IDENTIFICATION OF PERSONALITY DIFFERENCES
AMONG MALE TENNIS CHAMPIONS

DISSERTATION

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By

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* * * * * *

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<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>VITA</td>
<td>iv</td>
</tr>
<tr>
<td>CHARTS</td>
<td>vi</td>
</tr>
</tbody>
</table>

**Chapter**

<table>
<thead>
<tr>
<th>I. INTRODUCTION AND PURPOSES</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>II. REVIEW OF RELATED LITERATURE</td>
<td>6</td>
</tr>
<tr>
<td>General Readings About Tennis Champions</td>
<td>6</td>
</tr>
<tr>
<td>Personality Evaluations of Athletes</td>
<td>16</td>
</tr>
<tr>
<td>Depth Studies of Highly Gifted People</td>
<td>24</td>
</tr>
<tr>
<td>III. PROCEDURES, TERMS, LIMITATIONS</td>
<td>30</td>
</tr>
<tr>
<td>IV. ANALYSIS OF THE DATA</td>
<td>52</td>
</tr>
<tr>
<td>V. SUMMARY AND CONCLUSIONS</td>
<td>63</td>
</tr>
<tr>
<td>Discussion of the Results</td>
<td>65</td>
</tr>
</tbody>
</table>

**Appendix**

<p>| A. THE RAW DATA GRAPH | 80 |
| B. LIST OF EXPERTS CONTACTED DURING STUDY | 83 |
| C. FIRST POLL OF EXPERTS SAMPLE LETTER | 84 |
| D. SUMMARY OF RESULTS FROM FIRST POLL | 85 |
| E. INTRODUCTORY LETTER TO TWO-PART QUESTIONNAIRE SAMPLE | 86 |
| F. TWO-PART QUESTIONNAIRE, PART I | 88 |
| G. TWO-PART QUESTIONNAIRE, PART II | 92 |
| H. TABULATION OF RETURNS FROM TWO-PART QUESTIONNAIRE | 99 |
| I. INITIAL INTERVIEW (Rejected) | 103 |
| J. SAMPLE LETTERS REQUESTING INTERVIEWS | 109 |
| BIBLIOGRAPHY | 111 |</p>
<table>
<thead>
<tr>
<th>Chart</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. ELEMENTS OF FULL AGREEMENT</td>
<td>54</td>
</tr>
<tr>
<td>II. ELEMENTS OF GENERAL AGREEMENT</td>
<td>56</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION AND PURPOSES

In the past ten years the United States has won the Davis Cup Tennis Championship twice, the renowned Wimbledon Championship twice, and the United States Championships at Forest Hills, New York once. These championships represent the ultimate in team and individual tennis achievement on a world-scale. Success in them may well reflect the quality of participation by a country in the sport of tennis. The United States has done poorly for its size, its capacity for providing participation opportunities, and its tradition for achieving excellence in all it undertakes. As a result, those persons in the United States who enjoy tennis and struggle to help it are concerned.

Foremost among those concerned has been the official organization for amateur tennis in the United States, the United States Lawn Tennis Association. This organization has long recognized the problem of attempting to defeat a country like Australia in tennis. In Australia tennis is "The Sport" for youngsters. The best athletes among them dream of becoming champions of the tennis world. As a result they devote their lives to it--from grade school to adulthood.
In the United States such devotion is directed toward becoming baseball, football, or basketball "champions."

No amount of money and no amount of research is going to change this motivational problem overnight. If changes are to come many things must evolve.

As a beginning, the United States Lawn Tennis Association initiated a research project in April, 1965, to determine the characteristics of champion male tennis players. The idea was to describe as fully as possible the psychological, intellectual, and physical make-up of those tennis players who are or have been tennis champions.

The ultimate purpose was to facilitate any and all tennis youth programs in the United States in the attempt to identify potential tennis champions. It was hoped that a profile of tennis greatness could be drawn which would greatly enhance the entire approach to promoting tennis in this country.

Previous identification (or recruitment) procedures have depended primarily upon watching a large group of youngsters participate in national and/or local tennis tournaments. By observing youngsters only in a tennis environment judgments are limited because of the great differences in previous tennis experience of those being observed. A twelve-year-old with four years of private lessons is almost sure to "look" better than a twelve-year-old with only an
informal acquaintance with the game. As a result perhaps many potentially fine tennis players are being overlooked.

It would be misleading to attempt to narrow the blame for tennis inefficacy in this country to an inability to identify and subsidize talented youngsters. Certainly such things as the lack of facilities, the lack of qualified teachers, and the image of tennis as a rich man's game, or even worse, a "sissy's" pastime, lend heavily to the problem.

It seemed that in reconstructing the attitude of a nation about an entity it would be helpful to have a relatively concise idea of its ultimate essence. The sense of worth which people feel about something often motivates them to seek it. Presumably the profiles of champions may stimulate children to play more tennis, adults to spend more money on building courts and supplying equipment, physical educators to improve their teaching methods, and skeptics to revise their image of the sport of tennis.

However presumptuous this approach may be, in March 1965 the United States Lawn Tennis Association, through its Tennis Education Foundation, decided to make an attempt to describe the profile of a tennis champion. Two broad goals were established:

1. To identify the psychological, intellectual, and physical characteristics of male tennis champions.

2. To determine if psychological, intellectual, and physical differences exist between the greatest of these champions and those considered to be near-great.
Several steps were taken to initiate the research:

(1) a poll was taken of tennis experts to determine the players whom they considered to be tennis champions, and those whom they considered to be of a slightly lesser caliber of greatness, (2) expert opinions were gathered concerning what the differences might be among the various tennis players who compete in the top competitive levels, and (3) interviews were made with selected tennis champions and those with whom they competed. These steps brought forth a great deal of information about the psychological differences among the great tennis players.

A series of physical evaluations was made on the highest ranked young male tennis players in each "age group." These age-groups are determined by the United States Lawn Tennis Association for purposes of promoting fair competition. National championships are held each year for these age levels and it was from these championships that the subjects were chosen for this phase of the project. The four levels are Twelve and Under, Fourteen and Under, Sixteen and Under, and Eighteen and Under.

Many physical measures were taken. Categories were established in which the most valid tests available were administered. These categories are (1) Balance, (2) Vision and Depth Perception, (3) Speed, (4) Reaction Time, (5) Tennis Ability, (6) Strength, (7) Vital Capacity, (8) Cardiovascular

This phase of the project will not be completed for several years. It was necessary to investigate the physical differences on a longitudinal scale due to the nature of the measuring techniques. Physical measurements were not considered feasible for those tennis champions chosen by the experts since their peak of performance was past. For this reason young players with great potential for becoming tennis champions were utilized. A fuller report on this phase will be brought forth in a few years.

In the atmosphere of this broad project the following dissertation was formed. It involved the three initial steps outlined previously—the first poll of the experts, the gathering of their opinions as to differences among great players, and the interviews with the champions.

This research operated from the basic hypothesis that psychological differences among the various top tennis players were susceptible to observation, i.e., that certain personality factors could be isolated which would distinguish among the various levels of tennis greatness.
CHAPTER II

REVIEW OF RELATED LITERATURE

For purposes of meaningful understanding the literature was reviewed in terms of three concepts: General readings about tennis champions, personality evaluations of athletes, and depth studies of highly gifted people.

**General readings about tennis champions**

A background of broad, general ideas was provided through a reading of literature which contained comments on and by tennis champions. Humans have always been curious about sports heroes. As a result, these heroes have written books and articles about their lives, their techniques, and their personalities. Others have attempted to analyze these men, also.

Donald Budge pinpointed both the immensity of the problem under study and the potential for solution when he wrote: "Every champion has his own peculiar style that is the expression of his individuality or personality, but each one has borrowed something from the champion before him."¹

Jack Kramer wrote that tennis champions "are created not by knowledge or talent, but by a superior inner strength that enables them to surmount physical, mental, and natural barriers."² It was Kramer's contention that "temperament and mental condition make the difference between a good player and a great one."³

William (Bill) Tilden implied this same inner strength when he wrote: "Champions are not born. They are made . . . They are endowed with a force that transcends discouragement and cries 'I will succeed' . . . It may be personality, dogged determination, or sheer genius of tennis."⁴

Grantland Rice, the famed sportswriter, used other terminology. He downgraded intelligence and education in talking about champions in general. "Neither I've found, is necessary for a champion. Intelligence denotes imagination which can be a positive deterrent, especially in heavy contact sports or in golf. However, awareness, a form of intelligence, is something I've found in all champions."⁵


Rice's list of qualities included confidence, coordination, concentration, condition, courage-at-impact, fortitude-stick-to-it-iveness, determination, stamina, quickness, and speed.

Frank Sedgman commented on the difference in confidence between champions and other players:

The champions never allow themselves to doubt that they will win. They may be two sets down and still be certain of victory. The mediocre players, meanwhile, may be in command of a match until they miss an easy volley or serve a double fault. Doubt creeps into their minds, they tighten up and they collapse.6

Gardner Mulloy differentiated primarily on the mechanical capacities. He said that "the real champ is sound in all departments and can win on any surface. The near-great frequently have a major stroke defect."7

Perhaps the best clues came from analyses of specific champions. Tilden, the legendary champion of the 1920's, sprinkled remarks throughout his book, which seemed to reflect his personality and philosophy: "Never lose your temper at an opponent's good shots, forget them. . . . I advocate trying the impossible at times, the 'science of missing shots.' . . . There is no greater thrill than centre-court


Wimbledon. . . . A player is duty bound to the public for being honoured.™ Other enlightening statements by Tilden were these:

Personalities are the deciding force in popularity. Patriotism is partially submerged in personality.

Win decisively, but not destructively, . . . why should a great star discourage and dishearten a player several classes below him.

Abnormal conditions for match play always tend to affect the better player more than the poorer, and bring play to a level.

(Before a match,) . . . go to the theatre or a concert, and get your mind completely off tennis. . . . I find my relaxation in auction bridge.

