A PROBLEM-SOLVING TEST OF SPORTSMANSHIP

DISSERTATION

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By

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CHAPTER I

INTRODUCTION

As the history of man is examined it can be seen from the way he lives and the rules of conduct which he has set for himself that there are purposes behind these rules. Man is aware of his purposes, he not only wishes to survive, to protect himself against those influences which would destroy him, but he wishes to go beyond that and to achieve a type of existence marked by creativity and happiness.

It is significant, in considering man's struggle toward Godliness, that each begins his struggle as a selfish, self-centered infant whose sole concern is for himself. His growth in the awareness of others progresses from parental dependence, through sharing with siblings and playmates, to adjustment to the sometimes conflicting values and roles of others which he inescapably finds in community living. Eventually there develops that extra something which makes him decide to risk his security so that another may have the right to oppose him, to differ with him, and perhaps prove him wrong. This is a distinction of civilized man.

Kilpatrick is paraphrased as saying:

At the beginning the infant is much like a sensitive plant, with little if any consciousness, and nothing properly to be called character. The process of achieving or building character is that of

effectively accumulating and organizing successive learnings. The first habit formulation may begin even before birth. After birth, learnings slowly accumulate to form the beginning of an organization, out of which comes consciousness in a fuller sense. In time, especially as language begins, other processes come into operation and from these develops self-consciousness. Now the individual acts not only consciously, but self-consciously, aware both of what he does and that he is doing it. Out of this fact come in turn accountability, responsibility, and conscience; so that prudence and morality have now begun to function and grow.¹

Where in the moral growth of man may be found the qualities embodied in the term "sportsmanship?" In the records of his development man may be seen setting goals for himself in the realm of ethics; striving to improve his relationships with others, wishing to love his fellow unselfishly, with varying degrees of success. Perhaps this goal is too high for him to reach; perhaps it is the function of such a goal, to be beyond the reach of mortal man. As Bryson puts it --

The doctrine of love is much too hard a doctrine to live by. But this is not to say that we have not made progress. It could be established, I think, that the next best thing to the rule of love is the rule of sportsmanship. We have gone a long way toward making that a common pattern of behavior in some cultures, and it is in those cultures that some degree of freedom is achieved.²

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¹William H. Kilpatrick, Philosophy of Education (New York: The Macmillan Co., 1951), p. 358.

²(Lyman Bryson.) "Sportsmanship as a Characteristic of an Enlightened People," Journal of the American Association for Health, Physical Education and Recreation, XIX, No. 9 (November, 1948), 596.

Concepts of Sportsmanship

If sportsmanship is a part of our culture it should be defined, but it has not been so well defined as to cover every concept of it.

Webster's Dictionary defines sportsmanship as "conduct becoming a sportsman, involving honest rivalry and graceful acceptance of results."³

Clark W. Hetherington defines sportsmanship as "the application of the Golden Rule to the ethics of sport."⁴

Delbert Oberteuffer states that

There is no such thing as a general quality of sportsmanship. There are sportsmanlike acts - and many of them put together and done by the same person will likely give him the reputation of being a 'Sportsman' or 'sportsmanlike.'

But if he achieves this distinction in a lasting sense, the chances are very great that he has become aware of values. He has studied his behavior in relation to principles and ideals which go beyond the gains or scores of the moment. He has seen sport not merely as amusement, or something to score more points in than someone else, but as an opportunity for testing human relationships, for building friendships and understanding, for learning about human nature.⁵

Perhaps the qualities involved stem from application of the Golden Rule, from the process of putting oneself in the position of another and acting as one would wish to be

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³Webster's Collegiate Dictionary, 5th ed. (Philippine Islands: G. & C. Merriman Co., 1941).

⁴Clark W. Hetherington, "The Organization and Administration of Athletics," Journal of Proceedings and Addresses (N.E.A.: 1907), 931.

⁵Oberteuffer, op. cit., p. 200.

treated in such a situation. Certainly, it seems to this writer, that along with this and perhaps basic to it is an attitude which encompasses love of man, and that fundamental of American belief, equality of opportunity.

Sportsmanship is then, many things; it is born of human brotherhood; springs from the great religions; it is part of all those qualities which we hold dear -- honesty, loyalty, compassion, love. It is basic to American life, inherent in the foundations of our way of life; and therefore it is more than these things that have been mentioned.

Homes wrested from the wilderness, defended from the savages; crops harvested despite plague and hard winters; children brought forth in hardship. These were men's achievements, and from these struggles came greatness, an empire, a democracy, great advances in all fields of human endeavor.

Man's achievements, the milestones in history, were not created by eliminating competition, but by building, by conceiving a better product, a better way.

Today it has become so easy to be content; life can be quite comfortable and interesting even without inspiration. We are well past the stage of striving for survival; it would be easy merely to maintain our comfortable lives. Each of us needs to learn the joy of achievement and to understand the conditions which produce it. Such is not present when you

win and explain your victory by saying "Fate had knocked him down, so I kicked him."

Sportsmanship is then, in part, the concern that the other has his opportunity to strive, to compete, and may the better man triumph. A racer breaks the record only when he is pressed.

Rules are made not only to protect the weak but to provide challenge to both the weak and strong. Equal opportunity does not eliminate stress, does not smooth the way to greatness; it provides challenge that makes for greatness, without which man will be content with mediocrity.

There seems to be a tendency to read the Golden Rule in reverse, "...do not do unto others that which you would not have them do unto you." A worthy philosophy, but sportsmanship embodies more than concern for the welfare of others in this negative sense. Do not mistake sportsmanship for Socialism. Self-sacrifice to assure mediocrity is stupidity.

And yet this is not to imply that it is merely to provide challenge that we espouse the concept of sportsmanship, for after the contest the victor will say, "come, I have found a new world, a better way; the sweat of the struggle has cleared my eyes; come, let me show you, for I love you," and the vanquished, pulling himself from the dust of battle will say, "I too have seen."

Statement of the Problem

"A great and continuing purpose of education has been the development of moral and spiritual values."⁶

A need for study of the problem. One of the commonly accepted objectives of physical education is to teach and provide practice in ethical-value formation. These values, given such names as honesty, courtesy, and sportsmanship, probably reduce to knowing and doing what is right and best in a situation. Judgments of this type involve more than a knowledge of the law. They involve understanding of the fundamental principles of our culture, and basic concern for the welfare of others.

Life situations involving ethical judgments frequently do not present clear-cut, right or wrong alternatives. Such situations are fraught with practical considerations, social pressures, conflicting values, and sometimes even lack of a completely ethical answer.

Physical Education activities are rich in situations which involve ethical judgments. This writer believes that physical educators wish to use these resources to meet their objectives, to help their students develop the ability to make ethical judgments.

Teachers of physical education and sports should attempt to take advantage of such situations when they arise

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⁶ Educational Policies Commission, Moral and Spiritual Values in the Public Schools. N.E.A. (Washington, D.C.: 1951), p. 3.

in the course of their classes; they should plan to make such situations occur. The former, however is at best hit and miss, and the latter is difficult to accomplish. Too often the development of ethical value formation is a by-product of the physical education program, without special programs or planning to achieve it. Oberteuffer states this concern in the form of a principle of physical education "The teaching of values on the ethical-moral plane must assuredly be as definite and planned for as those of skill."⁷ H. Harrison Clarke says:

Character development does continuously take place in all life's activities. This constitutes an obligation and a challenge to physical educators to see to it that social development takes the right direction; carefully planned programs should be instituted to realize this objective of physical education.⁸

Lyman Bryson says succinctly:

"The virtue must be deliberately taught and deliberately learned."⁹

A major deterrent to progress in the development of such programs is the difficulty of measuring the qualities of sportsmanship. "Without measurement, the physical educator cannot tell whether he is actually developing desirable traits in...his pupils."¹⁰

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⁷Oberteuffer, op. cit., p. 465.

⁸H. Harrison Clarke, Application of Measurement to Health and Physical Education (New York: Prentice-Hall, Inc., 1950), p. 219.

⁹"Sportsmanship as a Characteristic of an Enlightened People," Editorial, Journal of American Association of Health, Physical Education and Recreation, XIX, No. 9 (November, 1948), 596.

¹⁰Clarke, op. cit., p. 232.

A second obstacle to the teaching of sportsmanship is uncertainty as to what sportsmanlike behavior is. As Davis states:

There is too much uncertainty about the merits or demerits of intentional fouling, sucker shifts, stalling for time, harassing opponents, coaching from the bench, elbowing, and faking injuries. These tactics and many others are not easy to identify and evaluate.¹¹

Miss Betty G. Hartman,¹² in an exploratory study from which this study stems, developed a group of written situations involving ethical judgments in sports. These situations should be a valuable tool as a teaching device, to promote thought and discussion. Furthermore, if they were developed in test form it should enable the teacher to determine the status and growth of his students, and of his own teaching efforts in this area, as well as provide a better teaching device which would help the students evaluate themselves.

Thus far, tests devised to measure sportsmanship and ethical behavior in sports have been largely ratings based upon the judgment of observers.

The best of these tests, and the only ones subjected to statistical treatment, are based upon a rating of behavior frequencies. In this method, the rater estimates the frequency with

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¹¹O. Jennings Davis, Jr., "Educating for Sportsmanship," Journal of the American Association for Health, Physical Education and Recreation, XXVI, No. 6 (September, 1955), p. 36.

