with the people he meets in his flying?



Explanation of rating

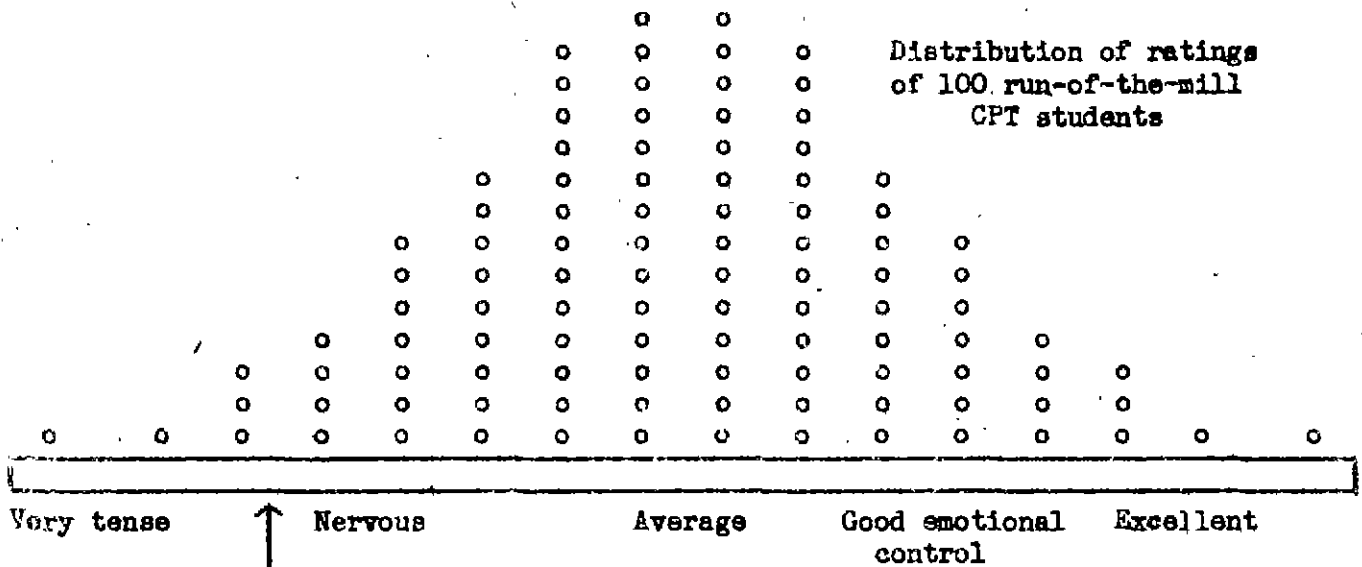
Name \_\_\_\_\_

Date \_\_\_\_\_

Institution \_\_\_\_\_

Rater \_\_\_\_\_

How calm and relaxed has he been (or will he be) when operating an airplane under all conditions.