The gallery is always for the weaker player . . . and . . . are eminently just in their desires.°

William Talbert wrote of Tilden: "He lived and breathed tennis so that whenever a weakness showed up in his game he would practice untold hours until he conquered it completely."™

Illustrating Tilden's great confidence in himself Talbert wrote that "he delighted in playing against the strong points of an opponent just to prove he could beat him at his own game."™

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®Tilden, pp. 1-103. 9Ibid., pp. 75-91.
11Ibid., p. 19.
Budge noted that Tilden had the "ideal height, shoulders, grace, and litherness of movement, . . . knew all the tricks, . . . and had the brain to dictate when to make use of them."12

Mulloy felt that Tilden's "high strung temperament often K.O.'d an opponent as much as the talented racket Bill wielded."13

Fred Perry became the greatest player in the world after Tilden and almost simultaneously with Ellsworth Vines. His book reflected two things: One, he had an inordinate number of injuries throughout his career, actually fainting from nervous exhaustion after beating Henri Cochet in the 1933 Challenge Round; and two, he included many, many pictures in his book of his shaking hands with an opponent. These items were probably simple coincidence, but it was intriguing to ponder the possibility that Perry was psychologically accident-prone and an extremely out-going personality.

Several of Perry's comments illuminate some of his personal beliefs. In speaking of his good fortune in winning at Wimbledon he said:

It is easy to counterfeit modesty of the spurious brand in writing of one's tennis achievements--to incur suspicion of being guilty of the pride that apes humility. I am not, indeed, going to argue that I

12Budge, 40.  13Murphy.
had no right to win the Championship! But believe me, what I have said about luck is genuine. Nine champions out of ten would own up occasionally to the same cause for thankfulness."14

When Perry won Wimbledon on Jack Crawford's foot-fault at 5-6, the luck factor certainly seemed important. However, Perry had won the first two sets with some of the greatest tennis ever seen. Some personalities might have placed more emphasis on this fact than on the luck.

To Perry that match was the turning-point in his career. He observed: "I came to Wimbledon knowing that my reputation for ability to concentrate on the biggest occasions was held in doubt by some even of my friends."15

Perry freely admitted to "choke-ups" in earlier big matches, but he did not seem to get down on himself too badly. For example, after losing to Cochet, the great Frenchman, he said simply, "Cochet is Cochet." His implication seemed to be that he was not expected to win.

Perhaps Perry was affected with the kind of nervous reaction Talbert attributed only to the established player. Talbert's opinion was that "an up and coming player is seldom if ever affected adversely by tournament nerves. . . . Tournament nerves . . . can be defined as a fear of losing to a lesser player."16


15Ibid., p. 65. 16Murphy, 195.
In describing Ferry, his compatriot H. W. Austin said: "I venture to say that from the very outset of his career his almost flawless technique, his almost unsurpassed physical qualities, and the confidence in his abilities which resulted from these great attributes predestined him to the position he now holds."

Budge noted that Ferry "had one of the finest physiques any player ever brought to the game... could retrieve all day without even losing balance."

Budge was the next great champion of the world after Perry. Among the facts to be found in his book were these: he did not like tennis as a youth, did not even play from age eleven to fifteen; he won the first tournament that he ever played in and this spurred him to practice long hours; as a junior, he was very shy, especially with strangers and girls; as he grew older he learned to like parties, but seldom ever tried to be witty. To this day he loves to work for hours by himself; he neither noticed the crowd nor seemed to need its support; he seldom was nervous before a match (unlike Vines who had tremendous indigestion) and never even looked at the draw, i.e., who would be his opponents. He swung left-handed in baseball, but threw right-handed, a fact which may be important in light of his reputation for having the greatest backhand of all time.

17 Ibid., p. vii. 18 Budge, 41.
Walter Pate, Captain of the Davis Cup Team at the time, said of Budge—

Budge is the greatest player of them all. . . . all the others lost important matches during their best years. Don Budge lost none. . . . The average feet-per-second speed of all the balls which leave his racket in an important match is, I believe, greater than that of any player who ever lived; yet his timing is so nearly perfect and his rhythm so beautiful that his movements seem effortless and he seldom appears hurried. 19

Allison Danzig noted "a deep-rooted sense of gratitude and loyalty to the game" 20 in Budge. This was justified by the fact that Budge remained amateur at the cost of $50,000 in 1937 primarily because he felt that he owed the amateur game one more year.

Bob Considine described Budge, only tennis player ever named Male Athlete of the Year, as follows:

(Budge is a) happy, garrulous mixture of clown and clouter, full of pity for his foe, and possessed of one of the most brilliant all-court games tennis ever has seen . . . twice the durability of Vines, another 'perfect' tennis specimen. And he has the spirit and heart that is needed in the game . . . a first-class comic with a laugh more infectious than a head cold in the subway. 21

This was consistent with Budge's own opinion of a champion. "My idea of a real champion is a player who can force and hold the upper hand in a match. (However) . . . it requires a lot of confidence for a champion to change his game when things aren't going his way." 22

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19 Hull, 18. 20 Ibid. 21 Ibid. 22 Budge, 43.
Jack Kramer was the outstanding player of his time, the years just after World War II. Kramer apparently felt much the same as Budge about the character of a champion. He noted that "a player who switches from offense to defense is admitting that he is getting beaten."23

Frank Sedgman said that Kramer "convinced every thinking person that athleticism allied to the serve-volley game wins every time."24

Sedgman was one of the great players in the 1950's. His creed was that "the majority of champions have a healthy respect for the demands of the game and don't handicap themselves by lack of sufficient rest."25

Generalizations were often made about a particular trait common to several great players. Tony Trabert, one of the last Americans to win the Wimbledon title, was definitely against "gamesmanship" and felt that it reflected the player's level of greatness. "Talking to an opponent to upset him, or stalling, is unfair and an unsatisfactory way of winning. . . . A few good players have used gamesmanship, but the champions don't need to."26

Mulloy made the following observations:

From personal experience, you will find no better sportsmen than Don Budge, Jack Kramer, Pancho Segura, Gottfried Von Cramm, Frank Sedgman, . . . They would

23Murphy, 90. 24Trengove, 124.
25Ibid., p. 133. 26Ibid., p. 160.
do everything to beat you, but they never resorted to 'gamesmanship,' relying only on ability. 27

Mulloy, a fine player for many years, was noted for his "gamesmanship." Apparently he didn't feel it was entirely out of place. Admiringly, he commented that Bobby Riggs, "in his wily way, tried to get your goat; . . . Kovacs ignored his opponents with crazy antics." 28

The subject of a champion's ability to concentrate was discussed by some. Sedgman said that "few of the champions lack it. Kramer, Gonzales, Segura, and Rosewall were able to concentrate relentlessly from the start of their careers. . . . Bromwich is the player who has had the best concentration in my time." 29

Sedgman felt that Lew Hoad and Rod Laver, the great Australian champions of recent times, were exceptions to the rule. They had the capacity to concentrate well on the big occasions, but were unable to do so at other times.

Pancho Segura, a great player of the 1940's and still on the professional circuit, felt that flexibility was relative to the player's style and was not something necessarily unique to tennis champions.

A few players were so great that they didn't need to be flexible, e.g., Helen Wills, Don Budge, and Jack Kramer. (However) . . . many players became

27 Murphy, 212. 28 Ibid. 29 Ibid., p. 136.
great simply because they were flexible and could adjust their games to the character of their opposition. Segura felt that Tilden and Riggs were two champions in the latter category.

These writings proved fruitful in providing general ideas which could be researched. Among these factors were such things as: physique, concentration, temperament, intellect, determination, alertness, flexibility, reactions to victory, reactions to loss, health, habits on and off the court, reaction to the crowd and opponent, attitudes on luck and modesty, sociability, love of practice, and goal-setting.

**Personality evaluations of athletes**

The following reviews concern research which has been done about the personalities of athletes.

Henry gave the Thurstone Neurotic Inventory and some ascendance-submission questions to four groups, student pilots, track athletes, physical education majors, and students enrolled in weight-lifting. He found the athletes and the aviators to be significantly more neurotic than the physical.

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education majors. These two groups were less introverted than the weight-lifters, also.

Thune in a study on weight-lifters which proceeded similarly to the present one found them to be more shy, more lacking in self-confidence, and more concerned with body build than other Y.M.C.A. members with whom they were compared. Also, he found them to respect men more than women, to desire dominance, health, and strength more than the other members did.

Gerhold compared temperament and athletic ability on 214 men at Oberlin College. Using the Guilford-Zimmerman Temperament Survey and the Cozens General Athletic Ability Test he got these results: Five of the ten traits correlated positively with athletic ability. They were masculinity, personal relations, emotional stability, sociability, and ascendance (the tendency to dominate in face to face relations). The four which had no correlation were general activity, objectivity, friendliness, and thoughtfulness. Restraint (the tendency to be over-serious, extremely deliberate, rigidly self-controlled) had a negative correlation.


LaPlace\textsuperscript{34} gave the Minnesota Multiphasic Personality Inventory (MMPI) to forty-nine major league and sixty-four minor league baseball players. He found that the major leaguers were better able to apply their strong "drive" toward a definite objective by exercising self-discipline; they adjust better to occupations requiring social contact like professional baseball; they exercise initiative better. He noted that both the major leaguers and minor leaguers were extremely ambitious, aggressive and vigorous, but that the minor leaguers lack the self-discipline and dissipate these drives.

Johnson\textsuperscript{35} gave the Rorschach and H-T-P projective tests to four football All-Americans, two lacrosse All-Americans, two wrestling champions, two boxing champions, one track champion, and one rifle marksman. He found five outstanding personality characteristics, (1) extreme aggression, (2) emotions lacking strict controls, (3) high and generalized anxiety, (4) high level of intellectual aspiration, (5) exceptional feelings of self-assurance. Johnson commented that "these subjects were extremely able to concentrate

\textsuperscript{34}John P. LaPlace, "Personality and Its Relationship to Success in Professional Baseball," \textit{Research Quarterly}, XXV (October, 1954), pp. 313-319.

personality resources upon the desired objectives; this test H-T-P also pointed up an unusual concern in these subjects for physical power and physical perfection."36

Hull37 in her study of men and women athletes of The Year collected comments about these outstanding athletes. The most commonly mentioned characteristics were competitive spirit, self-confidence, and a degree of pride which seemed to bring about the image of their being very single-minded of purpose. Hull found some inconsistencies. Some champions were shy, others garrulous; some liked crowds, others feared them.

Booth conducted a study at Grinnell College in which he found that the "MMPI has demonstrated merit as an instrument of personality traits of participants in programs of physical education and athletics."38 Four of the results from his study may be paraphrased as follows:

1. Varsity athletes and upper-class non-athletes scored significantly higher than freshman athletes and non-athletes on the dominance variable.

2. Varsity athletes scored significantly lower than the other three groups on the anxiety variable.

3. Varsity athletes of individual sports alone scored significantly higher than athletes of the other two categories on the depression variable.