¹²Betty Grant Hartman, "An Exploratory Method for Determining Ethical Behavior in Sports and Athletics," unpublished Ph.D. dissertation, The Ohio State University, 1958.

which he observes certain types of behavior in the individual being rated, thus having the advantage of specific data to guide his judgment.¹³

Review of related studies. Clarence M. Flory¹⁴ devised an instrument intended to measure sportsmanship attitudes, in which twenty-five specific situations were described in the five sports of football, basketball, baseball, golf, and tennis. The respondents were asked to approve or disapprove of the action taken by the participant, coach, or spectator. Twenty of the situations described poor sportsmanship, and five involved the correction by the persons involved, of a disadvantage incurred by an opponent.

Mr. Flory's study was concerned mainly with an investigation of differences in attitudes of groups according to age, sex, college year, control of the college, type of college, church membership, and experience in college sports.

Joy W. Kistler¹⁵ devised ten specific sports situations which depicted unsportsmanlike conduct. The situations were given to a group of men and women students

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¹³Clarke, op. cit., p. 233.

¹⁴Clarence M. Flory, "Sportsmanship Attitudes of College Students Toward Situations in Competitive Athletics," unpublished Ph.D. dissertation of The University of Texas, 1958.

¹⁵Joy W. Kistler, "Attitudes Expressed About Behavior Demonstrated in Certain Specific Situations Occurring in Sports," 60th Annual Proceedings of the College Physical Education Association, 1958, 55-58.

at Louisiana State University and to a group of male adults in the city of Baton Rouge, Louisiana. The respondents were requested to approve or disapprove of the actions taken in the incidents and to explain their responses.

As a result of the degree of approval of violations of rules and of the "spirit" of rules by the subjects Kistler concluded that the data would seem to indicate the importance of more emphasis upon a positive and planned approach to Sportsmanship Education.

David K. Brace,¹⁶ as chairman of the Committee on Professional Ethics of the American Association of Health, Physical Education and Recreation, has collected more than two thousand critical incidents in sports with the purpose of formulating a statement of principles of professional ethics. These incidents are being classified as to types relative to officiating, opponent relationships, rules of the game, player relationships, professional relationships, recruiting, public relations, eligibility rules, and scouting. Statements of standards are being constructed which relate specifically to the types of action described in the incidents.

Miss Hartman's study was concerned with the history and development of ethics and sportsmanship, and the collection of a group of sportsmanship situations with

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¹⁶David K. Brace, "Ethical Standards for Personnel Connected with Intercollegiate Athletics," 61st Annual Proceedings of the C.P.E.A., 1958, 132-141.

accompanying alternative responses. She administered the situations to groups of adult professional people, and to students at The Ohio State University and recorded and analyzed their responses. The study was exploratory in nature, with the intention "...to determine whether right or good behavior in sport can be determined and whether multiple choice test forms might be used to achieve such a goal."¹⁷

Comparisons were made between jury and student responses, and within the student group, by sex, athletic participation, and whether or not they were majoring in physical education. The assumption was made that right or good can be determined by majority agreement, and that the experience of the jury members enabled them to choose the most ethical responses presented in the situations.

Miss Hartman concluded that best behavior can be determined by this method within the limitations of the instrument and that principles of conduct in sports might be derived from this type of study.

Purpose of the Study

It is the purpose of this study to attempt to develop two equivalent tests of sportsmanship responses.

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¹⁷Hartman, op. cit., p. 317.

CHAPTER II

PROCEDURES AND DATA

For purposes of constructing this test it seemed desirable to utilize at least one of the aforementioned studies. The study of Miss Betty Hartman, having been done so recently and so thoroughly, presented excellent material from which it was likely that test items could be derived. After appropriate approvals were obtained the Hartman material was then used for purposes of constructing tests of sportsmanship responses.

Selection of items. One hundred and twenty-three items were taken from Miss Hartman's student test forms, these constituted the majority of her items which numbered one hundred and thirty-four. Some of the one hundred and thirty-four items were duplicates, a few were eliminated because they offered too few alternative choices.

The jury.* It seemed desirable to enlist the aid of persons experienced with the concept of sportsmanship. The results of the jury judgment used in the Hartman study were presented to this new jury of five persons and they were asked to choose the alternatives which they considered to

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*The jury is listed in Appendix H.

exemplify the best sportsmanship. They were also asked to select four other alternatives to accompany their choice. On items with fewer than five original alternatives they were asked to suggest an additional one.

Selection and preparation of items from jury findings.

Sixty items were chosen as a result of the jury's findings. These were items which received, from the jury, 80 to 100 percent agreement on the best answer with the exception of two items which received 60 percent agreement, but which were thought to be worthwhile questions.

Duplicate alternatives were eliminated, and other alternatives added. In instances where the jury was divided on two duplicate answers, one of these alternatives was eliminated and the jurors' responses to that one were added to the other similar alternative, thus adding to the percent agreement on that alternative.

The total range of difficulty of student responses in the Hartman study was represented in the sixty chosen items. The range encompassed items correctly answered by 5 percent of the students to some answered correctly by 95 percent of the students, with the majority of items falling within the 40 to 60 percent range.

The sixty items were reproduced and given, along with an answer sheet, to 120 (including 60 men and 60 women) students in the physical education service classes at The Ohio State University. Students took the test on a

voluntary basis. Subjects were selected at random, covering a wide range of physical education activity classes.

Validation of the Test

Determining a sportsmanship score. As a first step in the validation of the sportsmanship test it seemed desirable to ascertain if possible how students prejudged each other with reference to their general understanding and judgment inherent in sportsmanlike behavior, so a sociometric instrument was devised and given to a criterion group made up of 17 junior, and 63 freshman and sophomore students majoring in physical education at The Ohio State University. The instructions and rating scale are given in Figure 1.

The total numbers of ones, twos, threes, and fives received by all girls in each group were changed to z scores and their distance from the central tendency in terms of sigma distances was determined. The sigma distances were 1.08, 0.18, -0.77, and -1.81, showing degrees of difference between ones, twos, threes, and fives respectively. The step differences between sigma distances were negligible, (.90, .95, and 1.04) indicating that a score of five was approximately equivalent to a score of four in differentiation.

Method. The scores were changed to one, two, three, and four, multiplied by the frequencies of each score for each person, and divided by the number of discriminating

ratings to determine the means of the ratings. For example, a student receiving four 1's, twenty 2's, thirty 3's, and one four received a score of 138 divided by 55 or a rating of 2.5091. The example is illustrated in Figure 2.

Figure 1.—First Criterion Instrument

Directions: On a separate sheet you will find the name of every student in your group. We want you to put a number in front of every name. Put the number 2 in front of your own name.

- 1 Are there people in this group whom you think have exceptionally high standards of sportsmanship. If so, place the number 1 in front of their names.
  - 2 Put the number 2 in front of the name of each person whom you consider to have high, but not exceptionally high, standards of sportsmanship.
  - 3 Put the number 3 in front of the name of every person whom you feel to be all right. These are people you feel would be pretty fair most of the time.
  - 4 Put the number 4 in front of the name of every person whom you don't know well enough to rate.
  - 5 After you have given the numbers 1, 2, 3, or 4 to people in the group, there may be some names that you haven't marked as yet. You know these people but you don't feel their standards of sportsmanship are as high as the others. Put the number 5 in front of these names.
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Figure 2.—Sample Scoring of First Criterion Instrument

Frequency		Rating		Score	
4	X	1	=	4	
20	X	2	=	40	
30	X	3	=	90	$138/55 = 2.5091$
<u>1</u>	X	4	=	<u>4</u>	
55				138	

Each student participating now had a sportsmanship rating score.

The test was administered to the 63 remaining members of the original criterion group of seventy. Some attrition from the original group occurred when students completed their schooling at the end of the school term. The membership in each group was now: Juniors 13, Freshman and Sophomores 52.

Correlations with results. Correlations were run between number of answers missed and sportsmanship rating scores. Errors were used instead of test scores because the criterion ratings were designed for low scores to indicate best sportsmanship. The correlations are given in Table 1.

TABLE 1
CORRELATIONS BETWEEN SCORES ON 60 ITEMS AND SPORTS-
MANSHIP RATINGS

	Juniors	Freshman-Sophomores
Raw scores - 60 items	.62	.07

The low correlation of the freshman-sophomore group might possibly be because they had not had an opportunity to know each other well enough in eight weeks of classes in which both groups were combined. There were a large number of "don't know" ratings given in this group.

Second validity instrument. A new validity instrument, Figure 3, was devised and administered to the freshmen and sophomores separately. The membership of these groups consisted of the original freshman-sophomore group now in separate classes. These classes were now smaller, and three months more time had elapsed since the administration of the first criterion instrument. The new instrument forced the participants to choose members from their class whom each believed would or would not react in the most sportsmanlike manner in a given sports situation. A friendship item was also included in the new instrument for use in partialing friendship out of sportsmanship ratings.

The freshmen had now been together in team sport activities for five months and the sophomores for one year and five months, with some changes in group membership.

Method. Scores were determined by the numbers of first, second, third, and fourth choices received in each category. Low ratings were subtracted from high ratings to arrive at a score. For example, a girl receiving 10 first choice, 8 second choice, 3 third, and 5 fourth choices on the section asking for those most likely to respond

Figure 3.—Second Criterion Instrument with Weights

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1. The other members of this class may be members of this hockey team. The team is behind when they get into position to score, and as one player drives the ball toward the goal, her teammate inadvertently lets the ball bounce off her foot into the goal. The umpire does not see the kicking foul and indicates the goal is good.