Explanation of Rating

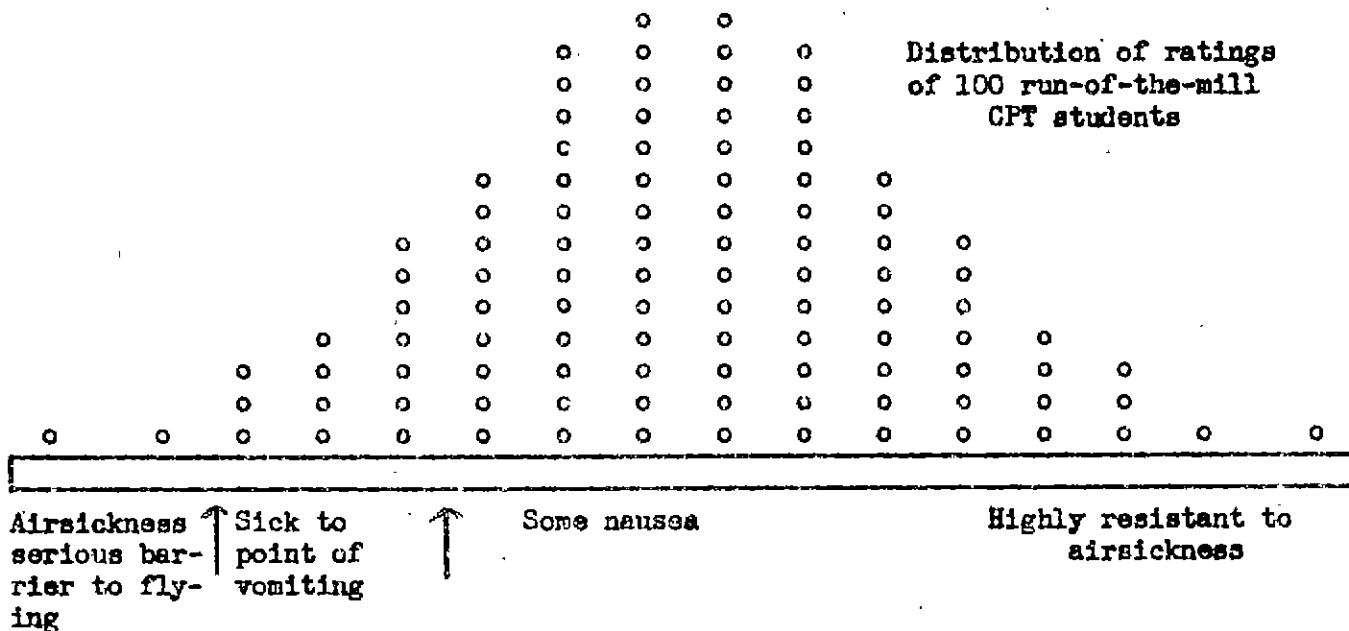
Name \_\_\_\_\_

Date \_\_\_\_\_

Institution \_\_\_\_\_

Rater \_\_\_\_\_

What has been (or will be) his susceptibility to airsickness?



Explanation of rating

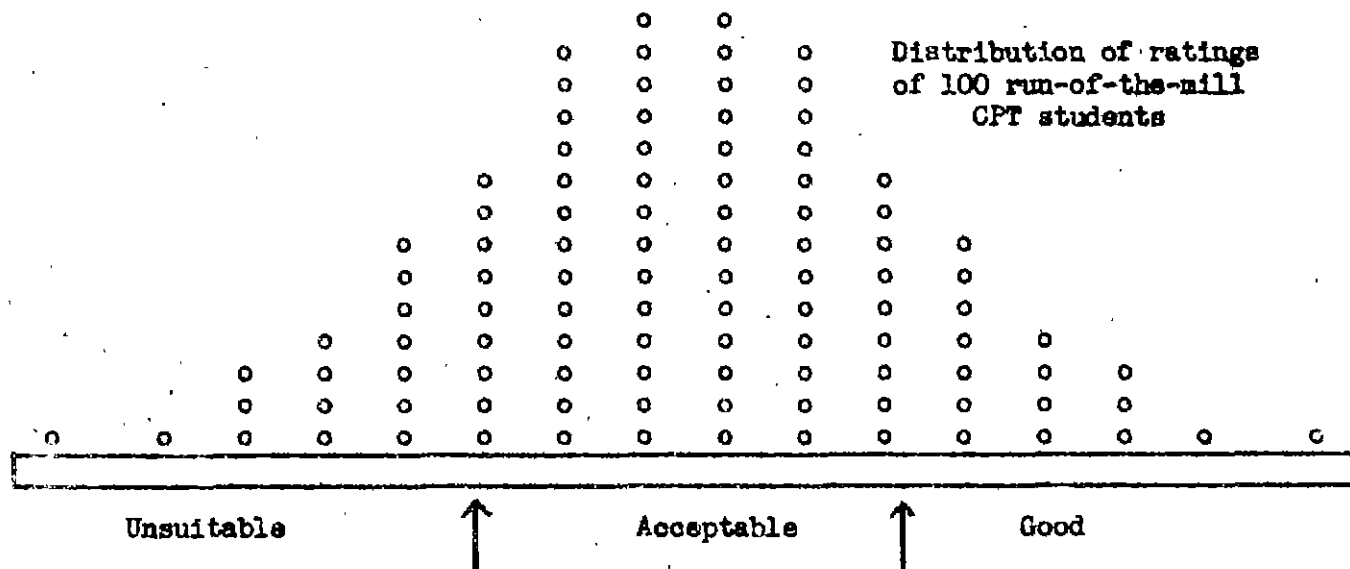
Name \_\_\_\_\_

Date \_\_\_\_\_

Institution \_\_\_\_\_

Rater \_\_\_\_\_

To what extent do you recommend this man as an applicant for flying in the Army or Navy?



Explanation of rating

Name \_\_\_\_\_

Date \_\_\_\_\_

Institution \_\_\_\_\_

Rater \_\_\_\_\_

Rate this man for suitability for each of the jobs below.

	Failure	Poor	Average	Good	Excellent
Fighter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Light Bomber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Observation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Big Ship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Instructor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Executive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Explanatory Remarks:

1. General
2. Fighter
3. Light bomber
4. Observation
5. Big ship
6. Instructor
7. Executive