4. Individual sport athletes scored significantly higher than the other two categories on the psychasthenia (a tendency toward abnormal fears, worry, difficulties in concentration) variable.

The athletes were selected from football, basketball, wrestling, swimming, track, cross-country, tennis, and golf for Booth's research.

Keogh\textsuperscript{39} tested the relationship of motor ability and athletic participation to personality. The Larson Test of Motor Ability and the California Psychological Inventory were used on 167 Pomona College junior and senior males. He found no significant relationship between either motor ability or athletic participation and the eighteen separate personality of the CPI.

Cattell\textsuperscript{40} gave the Sixteen Personality Factor questionnaire to forty-one former Olympic champions and compared them to normal American males. He found significant differences on four primary factors: greater ego strength or freedom from general neurotic tendencies; more dominant or assertive; more outgoing or less easily inhibited; show less guilt-proneness or liability to worry.

Perhaps Cattell put his finger on the crux of the problem when he wrote: "There may be people around who have


\textsuperscript{40}Raymond B. Cattell, "Some Psychological Correlates of Physical Fitness and Physique," Exercise and Fitness (Chicago: Athletic Institute, 1960), pp. 138-151.
the physical potential to make even better Olympic records than those we have, but whose neurotic personalities would reduce them to nervous wrecks in training and competitive situations."41

Atkinson42 divided forty-nine sophomore-junior-senior college men into two groups, High Success (men who tend toward expecting to succeed in a situation) and Low Success (men who tend toward expecting failure in a situation). He gave all the subjects a three-hour examination on their classwork and had them play a ring-toss game.

The only directions on the ring-toss game were that they could toss for a ringer from any line one to fifteen feet away. They could toss all the shots from one distance or change for each toss. Three results were significant and interesting: (1) High Success people chose distances of intermediate difficulty. Low Success people chose distances more toward the extremes; (2) High Success people worked for longer periods of time on the final examination; (3) High Success people got higher scores on the two tasks. Atkinson termed these behavioral variables as (1) Intermediate risk-taking, (2) Persistence, and (3) Efficacy. All three were found to correlate positively with one another.

41Ibid., p. 147.

Merriman\textsuperscript{43} gave the CPI to 308 high school boys and correlated the results with Phillips Jump-Chins-Rum Motor Ability Test. He found significantly positive correlations on four variables: Poise, Ascendancy, Intellectual, and Interest.

Hancock and Teeuan\textsuperscript{44} did a study based on Atkinson's premise that "Hope of Success" subjects would differ in risk-taking from "Fear of Failure" subjects. They used high school sophomores and a betting machine instead of a college population and a ring-toss game for their experiment.

In this study the subjects bet actual money at different odds. The findings agreed with Atkinson's. The "HS" subjects would move to easier odds or stay at the same odds after losing, but the "FF" group took an even higher risk or stayed at the same odds. Also, the "FF" subjects would move from one extreme to the other as if to reduce the tension accumulated. The investigators felt that the "FF" subjects chose tough odds because they wanted to avoid failure by trying something in which they weren't expected to succeed. But the "HS" group chose odds at which they could succeed, and at which they would be expected to succeed.


Lakie measured the "win at all costs" philosophies of athletes in basketball, football, track, wrestling, and golf/tennis. He found no significant differences between sport groups, whether they were from a state college, state university, or a private university.

Slusher compared selected high school athletes and non-athletes on personality and intelligence characteristics. He used 100 football players, 50 swimmers, 50 wrestlers, 100 baseball players, 100 basketball players, and 100 non-athletes. The MMPI and the Lorge-Thorndike Intelligence Test were used. Some of the results of interest were these: The baseball players had the highest tendency to worry as evidenced by the high Hs scores and depression scores. They were also highest in hypomania (risk-taking, enthusiasm, excitement to extremes) of all athletic groups; the football and wrestling athletes were the most neurotic and most alike on composite personality; the wrestlers were lowest in intelligence, the football players were the highest; the basketball players were the most deviant of the group--they exhibited an over-concern with physical symptoms and a relative lack of repression.


The review of the literature in this area revealed very little specifically about the personality of tennis players. Moreover, most of the studies compared athletes to non-athletes, or a similar relationship, and only a few attempted to differentiate personalities in terms of the very highly skilled to just well-skilled. Of some consistency, however, were these ideas:

1. Hypochondriasis and concern for bodily functions are sometimes significantly higher in certain athletes than in others or in non-athletes. (Henry, Thune, and Slusher studies.)

2. Enormous single-mindedness toward purpose and self-discipline relative to the goal are prevalent in some highly skilled athletes. (LaPlace, Johnson, Hull, Atkinson, and Hancock studies.)

3. The tendency to feel guilty or restrained is less in some highly skilled athletes as compared to less skilled individuals/athletes. (LaPlace, Booth, Cattell, and Slusher studies.)

Depth studies of the highly gifted

The studies which follow were valuable from two standpoints: (1) To indicate the problems and the general nature of research with "exceptional" persons; (2) to seek for relationships between the highly gifted mentally and the highly gifted physically—a relationship which might be tested in terms of tennis proficiency.
Jones studied six-year-olds and fifteen-year-olds of above 140 I.Q. and found three items of note when comparing them to the normal I.Q. children: They were superior in height and weight to other children; they had a balanced superiority-inferiority motivation orientation; they had a stronger tendency toward extrovertedness than the normal children.

Terman in his classic work on gifted children discovered some factors of pertinence to any longitudinal research:

1. Ninety-two per cent were from unbroken homes—divorces were only 5.2 per cent as compared to 8.75 per cent for the average child.

2. There was a preponderance of first born in families of two or more among these gifted children.

3. The gifted were superior to the average in health and the following physical attributes: height, weight, breathing capacity, muscle strength, size of shoulders and hips.

4. The gifted had more collections and/or hobbies than the average children.

5. The gifted were more interested than the average child in abstract school subjects (than practical subjects).

6. The gifted were more interested than the average children in games which required thinking, were mildly social, and were quiet.


7. The gifted were less interested than the average children in competitive games.

8. The gifted played more masculine games than the average children at all ages except thirteen where the interests were not significantly different.

9. The gifted played with older children more than the average children did.

10. The gifted played alone more.

Hollingworth understood that differences can be ascertained even among a highly select group. She surmised: "Children in the upper 1 per cent I.Q. are not all alike. On the contrary, the child at the top of this group exceeds the child who barely reaches the group by much more than the latter exceeds the average child." 49

She found that adolescents who tested above 135 I.Q. were "much less neurotic, much more self-sufficient, and much less submissive than college students in general." 50 She used the Bernreuter Personality Inventory for her data on this point.

MacKinnon 51 felt that the Freudian influence was one reason that so much psychological research centered on the ineffective individual rather than the effective one. It was also true, he said, that the mentally disturbed are more


50 Ibid., p. 252.

easily probed because they seek analysis and the effective individual does not.

However, during World War II several American government agencies, among them the Army Air Corps and the Office of Strategic Services, began doing research on the highly effective person. Their goals were related to recruiting and training pilots, espionage agents, and leaders of resistance groups behind enemy lines. Out of this research a number of hypotheses were formulated and a series of tests to measure them were developed. Such personality factors as adaptive flexibility, loyalty, sense of responsibility, originality, creativity, and other items were assessed.

The research in these areas is still going on, but perhaps the most illuminating statement was this one by MacKinnon:

We have found, as with many other measures, that the best performance and the most desirable traits are not associated with either the extremely high or the extremely low scores on an inventory or in a test situation, but with some range of intermediate scores. . . . (There) is a curvilinearity of relationship. . . . The lack of recognition of this fact has, in my judgment, contributed to the dismal showing of so many selection and placement programs. 52

Barbe 53 felt that a comparison of high genius with moderate genius might prove fruitful. He distinguished two

52 Ibid., p. 373.
groups, one with a mean I.Q. of 158, the other with a mean I.Q. of 129. His results were interesting relative to some points originally brought out by Terman. Below is a selected list from his publication:

1. Both groups were from relatively small families.
2. Sixty per cent of the highly gifted were first born, 54 per cent of the moderately gifted were. This was not a significant difference.
3. The highly gifted came from homes where the salary was significantly higher than that of the moderately gifted.
4. Parents rated highly gifted lower on muscular coordination than parents of moderately gifted did.
5. Both groups tended towards "Surgent" personalities, but the highly gifted did to a significant degree above the moderately gifted. (Surgent refers to happy-go-lucky, talkative, cheerful, serene, frank, expressive, mercurial, quick and alert.)
6. The highly gifted had a "better" self-concept.
7. Given three wishes the highly gifted were more "self-ambitious" and "behavioristic" (travel fancy, want more wishes, negativistic).
8. The moderately gifted had more freedom from nervous habits.
9. The highly gifted were rated less often as "industrious" in comparison to the moderately gifted.

Goldberg reviewed the research on the talented and drew some implications of a slightly different nature. She suggested that the highly gifted do worry about social standing--this is why they don't study hard in many cases. In speaking of the high I.Q. child who is an underachiever, Goldberg noted them to be cynical, to feel victimized by adult authority, and "to perceive his family situation as
having poor morale, with strong parental domination." She felt that the great majority of the underachievers were "childishly impulsive."

Finally, as if to help sum up the research in this area, Goldberg said: "The causes of underachievement still remain in mystery."

Certainly the research on the mentally gifted could be said to have hinted only at possible pathways for the study to pursue. Such questions as these resulted from the review:

1. Is the relationship between talent-greatness-success and being first born applicable to tennis achievement? Or for that matter, how about some of the other sociological factors studied in regard to genius, are they the crucial factors?

2. If significant differences can be discerned between mental geniuses and within such narrow limits, could not the same be done with physical "geniuses?"


55Ibid., p. 29.
CHAPTER III

PROCEDURES, TERMS, LIMITATIONS

Before any procedures can be explained the reader must be acquainted with two key terms which have been used throughout the study. Other terms will be defined within the text.

1. "Champions" or "Class I players." These two labels have been used interchangeably throughout the study. These are tennis players which the research has established as the greatest who have ever lived. Such terms as "unparalleled," "peerless," "most successful," "highest-ability," would all be synonymous. The nature of the present study made it compulsory to establish two levels of great tennis skill. "Champions" or "Class I players" were the terms used to identify the greatest.