Which of your class members would be most likely to allow the umpire's decision to stand and accept the goal?
Name in order

_____ -4 _____
 _____ -3 _____
 _____ -2 _____
 _____ -1 _____

Which of your class members would immediately indicate to the umpire that she fouled, thus disallowing the goal? In order

_____ +4 _____
 _____ +3 _____
 _____ +2 _____
 _____ +1 _____

2. Five of you are going on a weekend trip to your summer cottage. If you had a choice which four members of this class would you choose to go with you? List in order

_____ +4 _____
 _____ +3 _____
 _____ +2 _____
 _____ +1 _____

3. Which four would you be least likely to choose? In order

_____ -4 _____
 _____ -3 _____
 _____ -2 _____
 _____ -1 _____

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favorably in the situation would have a score of 75. This example is illustrated in Figure 4. From this score would

Figure 4.—Sample Scoring of Second Criterion Instrument

Frequency		Rating		Score
10	X	4	=	40
8	X	3	=	24
3	X	2	=	6
5	X	1	=	5
Total				75

be subtracted her score on the section asking for those least likely to respond favorably in the situation.

New correlations, with results. Sportsmanship scores were correlated with test scores providing the following results --

TABLE 2
CORRELATIONS BETWEEN SCORES ON 60 ITEMS AND NEW SPORTSMANSHIP RATINGS

	Freshmen	Sophomores
Raw scores - 60 items	.25	.25

Partial correlations, with results. Academic ability determined by performance on the Ohio State Psychological Examination (hereafter referred to as intelligence) was partialled out of test scores in an effort to remove the

influence of intelligence from test scores, and friendship scores were partialled out of sportsmanship ratings to remove that influence from the ratings. Sportsmanship scores with friendship removed were correlated with test scores with intelligence removed. Raw sportsmanship scores were correlated with test scores with intelligence removed, and sportsmanship with friendship removed was correlated with raw test scores. All of these combinations lowered the validities already obtained.

It would seem that sportsmanship and friendship intercorrelate, or that good sports tend to be well liked and vice versa; also intelligence seems to have a bearing on sportsmanship responses, at least in a written test. Raw scores gave the best results in all cases.

Item analysis. An item analysis was conducted on the test answers given by the freshmen physical education majors, the larger of the criterion groups ($N = 31$), and also on answers of the 120 service class students.

Method. The freshmen were divided into upper and lower halves according to their sportsmanship ratings on the second instrument. The 120 member service class group was divided into upper, middle, and lower thirds according to their total test scores.

The item analysis was made by determining the numbers of students in the upper division choosing each alternative,

subtracting from this the numbers in the lower division choosing the alternative, and dividing that frequency by the total number of students in all divisions choosing the alternative. This was done for each group. Each alternative now had a mean score. A high score indicated that the alternative was chosen by more of the upper group than of the lower half or two-thirds, and the higher the score the more discriminating the alternative, and the question. An example is given in Figure 5.

Figure 5.—Sample Item Analysis Using Frequencies from Freshman Group

		Alt. a	Alt. b	Alt. c	Alt. d	Alt. e
		a	b	c	d	e
Upper one-half of Freshman sportsmanship ratings	+1	1	1	4	0	9
Lower one-half of Freshman sportsmanship ratings	-1	7	3	2	0	4
	$\frac{X}{N}$	$\frac{-6}{8}$	$\frac{-2}{4}$	$\frac{2}{6}$	$\frac{0}{0}$	$\frac{5}{13}$
		<u>-.7500</u>	<u>-.5000</u>	<u>+.3333</u>	<u>0</u>	<u>+.3846</u>

Twenty items were eliminated which did not differentiate one alternative.

Correlations, with results. Correlations were run between sportsmanship ratings and scores on the 40 remaining items. The freshmen had a correlation of .41, while the

sophomores had a correlation of .11. Possibly the low sophomore correlation might be attributed to the fact that the freshmen would tend to be more objective since they had known each other for five months only, while the sophomores had formed more friendships and had allowed personalities to enter into their ratings to a greater degree. Interestingly, the sophomore criterion scores fell into two distinct groups, either of which would have correlated well with the criterion, while the group as a whole did not.

Due to the divergence of results of the freshman and sophomore groups a correlation was run on the junior group using the old criterion scores. The criterion was changed to positive scores, the original one now being a four, two now a three, three now two, and four now one. The correlation for this group was .66. The correlations for the three groups are given in Table 3.

TABLE 3
CORRELATIONS BETWEEN SPORTSMANSHIP RATINGS AND SCORES
ON TEST ITEMS

Group	r
Freshmen	.41
Sophomores	.11
Juniors	.66

These correlations indicate that the general impressions these students have of each other's sportsmanship is borne out in the test scores to varying degrees.

Weighting Test Items

Method. Alternatives were given weights on the basis of the item analysis. The weights ranged from +2 for those having high means, to -2 for negative means. In the example given in Figure 5, the weights are indicated below --

Figure 6.—Sample Weightings of Alternatives

	a	b	c	d	e
	1	1	4	0	9
	7	3	2	0	4
	-.75	-.50	+.33	0	+.38
Weights	<u>-2</u>	<u>-1</u>	<u>+1</u>	<u>0</u>	<u>+2</u>

In instances where an alternative obviously indicated poor sportsmanship but which was chosen by no one, a minus score was arbitrarily assigned to it.

Correlations, with results. Correlations on the 40 weighted items were as follows --

TABLE 4
CORRELATIONS BETWEEN SPORTSMANSHIP RATINGS AND SCORES
ON 40 WEIGHTED ITEMS

<u>Group</u>	<u>r</u>
Freshmen	.34
Sophomores	.16
Juniors	.50

The weights resulted in a slight increase in the correlations with the sophomores, and decreases with the freshmen and juniors. This indicates that this weighting of alternatives does not add to the validity of the test. However, the weights are included in appendices E and F since they should be valuable for purposes of discussion in connection with the test.

Developing Alternate Forms of the Test

Method. The percent passing each item was computed and changed to sigma distances from the zero point of ability. The items were arranged in order and two tests were selected each with 20 items, with items paired as closely as possible, according to difficulty. Reliability correlations were run, and some items re-arranged to produce nearly equal validities and the following reliabilities -- Freshmen .94, Sophomores .52, Juniors .86. Forms A and B were correlated using scores of the 120 Member Service Class Group. This gave a reliability of .88.

The Spearman-Brown Prophecy formula produced the following raised reliabilities -- Freshmen .97, Sophomores .68, Juniors .92, and the 120 Member Service Class Group .93.

The validities and reliabilities and significance levels of the 40 item test and of forms A and B are given in Table 5.

TABLE 5
COEFFICIENTS OF CORRELATION AND SIGNIFICANCE LEVELS
OF THE 40 ITEM TEST, AND OF FORMS A AND B OF THE TEST

	Freshmen Sophomores Juniors Service			
Validity 40 Items	.41*	.11	.66*	
Validity Form A	.43*	.08	.65*	
Validity Form B	.39*	.14	.62*	
Reliability Form A - Form B	.94**	.52*	.86**	.88**
Raised Reliabilities	.97**	.68**	.92**	.93**

*Significant at the 5 percent level.

**Significant at the 1 percent level.

All forms were valid at the 5 percent level of significance with the freshman and junior groups. The sophomore correlations were positive, but not significant. Forms A and B were reliable at the 5 percent level with all groups, and at the 1 percent level with three of the four groups. The Brown-Spearman reliabilities were significant at the 1 percent level with all groups.

Means and standard deviations. The means and standard deviations were computed for all test forms, and are given in Table 6. All means were above the midpoints of the tests. The scores of the physical education majors averaged higher than those of the service class group; this is probably because they were a select group. The means of the

TABLE 6
MEANS AND STANDARD DEVIATIONS OF ALL TEST FORMS

	Freshmen		Sophomores		Juniors		Service	
	Means	S.D.	Means	S.D.	Means	S.D.	Means	S.D.
Raw Scores 60 Items	40.19	10.66	43.80	6.39	43.84	9.17		
Raw Scores 40 Items	27.54	6.55	30.04	4.14	29.84	6.64	24.05	5.32
Weighted 40 Items	51.48	18.01	57.71	10.85	55.76	17.04		
Raw Scores Form A	13.67	2.98	14.52	2.37	15.15	3.25	11.60	3.71
Raw Scores Form B	13.87	3.64	15.52	5.48	14.69	3.62	12.45	3.80

service group on test forms A and B were 1.60 and 2.45 points above the midpoints of the tests (10 out of a possible 20 points). Scores on test form B averaged slightly higher than scores on form A with the exception of the junior majors.

The standard deviations did not vary greatly on the two test forms except in the case of the sophomores where the range was much wider on form B. Standard deviations tended to be slightly larger for all groups on form B.

The means and standard deviations of the service group indicate a fairly normal distribution.

The reliability of the means and standard deviations are given in Tables 7 and 8.

TABLE 7
RELIABILITY OF THE MEANS

	Freshmen	Sophomores	Juniors	Service
Mean 40 Items	27.54	30.04	29.84	24.05
5 percent level of significance	± 2.34	± 1.81	± 3.76	± 0.95
1 percent level of significance	± 3.09	± 2.39	± 4.95	± 1.26
Mean Form A	13.67	14.52	15.15	11.60
5 percent level	± 1.06	± 1.04	± 1.84	± 0.57
1 percent level	± 1.40	± 1.36	± 2.42	± 0.75
Mean Form B	13.87	15.52	14.69	12.45
5 percent level	± 1.30	± 2.40	± 2.05	± 0.68
1 percent level	± 1.72	± 3.16	± 2.69	± 0.89

This table is to be interpreted in the following manner: for example (in the case of Form A with the Freshman Group), the probability is 95 in 100 that the true (population) mean lies within the limits of 13.6 (obtained mean) plus or minus 1.06, and 5 in 100 that it lies outside this range; also the probability is 99 in 100 that the True mean lies outside this range. The range at the 5 percent level would then be 12.61 to 14.73, and at the 1 percent level would be 12.27 to 15.07.