2. "Near-greats" or "Class II and III players." These two labels have been used interchangeably throughout the study to denote the level of tennis skill just slightly below the champion level. Players in this category suffer from being compared to only the few greatest tennis players of all time. The "near-greats" in this study are among the best players of all time, but for purposes of this particular research they must be labeled in terms which have a somewhat inferior connotation. Every player in the study has been a champion in tennis at some time or other, but only a few will be called champions because of the nature of the research. The reader is cautioned to keep this in mind and to remember the extremely high levels of tennis skill at which all of the subjects operate.

The study was begun very informally. Perhaps most scientific research reports only the controlled, systematized,
and readily measurable aspects of its work. The early conversations of the present study could easily have been dismissed in this way. However, it was felt that their existence was important even though their effect was incalculable.

In a very real sense, then, the research began with the investigator simply listening at gatherings of tennis people. Usually it was a convening of college coaches gathered together because their teams were competing. They may have met for dinner or for a casual after-match conversation.

If possible, the conversation was guided toward the question, "What did you notice about the champion tennis players that the near-greats didn't have?" These coaches answered in general terms: "better competitors," "able to concentrate better," "can spot a champion by watching him move to a ball, unusual grace, great confidence. . . ."

In that atmosphere the first tentative hypotheses of the study were born.

A review of the literature was the next step. Chapter II relates the ideas which that process brought forth. The writings by and about the great tennis players broadened the investigation considerably. The research which had been done by other investigators relative to the problem was valuable in that both ideas and research techniques were suggested.

The next step was to establish definitely and with scientific procedures the fact that tennis experts really
did discern champion tennis players from near-great tennis players. If no clear-cut differences were even felt by tennis people then it would seem rather fruitless to try to objectify them.

A questionnaire was sent to fifteen tennis coaches throughout the country. These were men who had established reputations in tennis and/or who had coached and become well-acquainted with some of the greatest tennis players of all time. The group included all the Big Ten tennis coaches, the coaches at the University of California, University of Southern California, University of California at Los Angeles, Trinity College, Miami University, and several other men of tennis renown. See Appendix B for a more complete description of the experts consulted.

From a list of sixty-three players the respondents were asked to place a I, II, or III beside each name as an indication of the level of greatness of that player. The definitions of each level were as follows:

Class I. Players who at their prime were or are capable of winning consistently from any other player at any level of tournament pressure.

Class II. Players with tremendous ability, but ones that you feel somehow would lose to Class I players in the "big tournament."

Class III. Players with mechanical ability somewhat below Class II level.

Respondents were asked to leave blank the names that they did not know very well. Only living players were on the
list for future research purposes. See Appendix C for a copy of the questionnaire. The sixty-three players are listed below.

Allison, Wilmir
Anderson, Malcolm
Ash, Arthur
Ayala, Luis
Bartzen, "Tut"
Borotra, Jean
Bromwich, John
Buchholz, Earl
Budge, Don
Cochet, Henri
Cooper, Ashley
Crawford, Jack H.
Dreyfus, John
Drobný, Jaroslav
Emerson, Roy
Flam, Herb
Frazer, Neale
Froehling, Frank, III
Gimeno, Andres
Gonzales, "Pancho"
Grant, Bryan M., Jr.
Graebner, Clark
Hoad, Lew
Holmberg, Ron
Hunt, Joseph
Knight, Billy
Kovacs, F. L.
Kramer, Jack
Lacoste, Rene
Laver, Rod
Lott, George
Mackay, Barry

McGregor, Ken
McKinley, Chuck
Mulloy, Gardner
Olmedo, Alex
Osuna, Rafael
Pails, Dinny
Parker, Frank
Pasarell, Charles
Perry, Fred
Quist, Adrian
Ralston, Dennis
Reed, Whitney
Richards, Vinnie
Richardson, Ham
Richey, Cliff
Riessen, Marty
Riggs, Bobby
Rose, Mervyn
Rosewall, Ken
Sangster, Mike
Santana, Manuel
Savitt, Dick
Sedgman, Frank
Segura, "Pancho"
Seixas, Vic
Shields, Frank
Shroeder, Ted
Stolle, Fred
Talbert, Billy
Trabert, Tony
Vines, Ellsworth

Eleven coaches responded. The vote tabulation appears in Appendix D. The results are summarized below:

Unanimous Class I: Don Budge, Pancho Gonzales, Jack Kramer.

Concensus Class I: Henri Cochet, Roy Emerson, Lew Hoad, Rene Lacoste, Rod Laver, Fred Perry, Bobby Riggs, Ken Rosewall, Frank Sedgman, Pancho Segura, Tony Trabert, Ellsworth Vines.
Unanimous Class II: None.

Concensus Class II: Wilmir Allison, Malcolm Anderson, Arthur Ashe, Tut Bartzen, Jean Borotra, John Bromwich, Earl Buchholz, Ashley Cooper, Jack Crawford, Jaraslov Drobny-Neale Frazer, Andres Gimeno, Bryan Grant, Joseph Hunt, F. L. Kovacs, George Lott, Barry Mackey, Ken McGregor, Chuck McKinley, Gardner Mulloy, Alex Olmedo, Rafael Osuna, Dinny Pails, Frank Parker, Adrian Quist, Dennis Ralston, Vinnie Richards, Ham Richardson, Mervyn Rose, Manuel Santana, Dick Savitt, Vic Seixas, Frank Shields, Ted Shroeder, Fred Stolle, Billy Talbert.

Unanimous Class III: None.

Concensus Class III: Luis Ayala, John Doeg, Herb Flam, Frank Froehling, Clark Graehner, Ron Holmberg, Billy Knight, Charles Pasarell, Cliff Richey, Marty Riessen, Whitney Reed, Mike Sangster.

It was clear that differences were felt. From the results of this first questionnaire it was concluded that the research had a basic hypothesis upon which it could build.

Approximately one month later a second questionnaire was sent to these same tennis experts (a few were added) on which they were asked to do two things: One, think about the three general areas under study (psychological, intellectual, and physical), regarding any differences which they might perceive among the players. The experts were instructed that the differences were to be only those which seemed to exist

1The fact that all three areas were included illustrates one of the ways in which the present study was conducted as part of the bigger longitudinal project.
between Class I players and the other players. It was sug-
gested that they think of actual players which, to their way
of thinking, fell into each category. The list of sixty-
three players was included to help them. They were directed
in no other way. The hope was that new ideas would occur to
these experts which had not yet been uncovered.

Two, after finishing this "non-directed" part of the
questionnaire the experts were asked to comment on some
specific questions formed by the investigator with the help
of a clinical psychologist and a tennis professional. These
questions were an outgrowth of the early conversations with
tennis people and the review of related literature, Chapter
II of this report.

Again, the respondents were reminded that the differ-
ences which they were citing were to be about Class I players
relative to Class II and III players. The questions in Part
Two follow. See Appendixes F and G for a complete copy of
the questionnaire.

1. Is there a difference in the degree of self-
confidence? Does the champion appear conceited, introspec-
tive, extroverted, calm, nervous, etc.?

2. Is there a difference in the degree to which the
champion relates to others? Is he concerned with personal
popularity? Does he seem to disdain certain social concerns
more than the near-greats? Does he almost seem above certain
things--a referee's decision, a personal snub, a boo from the
crowd . . . ?

3. Is there a difference in ability to concentrate?
Does he focus more fully on his immediate situation? Does he
do it longer? Can he practice by himself for longer periods
of time than the near-great? Do side things distract him
more or less?
4. During competition is there a difference in attitude toward the opponent? Does the champion seem to hate, ignore, "kill with kindness," condescendingly regard, love . . . his opponent? How real is this?

5. Is there a difference in the ability to come from behind? Can the champion come back better, or is it that he can also go on to win after a comeback? Does he enjoy winning more? How do losses affect him?

6. Is there a difference in the gambling-instinct, the so-called risk-taking trait of the champion compared to the near-great? In personal things as well as in sport, does he take more or less chances, e.g., crossing the street, driving his car, ordering food, risking injury in another game . . . ?

7. Is there a difference in philosophical makeup? How concerned is the champion with the aesthetics of a situation? Is he dominated by practical considerations? How much does he care about the ethics, the justice, the beauty of an endeavor?

8. How varied are his interests compared to the near-greats? Does he try other sports? Does he succeed? Does he enjoy discussing and doing things other than tennis? Is he a "genius" in anything else, or is he a standout in tennis alone?

9. If you knew any champions at a younger age—how were they as children? Were they pampered more? Were they loners or quite gregarious? Were they insecure in any way? Were they stronger, or faster, or bigger, or more mature than others?

10. Does the champion appear to revel in his physical power? Is he proudful of his physique? Is he somewhat vain? Is he extremely aggressive? Does he engage in such things as arm-punching, hugging a partner, etc., to a greater degree than the near-great?

11. Is there anything distinctly pathological about the champion? Does he suffer from nightmares? A fear of heights? An almost irresistible urge to be best at all he does? Other extreme behaviors?

12. When hitting the ball, does the champion seem to personalize the inanimate? Does the ball seem to become a projection of some intra-personal frustration or hope? Is he possessive about his racket?
Nine responses were received to this two-part questionnaire. On the "non-directed" part two empty pages were available for responses. On the "directed" part enough space had been left below each question for the respondent to make a nine or ten-line handwritten comment. No respondent used all the space provided on either part.

A very simple tabulation procedure was employed to analyze the returns. For each specific question a count was made of every sentence or phrase which appeared to be similar in meaning. For example, question number one dealt with the degree of self-confidence. The following five comments, relative to this question, were received from different respondents:

"Group I certainly are self-assured, not conceited."
"Self-confidence, definitely—conceit, not usually."
"The champion usually is calm and self-confident. . . . He knows that overconfidence can be his downfall. . . . Near-champion more conceited."
"Calm, relaxed, determined."
"The champion . . . is not conceited."

These comments were arbitrarily labeled as meaning, "Champion is less conceited, though calm and self-confident." Since there were five responses having similar meanings, a count of five was recorded for that concept. Had similar phrases occurred three times the concept would have been given a count of three. The manner in which all the comments
or phrases relative to question number one were broken down into concepts is as follows:

"Champion has supreme confidence, conceited appearing." 2

"Champion less conceited, calm and self-confident, though." 5

"Champion is self-assured in matters other than tennis, also to a greater degree." 1

"Champion hides his nervousness." 1

"Champion more confident because he has won." 1

"Champion nervous until match starts." 1

For each of the three general areas in the "non-directed" part of the questionnaire, and each of the twelve questions in part two of the questionnaire, similar analyses and tabulations were made. These are all reported in Appendix H.

This procedure reduced the number of statements to eighty-six separate concepts. Each concept was typed on a separate card. Working independently a clinical psychologist and the investigator attempted to form associations among the eighty-six concepts written on the cards. This process gave some psychological meaning and order to the opinions forwarded by the experts. By using cards it was found easy to place items together which were psychological correlates. The cards would then be reshuffled and rearranged to find a second implication. Both investigators then wrote a summary of the many implications which seemed to exist.
Psychologist's analysis. The associations below are based on the returns from eight tennis coaches asking them to compare Class I with Class II players. The Class I players are described as having greater pride, confidence, single-mindedness, and possibly being not as "well-rounded" as Class II players. They are described as being extremely stable, having consistent emotional control, extreme discipline and being able to hide their nervousness. There is a tremendous desire to win. They are described as having supreme confidence which shows itself in a calm fashion (as if they do not have to compensate for a lack of confidence by obvious conceit). A few coaches imply that this confidence is seen in other areas as well as tennis.

Class I players appear not to be bothered by social snubs, or by decisions of tennis officials. It appears that they are able to be rather cold (efficient, impersonal) with individuals and with social groups, however, paradoxically there seems to be a strong desire for success, fame, respect, or popularity as a player. In line with this picture of the ability to be impersonal, they are described as being able to concentrate to a greater degree--able to become machine-like, perhaps.

In line with the same picture, Class I players are described as being able to be quite impersonal with their opponents, i.e., they either are extremely detached from the opponent or, less often, the opponent is seen as the enemy. Therefore, the Class I player does not try to crush the opponent, apparently he is saving his energy, dispassionately analyzing the opponent. Class I players appear not to be discouraged when behind and do not let up when they are ahead. Their competitiveness shows in their great enjoyment of winning, wanting a rematch after losing.

Class I players are not "gamblers," but are "percentage players." (Again in line with the description of calm efficiency and impersonalness.) Class I players appear to be extremely practical, are concerned with winning (not concerned with the beauty, ethics, or philosophy of the game).

The Class II players description is implied by the reverse of the above. In general, Class II players are seen as having some flaw in not being single-minded enough. For example, some Class II players are described as being good students with too many outside interests. The Class II players are seen as sometimes becoming over-emotional, such as in "hating the opponent." In general, Class II players are seen as differing in that they do not have the extreme motivation to win, or the exceptional emotional control (an almost abnormal emotional control).
Investigator's analysis. Comments about the physical differences led to these thoughts: Class I players have more speed and balance, are taller, seem to look more graceful, and are always in top condition and weight. Several experts dwelled on the idea that the champions appeared and/or were stronger. They also matured earlier. A couple of experts opined that champions thought about their physique more, either to revel in it or negate it on purpose.

There were thought to be no real differences in intellectual ability. However, the Class I players were thought to have far better concentration powers, more resolution toward goals, and are able to analyze the opponents better. Class I players are more practical in all matters, seldom gambling against the percentages as much as Class II players.

Philosophically, the champions were considered to be less concerned with aesthetics in their tennis play. It was generally agreed that winning is their primary and sole objective—all else being either secondary or non-existent. However, no expert felt that the champion would skirt the rules to win. Most experts felt that the Class I player made tennis "his whole life." Incongruously, many experts felt that Class I players are normally diverse in their interests and are good athletes in many sports.

The emotional makeup of the Class I players was considered to be as follows: more stable in all situations, but especially well-controlled in situations perceived as "big;" champions are more self-assured and able to hide nervousness; experts split on whether Class I "appear" more conceited; champions seem to get just as emotionally involved in a match, but somehow can direct it to their advantage.

The Class I players take great pride in their "public image," but are not particularly concerned with socializing or personal friendships. Some experts felt that the champions are "above" snubs of any type. Class I players are detached from their opponent—ignoring him for the most part. The champion does not try to overwhelm an opponent, but a near-great seems to need to do this at times.

The champions enjoy winning more and detest losing so much that they always ask for a quick rematch. The experts were not in agreement on how the two classes differ in behavior when ahead in a match. However, slightly more felt that champions do come back better from behind.

No other thoughts were outstanding. However, the following ideas were mentioned as possibilities: Class I players are not loners, but do have only a few "close"
friends; they seem to turn their deep concentration on and off, i.e., they are not continuously serious; they do regard the opponent more as an enemy, perhaps as one might a virus, indicating that it is not a personal thing; they are very self-centered, imaginative, and curious; some may be superstitious, have a favorite racket, perhaps.

All the points previously mentioned were relative differences to Class II players. In each case the experts felt that the Class II players differed in some degree.

On only one point did the two analyses reflect a conflicting association. This was in the interpretation of the experts' opinions as to how diverse the interests of the Class I players were relative to the Class II and III. It was decided that this was a point which deserved special attention in the next step of the research.

The next step was to devise an interview which would delve into the ideas suggested by the previous work. This interview was to be made with selected players from each of the classes, I, II, and III.

At first the interview outline was extremely specific. It contained some direct questions, but there were also many indirect questions devised with the hope of getting the interviewee to talk about himself without realizing the purpose. For example, in attempting to understand the concept which one might call variously "gregariousness," or "love for socializing," the original interview outline had the following questions:

a. When was your first date?

b. Did you ever try to get out of going to kid parties?
c. If you had your choice now of going to a party or staying home alone, what would you do?

d. Does the size of the gathering make any difference?

e. How did you meet your wife?

f. What is the tie you have with your close friends?

g. When things are going badly, do you seek them out?

A complete copy of this original outline appears in Appendix I. It is not given in full here because it was rejected for use. However, it bears mentioning because of its role in the development of the data. It was a first crude effort to ask questions which would stimulate people into meaningful introspection without causing them to feel that their personal lives were being arrogated.

Interviewing technique was practiced using the original outline with members of The Ohio State University tennis team. These tapes were analyzed and some changes were made.

The most important change was to reduce the number and types of questions. During the interviews the subjects were being "moved" along too quickly to be able to answer all the questions. They were not being given time to think or relax. Moreover, the questions were too indirect and lengthened the time involved to get at the point under consideration.

An example of how this particular change was implemented may be observed in regard to the "gregariousness"
concept mentioned previously. The seven questions were reduced on the interview outline to one simple, guiding sentence, as follows:

"Loner idea—shyness, party-goer, flamboyant, . . . ."

It was decided to ask the interviewee directly whether he was a loner and try in a relaxed way to get him to talk about his interrelationships with people. The idea behind this suggestion was the assumption that the men interviewed were intelligent enough to pick up an idea and expand on it in their own way. There would be no need to "lead" them in quite the way one might a younger child. This turned out to be a correct assumption. The subjects interviewed were very cooperative and capable in "seizing" upon a suggestion and passing their opinions about it.

A third suggestion was to lead off the interview by showing them a list of the players to be interviewed and asking them to integrate their appraisals of the questions with opinions of these players. It was felt that a form of cross-validation could be achieved in this way. It also provided a means to change the subject whenever the interview became too centered on an intimate personal reflection. The interviewees seemed to relate more about themselves when the conversation involved shifts in focus from them to others and back to them. A "wall" seemed to come up whenever the conversation focused too heavily on the subject himself.
The fourth suggestion was to use the interview technique called "Reflection." This is a technique in which the interviewer establishes himself as completely empathetic to anything the interviewee might say, not necessarily by agreeing with him, but by repeating what has been said. The interviewer asks the interviewee if the review or reflection is close to what he meant. This reflection not only clarifies the statements of the interviewee, but it brings about a self-confidence by the interviewee that he is communicating, also. It tends to encourage him to further comment.

A study was made of "expert" interviewers like Carl Rogers who specialize in the "Reflection" method.

Finally the actual interview outline was completed. A copy of it follows:

I. Introduction
   a. What the study was all about.
   b. What has taken place so far.
   c. Where interviewee fits in.
   d. Promise privacy of what is said.

II. Show interviewee a list of players. (The thirty-three who had been contacted and were potential interviewees)
   a. Ask interviewee if he knew any of them well.
   b. Ask him to integrate comparisons as we talk.

III. Loner idea—shyness, party-goer, flamboyant, . . .

IV. Seriousness aspect—toward life, practice, tennis, . . .

V. Independence—role of others in success, amount of conceit, . . .

VI. Enjoyment of a win—like to talk about it, why?

VII. Behavior during match—"psyche out" opponent?, general attitude during, . . .
VIII. Effect of defeat—most frustrating loss, immediate desire afterwards, . . .

IX. Risk-taking.

X. Reaction to crowd, bad calls.

XI. General development—peak, parents' role, physical growth, . . .

XII. Schooling—grades, type of schools, intelligence, . . .

XIII. On-court, off-court resemblances, personality factors mainly.

XIV. Notice any resemblances among Kramer, Gonzales, Budge, Tilden.

List of thirty-three players interviewees were shown:

| Arthur Ashe | Gardner Mulloy |
| Earl Bucholz | Alex Olmedo |
| Don Budge | Charles Pasarell |
| Herb Flam | Fred Perry |
| Frank Froehling | Dennis Ralston |
| Andres Gimeno | Ham. Richardson |
| Pancho Gonzales | Marty Riessen |
| Clark Graebner | Bobby Riggs |
| Bryan Grant | Ken Rosewall |
| Lew Hoad | Dick Savitt |
| Ron Holmberg | Frank Sedgman |
| Jack Kramer | Pancho Segura |
| Rod Laver | Vic Seixas |
| George Lott | Bill Talbert |
| Barry MacKay | Tony Trabert |
| Ken McGregor | Ellsworth Vines |
| Chuck McKinley |

In most of the interviews the order of the outline was ignored except for points I and II. Most of the interviews began with the interviewees commenting on the study in some way. This usually led to one point or another on the list. It was possible to discard the outline until the end of the interview at which time it was used as a sort of check list to be sure all the pertinent ideas had been explored.
Letters were sent to the thirty-three players listed in the Interview Outline requesting a chance to interview them. These players were selected from each of the three classes primarily because they would be most accessible and/or would be most able to converse in English. Sample copies of some of these letters appear in Appendix J. Twelve of the men replied that they would be very willing to be interviewed. Others had to be contacted by letter again, called by 'phone, or approached directly at a tournament site.

Finally twelve interviews were conducted. Below is a review of the time and place of each interview. Names have been withheld to honor the promise of anonymity made to each interviewee. The men are listed by their subject number and skill level classification as these figures are used in Chapter IV.