TABLE 8
RELIABILITY OF STANDARD DEVIATIONS

	Freshmen	Sophomores	Juniors	120
Standard Deviation 40 Items	6.55	4.14	6.64	5.32
5 percent level of significance	± 1.63	± 1.25	± 2.56	± 0.67
1 percent level of significance	± 2.58	± 1.65	± 3.37	± 0.89
Standard Deviation Form A	2.98	2.37	3.25	3.71
5 percent level	± 0.74	± 0.72	± 1.25	± 0.47
1 percent level	± 0.98	± 0.94	± 1.65	± 0.62
Standard Deviations Form B	3.64	5.48	3.62	3.80
5 percent level	± 0.91	± 1.66	± 1.39	± 0.48
1 percent level	± 1.19	± 2.19	± 1.84	± 0.63

This table may be interpreted in the same manner as Table 7.

The obtained means and standard deviations of the service group are very near the true means and standard deviations, while the chance of error is greater with the major groups due to the smaller degrees of freedom afforded by small groups.

It is encouraging that the obtained and true statistics of the service group are so close since the obtained distributions represent nearly normal curves, a function to be desired in test construction.

As a matter of interest the means and standard deviations of the men and women were compared.

TABLE 9
MEANS AND STANDARD DEVIATIONS OF MEN AND WOMEN

Means	Men	Women
Raw Scores 40 Items	23.65	24.45
Raw Scores Form A	11.56	11.63
Raw Scores Form B	12.08	12.81
<u>Standard Deviations</u>		
Raw Scores Form A	3.97	3.43
Raw Scores Form B	3.89	3.67

The women produced slightly higher means and slightly smaller standard deviations than the men, but the differences were not great enough to be significant.

The tests of sportsmanship. All of the foregoing describes the procedures used in this study to produce and validate two tests of sportsmanship. Rather than place these tests in the body of the study the reader is referred to appendices A, B, C, and D.

CHAPTER III

SUMMARY AND CONCLUSIONS

This study has produced two tests of 20 items each which are reliable and valid in so far as the criterion instruments measure the qualities of sportsmanship. The limitations of the criterion are recognized but a dearth of more reliable instruments made its construction necessary. Since there is no universally accepted definition of sportsmanship, judgments based on individual philosophies are probably as valid measurements as can be obtained at this time.

The behavior of the results from the sophomore group cannot be explained satisfactorily. Groups which vary from the norms in this manner occur occasionally in statistical studies. Since the other groups conformed it should be fairly safe to assume that this group was the exception rather than the rule. This is not to discount the possible significance of their results, but further experimentation is needed to determine that significance.

Partialing friendship out of sportsmanship ratings and intelligence out of test scores lowered obtained reliabilities on raw scores. This would seem to indicate that friendship intercorrelates with sportsmanship ratings, and intelligence with written test scores. Sportsmanship stands

high in the values of our culture. A person's reputation as a good or poor sport would influence the esteem in which he is held by others. Intelligence plays a part, not only in the understanding and command of the written word, but also in the ability to build concepts and generalizations which in turn become bases for reasoning and choice of action in situations involving sportsmanship and ethics.

Weighting alternatives did not add to the validities of the tests, although a different system of weights could possibly do so. The writer however does not feel that any system of weights would raise validities significantly. The values which could be derived from weighting alternatives lie in their use in discussion of test items, and in their possible future use in the development of a profile based on the factors, as yet undetermined, which may make up the general quality we call sportsmanship.

The test forms achieved very nearly normal distributions among the service class group, with means close to the midpoints of possible scores. Differences between forms A and B are small but indicate form A to be slightly superior to form B in that it produced a higher validity, and means nearer the midpoint of the test.

Certain restrictions are inherent in the nature of the test. These are written, problem-solving, multiple choice tests. The tests purport to measure sportsmanship attitudes and knowledge, with the degree of emotional response determined by the student's experience in similar

situations, and his ability to relate test items to his experience.

Test scores would not necessarily indicate the degree of sportsmanship to be expected in a sports situation with its accompanying pressures and emotional involvements. It could be surmised that a student might know the best response but fail to react in the same manner in an actual situation. It is also to be deduced that the sportsmanship ratings given by classmates were based on observed behavior, and that this would allow for some discrepancies between ratings and test scores based on knowledge.

Knowledge alone does not guarantee results in action, but knowledge must accompany attitude formation, and precede action. If the student does not know what is right in a specific situation and has not conceptualized specific instances into principles we can hardly expect him to respond favorably in a stress situation involving those knowledges and principles. It is felt that the greatest values of the tests will be those obtained from their use as teaching aids, as stimulants to discussion, and as bases for generalizations on ethical behavior not only in sport but in all facets of life.

It is hoped that the tests resulting from this study will be widely used to reinforce learning of appropriate behavior in sports situations, as part of planned efforts to teach sportsmanship, and therefore that they will play a part in the ethical-value development of students.

CHAPTER IV

IMPLICATIONS FOR FURTHER STUDY

The following possibilities present themselves for further research:

1. Further validations using new groups, especially groups other than majors in physical education.

The problem would be to find groups whose members know each other well enough to make ratings. There are values in each of the criterion instruments used in this study. The first instrument should be re-constructed so that the highest rating would be represented by the highest score. The problem with this instrument lies in the effect that "don't know" scores have on the results; it would be advisable for each member to be able to rate each other member. The second instrument forces choice and confines it to members of the group who have exhibited good or poor sportsmanship, and who might be expected to be more easily chosen in contrast to the necessity of rating each member. The validity obtained with the junior group by the first method may be an indication that it is more discriminating when members are well known to each other, but the second method seems preferable when this is not the case, and may in fact be the better method because it removes the possibility of being

generous in giving ratings. Certainly the development of new criterion instruments would be worth while.

2. Reconstruction of rejected items, as well as construction of new items for use in new forms of the test.

Eighty-three items were eliminated in the process of refining the test forms. These items possess potential for use in new forms. The reasons for their rejection would need to be established and corrected. Assuredly these eighty-three items do not represent the entire volume of situations which have or might occur in sports, a great many more possibilities are at hand for the seeker.

3. The establishment of national norms.

The tests should be given to students on a nationwide basis, students representing a cross-section of the college and public school population. The tests would of course be limited to age groups possessing sufficient verbal ability to handle a written test of this sort; and any norms established would need to represent specific age groups. It might be expected that norms of college age students would resemble the range found with the service class group in this study. Some differences might appear on questions involving sports of especial concern in one area or college, but these would probably be absorbed in the total picture presented by the nation as a whole.

4. A comparison of test scores and performance in the same or similar situations.

It is expected that there would be a divergence between knowledge and action, but they should correlate positively to some degree. A comparison of action before and after administration of the test should show some increase in sportsmanship, especially if the tests were used as teaching devices. The major problem in this type of study is the difficulty of setting up the action situations needed, and of scoring the reactions registered.

5. A factor analysis to determine the factors of sportsmanship indicated by the test, and the relative significance of those factors.

It is possible that several factors could be isolated, some of which might be respect for authority, honesty, concern for equality of opportunity, empathy, and concern for the safety or happiness of others. It is also possible that there might emerge one general sportsmanship factor. Should more than one factor be established the degree of importance attached to each as well as its identity would be of tremendous value in guiding us in our understanding of sportsmanship and how it can be taught.

6. A profile to be constructed on the basis of the factors found through factor analysis.

Once factors are established a profile could be developed which would indicate strengths and weaknesses in those factors as indicated by different test items and alternatives. Not only would this indicate areas in which

individual students need development, but it would also be possible to establish a general sportsmanship score for each student, and this could lead to the development of a sportsmanship index based on national studies.

The potential for further research is great. This study has planted a seed and produced a sprout; with nourishment the bud will develop and unfold.

APPENDIX A

TEST FORM A

A PROBLEM-SOLVING TEST OF SPORTSMANSHIP

Form A

Instructions

The following are incidents which might occur in sports situations. With each incident are five alternative solutions or opinions. You are to choose that alternative which most nearly reflects your feelings about the incident. Choose only one alternative. Place an X on the answer sheet opposite the letter of the alternative you prefer for each question.

FORM A

- A1. A football team's linesman gathers hands full of grass or dirt to throw into the opposing line's faces. This enables them to break through the opponent's line freeing their backs to make long runs and score touchdowns.
- a. It is the official's fault for failing to penalize the players for such actions.
  - b. As long as the officials can't see the linesman do this they might as well try it.
  - c. The opponents should throw dirt or grass at this team when they get the chance in order to pay them back.
  - d. The other team has equal opportunity to try the same thing, therefore, this team is justified in its actions.
  - e. The linesmen's actions are unfair to the opponents and not in the spirit of the game.
- A2. In little league baseball competition the coaches of some of the teams have been known to tell their players to participate in the "Stamp Act." The stamp act means that the players are to try to stamp on the umpire's feet whenever they can get close to him. The stamping is a means of protesting an umpire's decision. Whenever a disputed decision occurs the coach calls out "Stamp Act" and the players carry out the play.
- a. Rather than argue, the players have an effective means of protesting the umpire's decision when they use the "Stamp Act."
  - b. The coach has no business telling his players to do such a thing.
  - c. The players should carry out the Stamp Act since the coach says this is a good maneuver.
  - d. This action is all right to use as long as the players do not really hurt the umpire by stamping on him.
  - e. This action is all right as long as the umpire knows why the players are doing the Stamp Act. It's all part of the game.