1. Subject 1, Class I - The stands of a tennis club - 3:00 P.M., March 19, 1966.
2. Subject 2, Class I - A restaurant - 12:00 Noon, March 19, 1966.
4. Subject 11, Class I - His office - 11:00 A.M., April 12, 1966.
7. Subject 15, Class II - His office - 1:00 P.M., Feb. 18, 1966.
9. Subject 19, Class II - His home - 10:00 A.M., Feb. 18, 1966.
10. Subject 22, Class II - His office - 2:30 P.M.,
March 22, 1966.
11. Subject 23, Class III - A motel room - 1:00 P.M.,
12. Subject 24, Class III - A dressing room of a tennis

A Magnavox T107 tape recorder was used to record all
the interviews. Each interview, excepting the ones with
subjects 2 and 24, was conducted in privacy with no other
people present. It was not felt that the other persons
present in the two cases inhibited either man from speaking
freely.

A form of Content Analysis was employed to organize
the data provided by the interviews. The names of the
thirty-three men on the list shown to each interviewee were
placed along a vertical axis on the left margin of a large
chart, hereafter to be called "The Raw Data Graph."

Four categories were made of the interview topics
each having three sub-categories. These were placed along a
horizontal axis across the top of the Graph. Also, an area
entitled "Miscellaneous Thoughts" was placed at the end of
the horizontal axis.

These horizontal categories were a result of listen­
ing to the interviews. They were not categories established
for the interview comments to "fit into." General areas of
conversation which seemed to reside in each interview were
recorded. After listening to the twelve tapes it appeared
that all the comments from the interviews would fall some­
where within the four general areas. Only a few comments
did not lend themselves to the twelve divisions, and these were placed in the miscellaneous area. For purposes of communication the four general areas were labeled "Crucial Factors" in the analyses of the data. These Factors with their divisions are as follows:

I. Social Attitude
   A. General Personality
   B. Need for acceptance by society in general
   C. Individual social relationships

II. General Development
   A. Thoughts as a child
   B. Perceived role of other people in success
   C. Rate of development

III. Dedication-Concentration
   A. Love of all things concerned—related behavior
   B. Non-concentrative or other "negative" behavior during a match
   C. "Positive" behavior during a match

IV. Reaction to Accomplishment
   A. Enjoyment of successes, victories
   B. Motive to achieve
   C. Feelings after defeat

V. Miscellaneous Thoughts

In total there were 429 blocks on the Raw Data Graph. Each tape was studied numerous times until every comment of even the most remote importance was recorded in one of the blocks.

If the interviewee were talking about his own feelings, the comment was placed in red opposite his own name and under the Crucial Factor to which it was most related. If the interviewee were talking about one of the other subjects
on the list the comment was placed in blue opposite that sub-
ject's name and under the most related Crucial Factor.  

Every comment was not recorded verbatim on the Raw
Data Graph. In most cases paraphrasing was employed to re-
duce the number of words. Every effort was made to retain
exactly the same meaning as the interviewee intended.

All subjects were analyzed relative to a particular
Crucial Factor. Similarities and differences were noted be-
tween Class I subjects and all others. Subjects were placed
in one of five skill levels for this process. It was decided
that the voting by the experts in the first poll was such
that it warranted more than three divisions.

Therefore, Class I was broadened to include five sub-
jects, the men who had received the most votes for Class I
level. Again, the names have been withheld to insure anony-
mity.

A new class entitled Class Ig was created to include
the players who had been "Consensus Class I," on the first
poll, but had not received quite as many votes as the first
five. In the analyses this class was thought of as champion

2The Raw Data Graph appears in Appendix A. Due to
space and dissertation requirements, certain differences
should be noted. The interviewee's comments about himself
are always placed first and encased in quotes. The comments
of others about a subject are always placed second and
divided from the self-comments by two diagonal lines. The
reader may get some idea of the Graph as it looked to the
investigator by unfolding the sheets.
or Class I. However, when possible the investigator attempted to discern differences between them and Class I.

Class II, however, was the class at which the dividing line became somewhat "thicker." The subjects placed here were clearly not considered to be Class I or Class III. While there were no unanimous Class II's, this group was by consensus very clearly Class II.

Four players appeared to be thought of as either Class II or III and therefore were labeled Class II*.

Five players appeared to be clearly defined as Class III and were placed that way. There were no unanimous Class III choices, but the experts seemed to be fairly consistent in voting for them as "III's."

Six names were eliminated for use on the Raw Data Graph because so few comments were made about them. This reduced the number of subjects analyzed to 27 and the number of blocks into which comments were placed to 351.

Two charts appear in Chapter IV to illustrate the results of the comparisons. One analysis involved looking for personality "elements" within each skill level on which there was no disagreement. The other analysis involved looking for personality "elements" within each skill level on which there was only a small disagreement.

Personality "elements" refers to a single concept about a facet of personality which seemed to be implied by a group of comments. The word "trait" might have been more
familiar to the reader, but it was felt that these items were somewhat smaller in scope than that particular word implies. Finally, full case studies were made on each subject with special emphasis upon discerning unique combinations of personality factors which might have been missed in the attempt to analyze one factor at a time.

These case studies were made shortly after each interview. They were included as part of the results as the only evidence presented which took into consideration the subjects as individuals and entities with total personalities, rather than just isolated portions of a personality.

These case studies were called "personal impressions" to more properly label and limit them. No claim is made that these impressions carry the importance of the other two analyses. Their value was in providing a slight degree of unification prior to the drawing of conclusions.
CHAPTER IV

ANALYSIS OF THE DATA

The charts and analyses which follow were prepared to illustrate the manner in which the interview data were organized.

Content Analysis was the technique employed. It is sometimes called the scientific method for the description of communication content. "The content analyst aims at a quantitative classification of a given body of content, in terms of a system of categories devised to yield data relevant to specific hypotheses concerning that content."¹

The initial step was the formation of the Raw Data Graph (Appendix A). Through this medium the interview comments were categorized into broad concepts. The concepts were based on the hypotheses suggested by the questionnaire sent to the experts and the interviews.

Secondly, two charts were formulated in an effort to more precisely organize the interview contents. These charts were structured in terms of the degree of agreement found relevant to the working hypotheses.

Chart I was prepared as a condensation of the comments which had been placed in the Raw Data Graph. The condensation resulted from the process of tabulating the statements under each of the four Crucial Factors where no disagreement of any nature could be observed within a skill level. It was thus labeled "Elements of Full Agreement." The numbers following each statement indicate the number of times the statement was made by the subjects within that particular skill level.

Chart I revealed a number of personality elements common to Classes I, II, and III. These common elements made it possible to note some differences between the "champions" and the "near-greats." The following thoughts seemed to be reasonable:

1. The champions appeared to be more purposefully intense and serious. The word "aggressive" connotes this impression. The near-greats reflected intensity and seriousness, but seemed to direct their aggressiveness inwardly rather than toward some external purpose. The word "aggressive" usually means to most people an outward offensiveness, sometimes hostility. It was seldom used in regard to the near-greats, but was often used in regard to the champions.

2. The crowd was definitely on the minds of the near-greats as they played. No such agreement was reached in regard to the champions. To generalize from this fact might be too presumptuous. However, it implies a reliance by the near-greats on being accepted by society as a whole. Further clues implied that this idea was important in the search for differences.

3. The champions seldom "looked" harassed during a match. The Class III players, especially, were thought to allow their feelings to show. Again, this can mean many things or nothing, but most intriguing was the connection it made to the previous point. That is, the near-greats were constantly seeking to get other people to understand them,
<table>
<thead>
<tr>
<th>Skill Levels or Classes</th>
<th>Social Attitudes</th>
<th>General Development</th>
<th>Dedication-Concentration</th>
<th>Reaction to Accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class I</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Aggressive on &amp; off court (5)</td>
<td></td>
<td>1. Played all sports as youngsters (2)</td>
<td>1. Seldom talked during a match (4)</td>
<td>1. Great, unbounded exhilaration after win (3)</td>
</tr>
<tr>
<td>2. Seldom do silly things off court (4)</td>
<td>2. Grades average, schooling not important (2)</td>
<td>2. Always looked confident (4)</td>
<td>2. Wanted to be a pro (2)</td>
<td></td>
</tr>
<tr>
<td>3. Like people, conversation (3)</td>
<td>3. Tennis only sport to give full satisfaction (2)</td>
<td>3. Extreme depression after loss to point of crying (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Class II</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No elements of full agreement</td>
<td></td>
<td>No elements of full agreement</td>
<td>No elements of full agreement</td>
<td></td>
</tr>
<tr>
<td>1. Dad was real inspiration (2)</td>
<td></td>
<td>1. Goal when young was Davis Cup, not individual championship—this changed with age (2)</td>
<td>1. Felt justified in griping about a bad call (3)</td>
<td>1. Somewhat matter of fact after winning (3)</td>
</tr>
<tr>
<td>2. Heavy legs (2)</td>
<td>2. Public schools— C to B grades (3)</td>
<td>2. Felt pressure of being expected to win (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Class II</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Serious on and off court—called intense (4)</td>
<td></td>
<td>1. Average grades in school (2)</td>
<td>1. Engaged in &quot;Psyching&quot; opponent (2)</td>
<td></td>
</tr>
<tr>
<td>2. Crowd has an effect one way or another (5)</td>
<td>2. Great doubles the other (4) players (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Class III</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Outgoing, generous (4)</td>
<td></td>
<td>1. Didn't like tennis as youngsters or the other (4)</td>
<td>1. Little things bother during game (3)</td>
<td>1. Winning not that much of a boost (2)</td>
</tr>
<tr>
<td>2. Crowd has an effect one way or the other (4)</td>
<td>2. Great doubles the other (4) players (2)</td>
<td></td>
<td></td>
<td>2. Talk over matches quite a bit after (2)</td>
</tr>
<tr>
<td>3. Like people, conversation (3)</td>
<td>3. To have &quot;fun&quot; is biggest motive (2)</td>
<td></td>
<td></td>
<td>3. To have &quot;fun&quot; is biggest motive (2)</td>
</tr>
<tr>
<td>Class III</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Crowd has an effect one way or the other (4)</td>
<td>1. Didn't like tennis as youngsters or the other (4)</td>
<td>1. Little things bother during game (3)</td>
<td>1. Winning not that much of a boost (2)</td>
<td></td>
</tr>
<tr>
<td>2. Slow as kids (2)</td>
<td>2. Talk over matches quite a bit after (2)</td>
<td></td>
<td></td>
<td>2. Talk over matches quite a bit after (2)</td>
</tr>
<tr>
<td>3. To have &quot;fun&quot; is biggest motive (2)</td>
<td>3. To have &quot;fun&quot; is biggest motive (2)</td>
<td></td>
<td></td>
<td>3. To have &quot;fun&quot; is biggest motive (2)</td>
</tr>
<tr>
<td>4. Never pore over a loss (2)</td>
<td>4. Never pore over a loss (2)</td>
<td></td>
<td></td>
<td>4. Never pore over a loss (2)</td>
</tr>
</tbody>
</table>
have compassion for them, accept them, perhaps even dislike them, but most of all, react to them. The champions did not exhibit this need.