- A3. Before face masks on football helmets were legalized by the rules, a team might wear them if the other team consented. Team A was playing team B. Team B's coach had consented to allow team A to wear masks. At half time the score was 21 to 0 in favor of team A. Team B's coach protested the masks. Team B's coach heckled the officials all through the second half.
- a. Team B's coach had a right to protest since his team was losing.
  - b. Team B's coach had no right to protest since he had already consented to team A wearing masks.
  - c. The coach was correct in protesting but not heckling the officials during the second half.
  - d. The officials should have allowed team B's protest and had team A remove the masks the second half.
  - e. Team B should have put on masks to even their chances, rather than protest team A's wearing them.
- A4. An outstanding All-American football player was known for his rough, tough play. When he started to tackle or block an opponent he never stopped even though the opponents might have handed the ball or they were obviously out of the play. When asked why he played this way he expressed the opinion that once he started for a player he could not stop. If he stopped suddenly he might injure himself.
- a. Little regard for opponents made him an outstanding player. Those who play football should expect such action from opponents.
  - b. The All-American was right to avoid injury to himself.
  - c. The All-American should be penalized for such roughness, especially when the person tackled or blocked was not involved in the play.
  - d. To play roughly is bad enough, but to out and out admit it was because he was protecting himself, is even worse.
  - e. This player is not a true All-American. Good players should consider their opponent's safety as well as personal safety. He should be able to stop.

- A5. Two rival teams in a well-known conference played a basketball game on one of these team's home court. During this game, the visiting team's star player was consistently booed whenever he missed a basket, pass, rebound, or maneuver. In the return game on the other team's court, the home crowd took revenge by booing all the players on the opposition. They were retaliating for what the other team's home crowd had done to their star.
- a. Booing is a good device to use to rattle a player. If this could help the home team in the first game, such action is all right.
  - b. "Getting back" at the other team during the return game was justifiable under the circumstances.
  - c. Even though the star player had been booed the other team's crowd should not have paid them back.
  - d. Booing individual players does more good than booing the whole team. In the second game, the spectators should have singled out one player.
  - e. Players should learn to play under difficult situations. Having the crowd boo them helps them to ignore future experiences of the same nature.
- A6. A coach of a college football team taught the end player to use his knee on the head of the opposing backfield player. He was to use this whenever the opponent was trying to prevent the end tackling the kicker. After the end had used this maneuver several times the opposing blocker would become afraid of the end and let him by. The end player could never bring himself to follow his coaches' instructions.

It is possible that player's knees can come in contact with an opponent's head during blocks, tackles, or evasive action; however, if this is done deliberately the player could be penalized.

- a. Such an action in football is unnecessary. The coach who advised, and the player who would execute such action were wrong.
- b. This action would be all right as long as the blocker is not injured.
- c. The end player was right not to follow his coaches' instructions.

- d. The end player should follow his coaches' instructions even though he felt the instructions were wrong.
- e. This is a perfectly good maneuver to use in football. The coach was right in advising it and the player wrong not to do it.

A7. You are a member of a volleyball team and during a game your opponents hit the ball over the net. The ball barely grazes your fingers as it flies out-of-bounds. The referee does not notice that you touched the ball and declares it out-of-bounds. If you were this player what would you do?

- a. Tell the referee you touched the ball without waiting to see if anyone noticed your touching it.
- b. Wait to see if your teammates noticed your touching the ball. If they did not notice let the referee's decision stand.
- c. Since the referee did not notice your touching the ball and it is his job to make decisions, let his decision stand.
- d. Ask the opponents if they noticed whether you touched the ball. If they did not notice, do not report yourself to the referee.
- e. Since you discover that the opponent's noticed that you touched the ball you should report yourself to the referee.

A8. Second baseman, according to the rules of the game, must step on or tag second base before throwing to first base in making a double play. The runner who runs to second base from first base is put out in this manner and if the baseman's throw reaches first base before the batter arrives, the batter is out and thus a double play (or two outs) is made. Some big-league second basemen have been known to deliberately pretend to touch or tag second base, but miss. This allows them to cut down on the time it takes to touch second base and throw to first base, and enables them to get more double plays.

- a. Since it is the umpire's job to tell whether or not the second baseman touches the base before he throws, it is all right for the baseman to pretend to touch to cut down on his time if he can get away with it.

- b. The second baseman is breaking the rules and should not do this.
- c. This maneuver does not always help the baseman to get a double play so he might as well try it.
- d. This is all right for big league players to use, but school or minor league players should not use it.
- e. This is taking unfair advantage of the other team and therefore should not be done.

- A9. A baseball team that is losing a game, realizes that an opposing player was called safe at first on a trapped fly ball. The catcher of this team argues that the ball was not trapped but legally caught. The argument continues and the catcher calls the umpire names. The umpire finally evicts the catcher from the game.
- a. No player, regardless of the team he is on, should argue with an official.
  - b. The catcher should not argue. He should expect the person who trapped the ball or some other teammate to do this.
  - c. It would be all right for a player or catcher to argue as long as he feels the umpire is wrong and he is right.
  - d. He was justified in arguing since his team was losing. If they had been ahead he did not need to argue.
  - e. A player is justified in arguing with the umpire since this is customary in baseball, but he should not call him names.
- A10. A soccer player receives a chest high pass and taps the ball down to the ground with his hand. The referee does not see this foul. (Soccer players are allowed to play the ball with their feet, not their hands). The soccer player goes on down the field with the ball.
- a. The player should raise his hand to indicate his foul to the referee.
  - b. It is the referee's responsibility to see these fouls. If he fails to see them the player need not confess he fouled.

- c. The opponents should tell the referee the player fouled.
- d. As long as the player can get away with this action it is all right to use.
- e. This action may have been accidental. If the player does this again, the opponents should complain to the officials.

All. In a championship Little League Baseball game, the score was tied. In the final inning, with the last team at bat and a runner on third base, the following incident occurred: The third base coach, an adult, called to the rival team's pitcher and asked to see the ball. The young pitcher threw the ball to the coach, whereupon the coach stepped aside and let the ball go by. The runner on third base saw the ball rolling away and ran home scoring the winning run. There is nothing in the rules which states that such action is against the rules.

- a. The umpire should make the runner go back to third base even though he did not break a rule.
- b. The umpire should make the runner go back to third base, and speak to the adult about such tactics.
- c. The pitcher should have been smart enough not to do such a thing, therefore, what happened was all right.
- d. This is a perfectly good baseball maneuver and the adult coach was justified in using it.
- e. Such action is all right for older baseball players, but not for use on Little League players.

A12. Horse shows include events in which riders are judged on their ability and skill in riding. Other events involve judging the performance and appearance of the horse, not necessarily the skill of the rider, although a good rider can help a horse perform better. However, some horses perform well or poorly regardless of the skill of the rider.

During a horse show it became common knowledge that an outstanding horse, who was entered in an event where his performance was to be judged, was easily upset by loud whistles. A rival stable, wishing this horse to lose and their horse to win, stationed people around

the outside of the ring. These people were to whistle loudly whenever the horse went by. The horse was upset, performed poorly, and lost the event. The rival stable's horse won.

- a. The whistling was unfair. The favored horse should be allowed to perform without distraction.
- b. The judge should have allowed the favorite to win since he must be aware of the distracting influences.
- c. The losing horse's owners should complain to the judges so they could stop the people whistling.
- d. Since the favored horse's weakness was common knowledge, the rival stable's action was justified.
- e. If the horse was really good and deserved to win, it should not be distracted by such actions and deserved to lose.

A13. Certain basketball teams are coached to set up plays which cause the opponents to foul. Some players and coaches believe this is clever basketball since the opponents may foul out of the game and their team may gain extra points by scoring on the free throws.

- a. Players should use such plays. The coaches are clever to direct their players in such fashion.
- b. Players who disagree with this type of play may learn them if their coach so directs but should not use such plays.
- c. Players should refuse to play for coaches who insist they use such plays.
- d. The players should tell their coaches they don't approve of such plays but use them if he insists.
- e. Officials, players, and coaches should agree not to use such plays.

A14. If a wrestler uses an illegal hold and hurts his opponent, the match is awarded to the victim. If an illegal hold is used and the opponent is not hurt, the opponent is awarded two points. During a wrestling match wrestler A used an illegal hold on wrestler B. The official awarded two points to wrestler B, but wrestler B's coach comes out and tells wrestler B he is hurt. Wrestler B insists he is all right but the coach says, "No - you are hurt." The referee had to award the match to the "hurt" wrestler B.

- a. Since wrestler A used an illegal hold, wrestler B was right in pretending to be hurt and to take his coaches' advice.
- b. Wrestler B had no right to play "hurt" even though his coach told him to.
- c. The referee should have been able to judge whether wrestler B was "hurt" or not. He should not have given the match to wrestler B.
- d. The coach had no right to influence his wrestler B. His wrestler was put on-the-spot as was the official.
- e. Wrestler A should not have used an illegal hold. Wrestler B's coach was right to tell his wrestler to be "hurt" to teach wrestler A a lesson.

A15. When a member of a swimming team entered a race he deliberately moved slowly into his position in hopes that it would upset his opponents and make them take false starts. His teammates, entered in other races, did the same thing. Swimmers are allowed to take their time in getting into position. If, however, the swimmers are obviously stalling, they could be penalized. This is difficult for officials to determine.

- a. The opponents of these swimmers should learn not to be upset by such actions.
- b. This is all right to try since it probably works only on poor swimmers.
- c. This is all right since the opponents are not good enough to control their starting.
- d. The opponents will eventually catch on and would actually profit by having this trick used against them.
- e. These swimmers are taking unfair advantage of the opponents.

A16. A rather good golfer constantly tries to improve his opponent's game. He constantly offers advice on every shot, tells the opponent what club to use, and so forth.

- a. The good golfer gives the appearance of knowing all there is to know. This is annoying to his opponent.
- b. A good golfer should know that unasked-for advice may upset his opponents. He should refrain from this practice.
- c. Such advice may be helpful to his opponents.
- d. A good golfer should know that in tournament play a golfer may receive advice only from his caddy and therefore should not advise his opponents.
- e. Since his intentions are to be helpful his actions shouldn't bother his opponents.