4. The champions evidenced extreme exhilaration after a win, great depression after a loss, whereas the near-greats evidenced no such extremes in their reactions to accomplishment. It may well be that the champions have rationalized "winning" into something of a god because they are winners, and that the near-greats have rationalized the idea of sophistication, being unemotional, blase' into the forefront because they are not winners. However, such an assumption might be ignoring the basic personality structures of the different subjects. The capacity for great joy and extreme depression is not necessarily dictated by any one single environmental situation. It may well be that the champions had developed such a trait long before their tennis achievements. Of importance, too, was the fact that the champions commented that tennis was the one medium by which they could feel great satisfaction. They were actively seeking an extreme emotion. There was no evidence that the near-greats did this.

5. The near-greats expressed the fact that "being expected to win" was a great burden. The champions never expressed such a feeling. Again, one gets the impression from such a factor that the near-greats are most concerned with what others think of them.

Chart II was prepared as a condensation of the "general agreement" about the personality elements or tendencies toward an element as evidenced by each skill level. These items were not as definite as those presented in Chart I because conflicting statements about an element were found within a single skill level. However, these elements did reflect the tendencies of a majority of the subjects within each skill level. The numbers following each statement indicate the number of subjects who reflected the element (the first number), and the number who did not reflect it (the second number).
### CHART II

**ELEMENTS OF GENERAL AGREEMENT**

<table>
<thead>
<tr>
<th>Skill Levels or Classes</th>
<th>Social Attitudes</th>
<th>General Development</th>
<th>Crucial Factors</th>
<th>Reaction to Accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td>No elements of general agreement</td>
<td>1. Great speed as youngsters (3)(1)</td>
<td>1. Loved to practice (2)(1)</td>
<td>No elements of general agreement</td>
</tr>
<tr>
<td>5 subjects</td>
<td></td>
<td>2. Thin when adolescents (3)(1)</td>
<td>2. Seldom worried about the effect of &quot;crushing&quot; an opponent (2)(1)</td>
<td></td>
</tr>
<tr>
<td>Class I&lt;sub&gt;2&lt;/sub&gt;</td>
<td>No elements of general agreement</td>
<td>No elements of general agreement</td>
<td>1. Loved to talk tennis after (4)(3)</td>
<td>1. Humble winners, go out of way to be gracious (4)(1)</td>
</tr>
<tr>
<td>7 subjects</td>
<td></td>
<td>No elements of general agreement</td>
<td>2. Great love of conditioning, practice (4)(2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Would talk to opponent during match (4)(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class II</td>
<td>1. Intellectual, deep of general thinker type agreement (3)(1)</td>
<td>1. Worked very hard at practice and liked it (4)(2)</td>
<td>1. Adult goal was centered on an individual-type championship as opposed to team-type (4)(2)</td>
<td></td>
</tr>
<tr>
<td>6 subjects</td>
<td></td>
<td>2. Form close friendships (3)(1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class II&lt;sub&gt;2&lt;/sub&gt;</td>
<td>No elements of general agreement</td>
<td>No elements of general agreement</td>
<td>1. Disliked practice, needed to get away from tennis at times (3)(1)</td>
<td>No elements of general agreement</td>
</tr>
<tr>
<td>4 subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class III</td>
<td>No elements of general agreement</td>
<td>No elements of general agreement</td>
<td></td>
<td>No elements of general agreement</td>
</tr>
</tbody>
</table>
The following differences in general tendencies were noted:

1. The near-greats, especially Class II subjects, tended to be more concerned with intellectual challenges, complex problems, depth ideas. The champions showed no such general tendency. Such suggestions as those which stated that the near-greats enjoyed doubles because of its complexity, that they formed deep friendships, and enjoyed deep thinking led to this generalization.

2. The champions tended to be thin and fast as youngsters. No such general trait was evidenced in the near-greats.

3. No differences were found between Class I and II subjects in regard to the "love of practice" element. However, the Class II subjects showed a general tendency to dislike it. Their expressed desire to get away from tennis and relax implies that either the game is not satisfying to them or that they feel other things are more important. Whatever the source of the attitude, it was responsible for a sacrifice in time devoted to the game.

The final approach to the data was the analysis of the "personal impressions." These impressions were purely subjective opinions based only on the brief meeting with the subject, from watching him play tennis, and conversing with other players and people about him.

The role of these impressions was secondary to that of the Charts. They must be considered somewhat less scientific than the Content Analysis approach. However, they were an effort to make a "person" from a "subject." In a sense, the Charts segmented the interviewees to the point where it might have been difficult to make meaningful conclusions. By means of these impressions, a kind of unification took place. The concepts being entertained by the
study were brought together in the context of being applied to an actual personality, not to a group profile.

The two approaches used together contributed to a fuller basis for the formulating of the conclusions.

The names have been withheld and the subjects are numbered according to the way it was done on the Raw Data Graph. The wording is similar to that taped following each interview.

Subject 1 (Class I). He said more in twenty minutes than most people do in an hour. He seems extremely competent and intelligent. A fascinating type who knows it and probably works at it. However, he is not phony-seeming about creating this impression. He seems to enjoy his abilities more than he enjoys people. However, he is courteous, amicable, amenable to social niceties. I got the feeling that these things were not at all a chore like for some "loners," and one never got the feeling of being with a "social-climber."

He seems to joke around quite a bit, but I got the feeling that he wasn't at ease while doing this. This image of being witty and clever must be something he sees as necessary to his career. He works hard at his "image," but does not seem to be naturally out-going, so it is laborious to him.

I would assume that he has always been a serious-type, even as a youngster. He would not participate in things in which he could not excel, but since he is so talented, he may be pictured as having wide interests. My guess is that his interests are "narrow" in the sense that he avoids experiences in which he may fail to be somewhere near the best. This would include sports, discussions, and career. Some might say that he has to feed his enormous ego, and that is why he does this. I choose to think it is because he hurts so badly from failure that he must do this to keep his sanity. I don't believe he is dominated by self-interest to the point where he is unkind. His dominant drives seem to be dictated more by a realization or perception that life can be miserable and this is to be avoided. I would guess that he has great compassion for children, the poor, the down-trodden of all types and seldom worries about those who are not. This might give him the aura of being unkind. Part of all this thinking on my part stems from knowing that his cultural background can produce such a person.
Subject 2 (Class I). He seemed very concerned that I succeed in my study. I guessed from the effort he put into helping me that he dislikes seeing anyone fail, and if they do he can't understand it. It would puzzle him so much that he would almost regard that person as sick or cheated by nature in some way.

Everything he says or does seems to get back to the problems of promoting professional tennis. He praises people who understand what he is trying to do. Others he admits to not understanding, but is sure that there is something basically wrong with them. In other words, he gives the impression of being obsessed by a single thought, and of being somewhat narrow in outlook about people.

He has not been well-educated, but is fairly intelligent. He is one of the most highly motivated men to succeed and live that I have ever met. This strong drive enables him to achieve far more than his education and intelligence should.

He is smart enough to realize his limitations and has thus organized his life to cope with them. I don't know that succeeding, or being "best," gives him any unusual joy, but in his pragmatic way he realizes that life is better for the "winners." I got the feeling, though, that I could trust this man, that he has ethics. Moreover, unlike some observers my impression was that he has kindness. His lack of education causes him to do some things which appear unkind, but given the facts in perspective I would bet on him to be quite charitable.

Subject 7 (Class I2). A quiet man, but I got the impression of a tense, very serious, single-minded, and very highly motivated person. He is very courteous and watches his money quite closely. These two factors seem to be cultural absolutes for his background.

I would equate his intelligence and education with that of Subject 2. They are very similar in the sense that they do not feel qualified to understand people and therefore avoid it except on certain subjects. With this man this sense has made him a loner. He doesn't worry a bit about friendships, but is very likeable, is probably somewhat of a leader, and is concerned with his public image to a normal degree.

His tenseness is not the kind one might suspect in a little, quiet-type person. He seems inwardly calm, but he seems to be able to become intense about things which are
important to him. I sensed that he would become angry over a false statement or another player who did something to hurt their careers. Probably not unusually honest, but he is a very kind person, somewhat of a check on dishonesty in his world; I would think.

Subject 11 (Class I). He seemed quite intelligent, talked freely, even seemed eager at times, but I always had the impression he wasn't at ease. I guess a somewhat insecure person who even as a boy would rather have been alone or with only close friends. He was a roly-poly kid who probably sought guidance from close persons on most situations. Then, as he grew older he began to look for situations where he could be alone and feel independent—such as practicing tennis or running on the beach.

He seemed to like things in order, complete, with no loose ends. I guess that he is not real aggressive, is very thoughtful of people, and may be rather touchy about certain things. Probably would not blow up in a fit of temper, rather he would hold it in and avoid that situation or person a second time.

Subject 13 (Class II). He does not seem to be a bit nervous or insecure. This interview was one of the more relaxed and he gave the impression of unguardedness, sincerity, openness.

I guess that he is not a profound, philosophical type. He seems to have slightly above average intelligence, but not a real high I.Q. Does not seem to be a real outgoing type. My guess is that he would never dominate a gathering, very quiet person. He seems to love performing through competition—a "Ham" in this accepted medium only. He sees this as a place to let himself out. In other words, his motivation to win is somewhat secondary to the joy he is receiving during a match in performing, "hamming it up," or just letting himself be "free."

Subject 14 (Class II). This is a very active, energetic human being. I guess he might be difficult to live with. However, his intelligence is high enough that he has learned to control his internal "tiger." Probably never really relaxes with people. He would never be mean because he has been hurt himself. Moreover, he can't imagine people not caring fully about everything they do. As a result, he is probably easily-used, pliable, naive.
Subject 15 (Class II). He was the most uncooperative of all. He seems to have a very cynical approach to people and situations. A very tense, interesting person. He definitely is not worried about acceptance, friends—not really prideful of his loner-ism, a plus difference to some so-called "angry young men." Probably never really enjoyed anything in his life. Intelligence hard to determine, probably above average to high.