A17. In basketball the spectators and players often attempt to put pressure on the officials by booing, talking, and yelling. This is a way of pressuring the officials into becoming aware that the players and spectators expect them to give the close decisions to their team.

- a. This is perfectly all right.
- b. This is customarily done and is a good way of putting the officials "on their toes."
- c. It is all right to yell and talk but not to boo.
- d. The spectators should assume that the officials try to be fair, therefore, they should refrain from such action.
- e. Such action probably does no good whatsoever so this is useless.

A18. During a football game an ineligible pass receiver catches a long touchdown pass and scores. The officials fail to determine that the player was ineligible. The score is allowed to stand.

- a. The ineligible receiver should have confessed he was ineligible.

- b. Since the officials did not see the error the player was justified in keeping his ineligibility secret.
- c. The coach or teammates of the ineligible pass receiver should tell the officials about the error.
- d. The players or coach of the opposing team should let the officials know they had made a mistake.
- e. Since the officials did not see the error nothing should be done.

A19. The crowd booed their basketball coach when he removed a player from the game. The crowd showed the coach, by their actions, that they wanted the player back in the game. After the game, the coach announced to the papers that he was justified in removing the player from the game since it was for the player's own protection.

- a. The crowd has a right to disagree with the coach.
- b. The crowd should leave the decisions to the coach and refrain from criticizing.
- c. The crowd has a right to disagree but should not boo.
- d. The coach knows more about the game than the crowd so the crowd should realize this and stop their criticisms.
- e. The crowd's action is not unusual, and is unimportant in its effect on players of coaches.

A20. In informal golf matches when there are no officials to watch each competing player, some players fail to count all the strokes they take. This gives them better scores and sometimes they end up winning the match.

- a. The player who fails to count his strokes is actually harming his golf game. He never knows how well or how badly he is really playing.
- b. Since this occurs in informal matches it doesn't matter whether players count their strokes or not.

- c. This type of player may never be a good golfer nor win important matches. In important matches there are officials to check on players' scores and this practice would be uncovered.
- d. Since there are no officials, players should be extra careful in scoring correctly and should call fouls against themselves.
- e. This type of play is unfair and should not be tolerated.

APPENDIX B

KEY TO FORM A

KEY TO FORM A

1. a. _____
b. _____
c. _____
d. _____
e.   x
2. a. _____
b.   x
c. _____
d. _____
e. _____
3. a. _____
b.   x
c. _____
d. _____
e. _____
4. a. _____
b. _____
c. _____
d. _____
e.   x
5. a. _____
b. _____
c.   x
d. _____
e. _____
6. a.   x
b. _____
c. _____
d. _____
e. _____
7. a.   x
b. _____
c. _____
d. _____
e. _____
8. a. _____
b. _____
c. _____
d. _____
e.   x
9. a.   x
b. _____
c. _____
d. _____
e. _____
10. a.   x
b. _____
c. _____
d. _____
e. _____
11. a. _____
b.   x
c. _____
d. _____
e. _____
12. a.   x
b. _____
c. _____
d. _____
e. _____
13. a. _____
b. _____
c. _____
d. _____
e.   x
14. a. _____
b. _____
c. _____
d.   x
e. _____
15. a. _____
b. _____
c. _____
d. _____
e.   x
16. a. _____
b.   x
c. _____
d. _____
e. _____
17. a. _____
b. _____
c. _____
d.   x
e. _____
18. a.   x
b. _____
c. _____
d. _____
e. _____
19. a. _____
b.   x
c. _____
d. _____
e. _____
20. a. _____
b. _____
c. _____
d.   x
e. _____

APPENDIX C

TEST FORM B

A PROBLEM-SOLVING TEST OF SPORTSMANSHIP

Form B

Instructions

The following are incidents which might occur in sports situations. With each incident are five alternative solutions or opinions. You are to choose that alternative which most nearly reflects your feelings about the incident. Choose only one alternative. Place an X on the answer sheet opposite the letter of the alternative you prefer for each question.

FORM B

- B1. A football coach tells his boys how, when he played in college, he was told to stiff-arm the opposing star in order to put him out of the game. He laughingly tells of his success in achieving this assignment.
- a. To injure an opponent deliberately is wrong. By laughingly telling his players what he had done, the coach is setting a bad example.
  - b. Putting opponents out of the game is clever. By telling them how he had achieved this, he showed his boys how they could do it.
  - c. Since the coach had been taught to do this, he must think such actions are part of football therefore he was justified in setting such an example.
  - d. Injuring players through legal means is good strategy. Any example in support of this belief should be used by the coach.
  - e. Since his actions helped win the game the coach is justifiably proud of his achievement.
- B2. A spectator at a basketball game sees that an opponent is about to shoot a free throw. He stamps, whistles, and tries to distract the player.
- a. If other spectators were trying to bother the player, you would also.
  - b. Unless the officials stop you, you would try to bother the player.
  - c. You would bother the player only if the score was close.
  - d. You would not try to bother the player.
  - e. If you were the only spectator trying to bother the player, you would stop.

B3. The timekeeper's whistle indicated the end of a wrestling match. The wrestlers continued even though the whistle had blown. During this over-time one of the wrestlers scored two points. The timekeeper informed the official that the two points had been scored after the match had been ended. The coach of the team that had scored the two points, argued with the official. The official compromised, since he was not sure when the match ended and the two points were scored in a legal maneuver. The official gave the scoring team one point and the match was tied.

- a. Since the two points were awarded the wrestler, the coach had a right to dispute with the official and gain a compromise.
- b. The coach should not dispute with the official since his wrestler's points were scored in an illegal overtime.
- c. The official had no right to compromise the situation. The two points scored were illegal and he should have accepted the timer's word.
- d. Since two points were scored as a result of the confusion over the timer's signal, the official was right to offer a compromise.
- e. The official should have allowed the two points since he wasn't sure they were not scored before the whistle.

B4. At a particular field house where basketball games are played, the coach and substitutes for each team are seated underneath the basket, one team at one end of the floor and the other team at the other end.

Team A and team B are playing when suddenly the play comes down under team A's basket. Team A's coach stands up, leans over the shoulder of the official who is standing under the basket and points to a foul which he thinks the official should call.

- a. Team A's coach was correct in pointing out the foul to the official, only if the official missed the foul.
- b. Team A's coach should not have pointed out the foul because the official would probably call it anyhow.

- c. Team A's coach was wrong. He should let the officials do their job without interference, reminder, or attempts to influence their decisions.
- d. Team A's coach was doing his job as a good coach. His action serves as a reminder and keeps the officials alert.
- e. The coaches' actions are justified since it is customarily part of his job to show the officials what they should call and what they are missing.

B5. A tennis player is getting ready to play in a tennis match. While he is getting out his racket, putting on his tennis shoes, and warming up, he complains about not feeling too well. He continues, commenting that he cannot play his best today. His comments seem to the spectators that he is trying to establish an alibi in case he should lose. He is defeated and after the match points out that he just wasn't playing his best today.

- a. Alibing is a poor thing to do.
- b. If he genuinely felt bad, he has a right to mention the fact before or after the game.
- c. His remarks may be misunderstood by spectators as an alibi.
- d. Since such actions seem to the spectators like alibing, the tennis player should not say such things.
- e. If the tennis player really felt bad he should not play. If he feels well enough to play he should keep still.

B6. Football players are not allowed to move beyond the line of scrimmage until the ball has been snapped. Some coaches coach their teams and players to attempt to charge across the line of scrimmage a fraction of a second before the ball is snapped. This gives them an advantage over the defense since they outcharge them. The officials have difficulty in seeing this and the team may get away with this more times than they are caught.

- a. The coach and players are clever to be able to do this without being seen by the officials.

- b. If the officials can't tell whether the team is wrong, players have the right to try.
- c. Since the object of the game is to outcharge the opponents, any way they can do it is legal.
- d. This is against the rules so the players and coach are wrong to try to get away with such actions.
- e. The opponents can do the same thing if they wish, therefore, teams are justified to try.

B7. During the last 30 seconds of a tied basketball game between two college teams, the players scrambled for a loose ball near team A's foul line. This resulted in a tie ball. After the official called the tie ball, team B requested time out and the official placed the ball on the foul line. After the time out, the official picked up the ball and awarded it to team A for a free throw, forgetting it was a tie ball. Team A's captain told the official he was wrong and the official accepted his word.

- a. The official was correct in accepting team A's captain's word.
- b. Team B should have corrected the official since they were being unfairly penalized.
- c. The official should have continued with the free throw regardless of objections since he is in charge of the game.
- d. Team A's captain should not have objected to the decision, he should have let team B's captain object.
- e. Neither of the team's captains should attempt to change the official's decision. They should let the official discover his own mistakes.

- B8. A previously undefeated tennis player was finally beaten in a close match. After the match and whenever someone spoke to him he would say, "I really didn't play my best game."
- a. He had to say something when addressed. This was a good remark.
  - b. He was justified in making such a statement if he felt it to be true.
  - c. This was a clever remark. It should influence his opponent's opinion of him so that he might beat him later.
  - d. A good loser would never say such a thing.
  - e. Since this was the first time he had been beaten he was justified in making such a statement.
- B9. In field hockey a player is permitted to hit the ball with her stick as hard as she wishes, as long as she does not hit the ball directly into an opponent. Sometimes a player hits when an opponent is very close. She hits the ball away and not at the opponent but in swinging the stick causes the opponent to duck or dodge to keep from being hit. This action is not illegal as long as the stick is not raised above the shoulders. Some players will not swing at the ball when an opponent is close but others concentrate on hitting the ball and expect the opponent to get out of the way of the stick.
- a. Since there is no rule against this action, players are justified.
  - b. Players who swing at the ball when an opponent is standing close to the stick should be penalized.
  - c. If the players have not the nerve to play under such circumstances they should not participate.
  - d. Players should be coached to use and exercise caution in avoiding this type of play. It is better to lose the ball than to endanger an opponent.
  - e. The object of the game is to get the ball. The first player to reach the ball has the right to do what she wishes.

- B10. In league bowling one person will score approximately half the time, then a member of the opposite team scores the rest. This amounts to keeping score for about one and one-half games. A bowler notices that the game being scored by the opponents is being scored incorrectly and in favor of the opponents.
- The bowler should call the matter to the attention of the opponents.
  - The bowler should ignore the situation.
  - The bowler should wait until his team is scoring and change the opponent's score.
  - After the bowler calls the mistakes to the attention of the other team he should ask for a new scorer.
  - If the error is pointed out and not corrected, the team should refuse to bowl.
- B11. Player A is playing Player B in a tennis match. Player A beats B in the first set, 6 games to 1. B continually stops to tie his shoes, wipe his face every few minutes, and moves slowly into position for each play. Player B discovers that these actions upset player A. He continues these maneuvers and beats player A in the second and third sets, winning the match.
- Player B is clever to use these tactics since they helped him win.
  - Player A should use the same tactics against player B.
  - Player B should not take unfair advantage of player A.
  - Since player A could use the same tactics as player B, player B was right to use them.
  - Player A, if he were a good player, would not let player B's tactics bother him.

B12. A basketball rule states that a captain of a team is the only player who may talk to an official, request time-out, or ask for permission to leave the court. Some players and coaches feel that if they constantly complain of being fouled when no foul occurred eventually they will gain an advantage by directing the attention of the officials to the opponents. It is possible this might work with some officials.

- a. Complaining about actual fouls is all right but not non-existent fouls.
- b. This particular practice influences only a few officials, probably poor ones, therefore such action is all right.
- c. This is a good thing to do because it may help to determine which officials are good and which are not.
- d. This action is not in the spirit nor within the rules of the game and should not be practiced.
- e. Since this action is a violation of the rules, the officials should stop this practice and enforce the rule.

B13. A rider in a horse show is putting his horse through various maneuvers and "gaits" required in that particular event. For example, the rider rides the horse through walk, trot, and canter with the judge estimating the skill with which the rider controls the horse and puts the horse through his paces. Another rider, in the same event, tries to crowd, shove, and annoy the first rider whenever the judge is not looking. If the judge sees the second rider doing these things, he can disqualify him, but unfortunately he does not. The first rider does not know what to do. He should --

- a. Report the opposing rider's actions to the officials in charge of the show.
- b. Ask the opposing rider to stop crowding and tell him that if he does not stop he will report him to the officials.
- c. Ask the other rider to stop and threaten to crowd him if he does not stop.
- d. Wait until the show is over and then report the opponent's actions to the show officials after telling the opponent he is going to do this.

- e. Simply ignore the opposing rider and pretend that nothing is happening.

B14. A field hockey team is being badly beaten by their opponents. They finally get into position to score and as one player drives the ball toward the goal, her teammate inadvertently lets the ball bounce off her foot into the goal. The umpire does not see the kicking foul and indicates the goal is good.

- a. The player who kicked the ball should tell the official what she did.
- b. The teammates of the player who kicked the ball should tell the umpire.
- c. The team which is ahead should inform the official that the goal was illegal.
- d. Since the team scoring the goal was behind it is to their advantage to confess the foul so that the opponents will think more of them even though they are not playing too well.
- e. The official's decision should stand.

B15. In a baseball game a base-runner was forced to run from first to second base when the batter hit the ball toward second. The base-runner was easily put out but he deliberately crashed into the second baseman who was trying to throw to first base, and who was not in the runner's way. It is common practice for runners to try to prevent basemen from throwing - by running into them. Although this is against the rules it is difficult for umpires to tell whether the runners are deliberately or accidentally knocking the baseman down.

- a. Customary or not, the base-runner should have avoided the second baseman.
- b. The base-runner runs the risk of being called out by the umpire. If he can get away with it, he might as well try.
- c. The base-runner was doing what is common by running into the baseman in order to prevent another out.

- d. The base-runner should get in the way of the second baseman rather than knock him down.
- e. Basemen expect this type of action from base-runners, so it was a risk; he should expect such things to happen, and try to avoid the runner.

B16. In a World Series baseball game one of the pitchers had a no-hit, no-run game up to the last batter. In the last half of the last inning, the batter at bat had a count of 3 balls and 2 strikes. As the pitcher delivered the ball, the umpire called "strike three, you are out." The batter objected violently but the game was over and the pitcher had won his no-hit, no-run game. Later, the batter told newspaper reporters that the third strike was wild and the umpire probably had called it a strike just to give the pitcher the glory of winning a no-hit World Series game. It was also known that the umpire in question was retiring and this was his last game.

- a. Since winning a no-hit game in the World Series is almost unheard of, the umpire was justified in calling that last pitch a strike regardless of where the ball was. The batter's team would have lost anyway.
- b. Big league umpires are very good and they very seldom make mistakes. The batter was wrong and the umpire right.
- c. The batter should not have protested the umpire's decision in the first place, much less go on to announce later that the call was wrong.
- d. It was all right for the batter to object to the third strike during the game but he should not have said anything later.
- e. If it is possible the umpire was wrong but since he was retiring and the pitcher had done so well, he was justified in calling any kind of pitch, "strike three."

- B17. A field hockey player hit her opponent on the shins just as she was about to receive a pass from a teammate. The player who hit the opponent's shins intercepted the pass and went on to score. It is against the rules to hit a player with your stick but the official did not see the foul.
- a. If the official did not see the foul the player need not confess she fouled.
  - b. The player should not have broken a rule. She should have indicated she fouled.
  - c. The opponent should wait for a chance to pay the player back and hit her in the shins.
  - d. Not all officials see all the fouls which may occur. Nothing need be done. If the player should foul again she will probably be caught.
  - e. If the teammates of this player realized she fouled they should tell the officials.
- B18. The groundskeepers have sprinkled lime on home-plate to mark it more clearly. A runner slides into home-plate. The catcher, by sitting on home plate, blocks the runner. The umpire calls the runner safe, but the catcher stands up and shows the umpire the imprint of home-plate on the seat of his pants. The catcher maintains the runner was out since he could not possibly touch home while he was sitting on home-plate. Blocking bases frequently occurs and is commonly accepted as good play although it is against the rules.
- a. The catcher should object strenuously since he has unquestionable evidence that the runner could not have touched home-plate.
  - b. If the umpire does not change his decision, the catcher should appeal to the other umpire or officials.
  - c. You should accept the umpire's decision since he is the authority in the game.
  - d. You should accept the decision but argue anyhow to let the umpire know how you feel.
  - e. Blocking home-plate takes unfair advantage of his opponent. If he earned a run he should get it. The official's decision should stand.

B19. A fencer consistently makes comments, shouts, or stamps his feet as he attacks his opponent. This seems to upset his opponent, but the first fencer is not breaking the rules of the sport.

- a. This is perfectly all right if the fencer is not breaking any rules.
- b. If this is the only way this fencer can win, he is not really a good fencer, and should not do such a thing.
- c. The coach or officials should advise the fencer to stop this action.
- d. The opponent should tell the other fencer what he thinks of such action.
- e. Shouting, stamping, etc., are not in the "spirit" of fencing. Fencers should not do these things.

B20. A baseball player trapped a fly ball between the ground and his glove in what appeared to be a spectacular catch. Such action is called "Trapping" and is against the rules. The player wasn't sure the umpire saw him.

- a. The player should have immediately confessed that he illegally trapped the ball.
- b. The player should wait for the umpire's decision and abide by it.
- c. If the umpire ruled his catch illegal, he should disagree on the grounds that he felt that the umpire could not see the play.
- d. If the umpire asks him if he trapped the ball he should say he did.
- e. If the umpire asks him, he should say he did not trap the ball.

APPENDIX D

KEY TO FORM B

KEY TO FORM B

1. a. <u> x </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> </u>	2. a. <u> </u> b. <u> </u> c. <u> </u> d. <u> x </u> e. <u> </u>	3. a. <u> </u> b. <u> </u> c. <u> x </u> d. <u> </u> e. <u> </u>	4. a. <u> </u> b. <u> </u> c. <u> x </u> d. <u> </u> e. <u> </u>	5. a. <u> </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> x </u>
6. a. <u> </u> b. <u> </u> c. <u> </u> d. <u> x </u> e. <u> </u>	7. a. <u> x </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> </u>	8. a. <u> </u> b. <u> </u> c. <u> </u> d. <u> x </u> e. <u> </u>	9. a. <u> </u> b. <u> </u> c. <u> </u> d. <u> x </u> e. <u> </u>	10. a. <u> x </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> </u>
11. a. <u> </u> b. <u> </u> c. <u> x </u> d. <u> </u> e. <u> </u>	12. a. <u> </u> b. <u> </u> c. <u> </u> d. <u> x </u> e. <u> </u>	13. a. <u> </u> b. <u> x </u> c. <u> </u> d. <u> </u> e. <u> </u>	14. a. <u> x </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> </u>	15. a. <u> x </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> </u>
16. a. <u> </u> b. <u> </u> c. <u> x </u> d. <u> </u> e. <u> </u>	17. a. <u> </u> b. <u> x </u> c. <u> </u> d. <u> </u> e. <u> </u>	18. a. <u> </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> x </u>	19. a. <u> </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> x </u>	20. a. <u> x </u> b. <u> </u> c. <u> </u> d. <u> </u> e. <u> </u>

APPENDIX E

FORM A WEIGHTS

FORM A WEIGHTS

1.
  - a.
  - b. -2
  - c. -1
  - d. -1
  - e. +2
2.
  - a. -2
  - b. +2
  - c. -1
  - d. -1
  - e. -1
3.
  - a. -2
  - b. +2
  - c.
  - d.
  - e.
4.
  - a. -1
  - b. -2
  - c. +1
  - d. -1
  - e. +2
5.
  - a. -2
  - b.
  - c. +2
  - d. -2
  - e. -1
6.
  - a. +2
  - b. -2
  - c. +2
  - d. -1
  - e. -2
7.
  - a. +2
  - b. -2
  - c. -2
  - d. -2
  - e. -2
8.
  - a. -1
  - b. -1
  - c. -2
  - d. -1
  - e. +2
9.
  - a. +2
  - b. -2
  - c.
  - d. -2
  - e.
10.
  - a. +2
  - b.
  - c.
  - d.
  - e.
11.
  - a. +1
  - b. +2
  - c. -1
  - d. -2
  - e. -2
12.
  - a. +2
  - b.
  - c.
  - d. -2
  - e. -1
13.
  - a. -1
  - b. +1
  - c. -1
  - d. -1
  - e. +2
14.
  - a. -1
  - b. +1
  - c.
  - d. +2
  - e. -2
15.
  - a. -1
  - b. -2
  - c. -2
  - d. -2
  - e. +2
16.
  - a.
  - b. +2
  - c.
  - d. +1
  - e.
17.
  - a. -2
  - b. -2
  - c. -1
  - d. +2
  - e. -1
18.
  - a. +2
  - b. -2
  - c.
  - d.
  - e.
19.
  - a.
  - b. +2
  - c.
  - d.
  - e.
20.
  - a. -1
  - b. -2
  - c. +1
  - d. +2
  - e. -2

APPENDIX F

FORM B WEIGHTS

FORM B WEIGHTS

1.
a. +2
b. -2
c.
d. -2
e. -2

2.
a.
b. -1
c. -2
d. +2
e. -1

3.
a.
b.
c. +2
d.
e.

4.
a.
b.
c. +2
d. -2
e.

5.
a.
b.
c.
d. -2
e. +2

6.
a. -2
b. -1
c. -2
d. +2
e. -1

7.
a. +2
b.
c. -1
d. -1
e. -2

8.
a. -1
b. -1
c. -2
d. +2
e. -2

9.
a.
b.
c.
d. +2
e.

10.
a. +2
b.
c. -2
d. -2
e. -1

11.
a.
b.
c. +2
d. -2
e. -1

12.
a. -1
b. -2
c. -2
d. +2
e. +1

13.
a.
b. +2
c. -2
d. -1
e. -1

14.
a. +2
b.
c.
d.
e.

15.
a. +2
b. -1
c.
d. -2
e. -1

16.
a.
b.
c. +2
d.
e.

17.
a. -2
b. +2
c. -1
d.
e.

18.
a.
b.
c. -2
d. -2
e. +2

19.
a. -2
b. -1
c. +1
d.
e. +2

20.
a. +2
b.
c. -2
d.
e. -2

APPENDIX G

RAW DATA

THE DEVELOPMENT OF A PROBLEM-SOLVING TEST OF SPORTSMANSHIP
RAW DATA

Freshmen

No.	Criterion Score	Test Score 60 Items	Test Score 40 Items	Weighted Test Score	Test Score Form A	Test Score Form B
1	6	31	22	38	10	12
2	18	22	11	2	6	5
3	32	49	34	67	17	17
4	26	40	25	39	13	12
5	34	57	34	71	17	17
6	30	41	29	51	14	15
7	43	56	38	78	19	19
8	20	38	25	39	13	12
9	47	38	28	59	14	14
10	44	51	34	71	17	17
11	40	46	34	71	17	17
12	16	45	30	54	14	16
13	35	48	36	72	18	18
14	32	47	31	57	15	16
15	36	37	28	56	13	15
16	48	30	22	47	11	11
17	5	36	22	37	11	11
18	2	45	31	63	15	16
19	46	39	30	59	14	16
20	35	19	15	25	9	6
21	34	33	25	48	13	12
22	35	53	37	77	18	19
23	0	24	16	22	9	7
24	40	41	29	57	15	14
25	23	44	30	60	14	16
26	22	28	17	15	9	8
27	42	40	31	62	14	17

RAW DATA (contd.)

No.	Criterion Score	Test Score 60 Items	Test Score 40 Items	Weighted Test Score	Test Score Form A	Test Score Form B
28	28	37	23	37	12	11
29	32	45	31	60	15	16
30	32	48	31	54	16	15
31	48	38	25	48	12	13
<u>Sophomores</u>						
1	13	41	30	56	17	13
2	28	42	28	58	14	14
3	30	48	33	63	14	17
4	19	47	33	67	15	18
5	23	42	27	43	14	13
6	12	56	38	75	18	20
7	24	42	27	55	12	15
8	23	48	32	64	14	18
9	29	46	33	65	17	16
10	15	47	33	63	16	17
11	19	34	25	43	14	11
12	12	46	32	61	15	17
13	68	53	36	71	17	19
14	22	55	36	76	16	20
15	16	39	30	57	14	16
16	29	39	28	52	15	13
17	19	40	28	58	13	15
18	35	42	26	50	12	14
19	44	46	30	58	16	14
20	25	29	19	30	8	11
21	0	38	27	47	14	13

RAW DATA (contd.)

Juniors

No.	Criterion Score	Test Score 60 Items	Test Score 40 Items	Weighted Test Score	Test Score Form A	Test Score Form B
1	3.625	42	28	49	15	13
2	3.529	26	17	24	10	7
3	3.800	50	33	60	16	17
4	2.750	46	31	66	16	15
5	3.125	53	38	77	19	19
6	3.400	55	36	72	19	17
7	2.500	23	15	17	8	7
8	2.882	45	34	66	19	15
9	2.833	46	32	61	16	16
10	3.625	40	26	49	12	14
11	2.125	46	32	61	15	17
12	3.133	47	31	54	15	16
13	3.062	51	35	69	17	18

RAW DATA

120 Service Class Group

No.	Form A	Form B	No.	Form A	Form B	No.	Form A	Form B
1	15	13	81	15	19	81	14	13
2	12	12	82	17	17	82	5	5
3	11	12	83	16	11	83	4	5
4	9	11	84	13	16	84	9	9
5	16	18	85	9	10	85	8	8
6	10	16	86	16	17	86	18	18
7	12	8	87	8	10	87	16	17
8	11	12	88	14	15	88	17	17
9	14	10	89	11	12	89	10	7
10	6	8	90	6	6	90	8	8
11	13	17	91	11	8	91	13	13
12	13	18	92	11	13	92	8	7
13	16	15	93	6	6	93	7	9
14	13	12	94	16	19	94	9	12
15	9	13	95	9	7	95	12	14
16	15	17	96	15	18	96	9	13
17	15	16	97	8	11	97	6	6
18	16	17	98	8	11	98	12	17
19	13	13	99	9	11	99	7	10
20	12	16	100	15	15	100	15	18
21	13	12	101	13	14	101	12	15
22	8	9	102	18	15	102	18	15
23	9	8	103	6	9	103	18	16
24	11	12	104	10	7	104	9	9
25	13	12	105	5	5	105	18	17
26	13	11	106	18	17	106	15	15
27	17	19	107	7	9	107	14	15

RAW DATA (contd.)								
No.	Form A	Form B	No.	Form A	Form B	No.	Form A	Form B
28	12	10	68	10	8	108	10	13
29	8	7	69	3	6	109	9	13
30	10	15	70	14	17	110	12	11
31	11	16	71	11	9	111	14	9
32	11	14	72	13	15	112	15	19
33	3	5	73	14	17	113	9	12
34	8	17	74	5	7	114	17	14
35	14	16	75	12	14	115	13	15
36	14	17	76	7	8	116	15	14
37	11	10	77	15	18	117	14	10
38	12	13	78	10	12	118	11	9
39	9	11	79	12	12	119	13	14
40	7	9	80	16	15	120	12	11

APPENDIX H

JURY MEMBERS

JURY MEMBERS

- Walter F. Ersing - Instructor of Physical Education and Lacrosse Coach at The Ohio State University.
- Chalmer G. Hixson - Associate Professor of Physical Education at The Ohio State University. Basketball Official.
- Seymour Kleinman - Instructor of Physical Education at The Ohio State University.
- Margaret A. Mordy - Chairman of the Department of Physical Education for Women at The Ohio State University.
- Marilyn D. Tavares - Instructor of Physical Education at The Ohio State University.

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AUTOBIOGRAPHY

I, Mary Jane Haskins, was born in Wooster, Ohio, October 31, 1928. I received my secondary school education in the public schools of the city of Columbus, Ohio. My undergraduate training was obtained at Stephens College, from which I received the degree Associate in Arts in 1947, and at The Ohio State University from which I received the degree Bachelor of Science in Education in 1950. I received the degree Master of Arts at The Ohio State University in 1951. While completing the work for the Master of Arts degree I filled a temporary position as instructor in physical education at Ohio Wesleyan University in Delaware, Ohio. In 1951, I was appointed to a teaching position in the public schools of Port Clinton, Ohio, where I remained until June of 1956. I entered The Ohio State University to begin work toward the degree Doctor of Philosophy in the fall of 1956. In 1957, I received an appointment as Graduate Assistant and in 1958 as Instructor in the Department of Physical Education at The Ohio State University.