Subject 16 (Class II). He is a very guarded person. I believe him to have a lazy mind, he forgot our appointment three times. This was not from unkindness, simply a mind which wanders easily. He seems to be in a fog, comes out, peers at you, says something defensive and goes back under a cloud. I don't think that he really cares about status, important friends, but is very close to a few people and would be very depressed if they lost faith in him. That is certainly a guess. I also feel that his intelligence is either low or certainly not used. He seizes upon the simple reason, may be the reason he is a perfectionist.

Subject 19 (Class II2). He seems to enjoy the glow of renown immensely. Seemed quite intelligent, but he works harder than others at giving this impression. He talks unguardedly more to impress you that he is "in" than because of any basic straight-forwardness. He takes excessive pride in knowing important people. I guess that he is very neat, trim, a real dude, does all of the "correct" things. Would be bothered by things out of order.

Subject 22 (Class II2). A fairly intelligent person, well-educated. Loved to reminisce. He doesn't seem to want to give the impression that he takes himself too seriously, rather that he has a very easy-going approach to life. This produces some self-conflict because he would also abhor being known as the perennial clown. He was somewhat dishonest when younger, but he does reflect some concern for other people and a moral code of some sort now. There are others I would distrust more. This man probably worries about his own ability to exist in the high-level world and as a result might forego ethics on occasion. His insecurity is deep and covered by a veneer of jolly, easy-going affability.

Subject 23 (Class III). He is still young, searching, but too free and easy to worry about appearing immature--intelligent enough, maybe bright. Very thoughtful to me, but I doubt that he is a keenly "aware" person. My guess is that he would ignore close friends to go out of his way for "interesting," not necessarily "important," others. He makes quick decisions, usually intelligent, but would be
bored with extended thinking. He seems somewhat insecure, but has really convinced himself that he is not a loser. Since he seldom engages in deep thought it may never occur to him that he might be wrong.

Subject 24 (Class III). I guess him to dread pain of any sort. He would rather do anything, be anything, than to endure pain. His defense mechanisms are up to avoid knowing this about himself. He is basically placid, not really concerned with great achievement. However, due to his situation he has periods of extreme effort to be great. This conflict hurts an essentially relaxed personality. Given less tennis ability, life might be more enjoyable for him.

From these impressions a more complete picture of the subjects was developed. The elements brought out by Charts I and II were then integrated with the "personal impressions" for the conclusions which follow in Chapter V.
CHAPTER V

SUMMARY AND CONCLUSIONS

The basic problem of the study was to discern the personality differences among outstanding male tennis players. This problem was but a part of a larger, longitudinal research project involving the discernment of all characteristics including physical, intellectual, and psychological of outstanding tennis players.

It was established that tennis experts do classify great tennis players into a champion class and several relatively lesser skill levels, referred to in the study collectively as near-greats. This was the result of a poll in which tennis experts were given a list of the best male players of all time, who are still living, and asked to make classifications of them in terms of skill.

A two-part questionnaire was used to discover their reasons for perceiving the great players at different skill levels. The questions were oriented to possible personality differences. From the responses by the experts an interview was devised and conducted on twelve of the great players, a cross-section from each skill level. During the course of the interview the players were encouraged to talk about themselves as well as about their competitors.
Analyses were made of the interviews. Personality elements on which there was complete agreement and those on which there was only slight disagreement were noted. Personal impressions were recorded. The following results were found to be most significant:

1. The champions appear to be more purposefully intense and serious. Their aggressiveness is directed toward a recognizable external object while the near-greats seem to focus on something inside themselves, not easily recognized by others.

2. The near-greats are aware of the crowd reaction to a greater degree than the champions.

3. The champions seldom appear bothered during a match. The Class III players, especially, seem prone to allowing their feelings to show.

4. The champions express a great desire and need for the extreme emotions of "great exhilaration" after a win, and "deep depression" after a loss. This is not evident in the near-greats.

5. The near-greats seem to feel the burden of being expected to win more than the champions do.

The following three items were found to have a slight conflict in agreement, but were, nonetheless, trends of some significance:

1. The near-greats tend to be more concerned with so-called intellectual challenges or complex situations than the champions.

2. The champions tend to be thin and fast as youngsters. This tendency is not particularly evident in the near-greats.

3. Some near-great subjects, particularly Class II\textsubscript{2} give evidence of disliking practice and the need to "get away" from tennis periodically. This tendency is never evident in the champions.
Discussion of the results

The following discussion contains three approaches to the findings of the study. The first approach is sociologically-based, but contains some implications for a psychological understanding of the subjects. The thoughts of David Reisman, as embodied in his book The Lonely Crowd,\(^1\) provide the framework for this part of the discussion.

The second approach might be said to have an ethical-moral connotation to it. The two men who were constantly involved in analyzing the data, Dr. Barker and the investigator, were continually startled by the high degree of pragmatism consistently displayed among the champions. Whether "pragmatism" belongs in an ethical-moral context is certainly debateable, but an exploration of this factor seemed worthy.

The third approach is essentially from a psychological base, but working in an opposite direction to the first approach, the implications in terms of social and cultural effects are more clearly defined than the psychological ones.

It was not the purpose of this discussion, or the study for that matter, to probe the inherent and environmental causes for the different behavior patterns. Rather, the principal purpose was to discuss existing behaviors and

their effect on one particular goal, tennis achievement. This was a very existential task, and any value-judgments of behavior patterns in relation to other goals have been avoided.

The search was essentially for "The Personality" which would best characterize the male tennis champion. From a negative standpoint, there was also a search for the personality factors which might keep a man with an apparent wealth of physical tennis ability from exploiting it to the fullest.

The idea that two men or two young tennis players could be equal on all counts except for a few elements within their personalities is somewhat presumptuous, but the following discussion attempts to explain this point. The basic premise is that the effect of certain personality elements can be so salient to a person's existence that they become the dominant force in that person's life.

From a sociological standpoint the thoughts of Reisman provide some interesting ideas. He postulated that the social character of individuals, or the way in which they approach life, society, existence, stems primarily from one of three directions, the "tradition-directed," the "inner-directed," and the "other directed."\(^2\)

\(^2\)Ibid., p. 23.
The latter two directions seemed most applicable to the findings of the present study. An inner-directed person, by Reisman's definition, "becomes capable of maintaining a delicate balance between the demands upon him of his life goal and the buffettlngs of his external environment." A metaphor is used to describe this type of person. He is said to have developed a "psychological gyroscope" which became more or less set within him by his early experiences. It limits this person somewhat in the number of external stimuli from which he can learn. He rejects those signals which cannot be reconciled with his gyroscope.

The other-directed person is one whom Reisman sees as emerging in more recent times from the new upper middle class of America. "What is common to all the other-directed people is that their contemporaries are the source of direction for the individual... The process of paying close attention to the signals from others (remains) unaltered throughout life." Speaking metaphorically, the other-directed person is seen as having a highly-developed radar set. He seems to have a set of antennae constantly at work picking up signals from other people, their desires, their values, and behaves in accordance with these.

The champions exhibited the kind of gyroscopic internizing of experiences which Reisman suggests. The near-greats consistently gave the impression of having their antennae

\[^3\text{Ibid.},\ p.\ 32.\quad ^4\text{Ibid.},\ p.\ 37.\]
tuned up for the reactions of others. In such a context it seems reasonable that the champions would react differently to certain tennis experiences than the near-greats.

For example, the near-greats might establish their tennis goals in terms of social approval to such an extreme degree that they avoid certain behaviors for fear of social rejection. The idea of being aggressive may be perceived by them as being socially unacceptable, therefore, they avoid it. That they seem to internalize it reflects their desire to hide from a society which supposedly condemns it.

Likewise, to set a narrow goal might also be perceived by the near-great as socially unacceptable. As a result they avoid concentrating all their efforts into one direction or devoting all their time to one pursuit; in essence, they attempt to avoid being labeled single-minded.

The application might also apply in discussing the apparent need by the near-greats for crowd acceptance. The anxiety which they feel from being "expected to win" might conceivably be a part of their other-directedness. The burden of obeying the signals they are picking up on their radar works on them and causes great stress, perhaps enough to make them forget social graces and lose their control in front of the crowd.

A final thought along these lines has to do with the tendency exhibited by the near-greats for indulging in intellectual and complex experiences. It seems consistent that
the other-directed person in this day and age would seek such opportunities. The image of intellectuality has found greater acceptance in contemporary culture.

The champions certainly exhibited some behaviors of the nature just noted. However, their consistent pattern coincided more with Reisman's inner-directed description than any other. The champion appeared hostile, aggressive, uncom­cerned, single-minded, almost animal-like in emotional reaction to success, and more or less apathetic to people. These re­actions relate more to the inner-directed person, or at least to the non-other-directed type, to coin a term.

The consistencies are fascinating. Even where apparent conflict arises, one can almost explain it away in the context of the inner-outer-directed thesis. For example, the champions were very concerned with the image of tennis and themselves to the public. This might be thought of as an example of how the gyroscope of the inner-directed person takes in external signals when they "fit" the constantly in­ward turning motor of his emotions and drives. Reisman never suggested that the inner-directed person has an automatic pilot. There is room in his world for new experiences. The difference lies in the source which directs the acceptance or rejection of the experience.

This fact reveals a necessary caution in attempting to draw a distinct line between the champions and the
near-greats. If only one theory, such as Reisman's, is used, it becomes impossible to comprehend all the possibilities.

For example, certain near-greats exhibited strong anti-social tendencies. This proved irreconcilable in terms of inner-directedness versus other-directedness. It did not deny the reasonableness of this thesis, but it begged a second approach.

As explained previously the champions were in every case extremely pragmatic. A look at the implications of this tendency brought about the following observations:

A pragmatist would be concerned primarily, perhaps solely, with the end, the goal, the ultimate purpose, of any experience. In life he would not allow minor setbacks and trivial matters to bother him in any way. Relating to tennis, he would not be bothered by the rejection of the crowd, a missed call, or his own lack of form. The evidence strongly suggests that the champions were far more pragmatic than the near-greats in this sense of the word.

The extreme emphasis which some of the near-greats placed on stroke form and the fact that they enjoyed the complexities of the game, the so-called "depth-issues" of strategy, ethics, indicate something of an idealist or at least, a non-pragmatic person. If the word idealist does not fit, one might suggest perfectionist as a possible synonym, in the context of trying to define someone overly concerned
with approach or method, and having too little concern with purpose.

None of the champions were thought of as perfectionists. However, three of the near-greats who are generally agreed to have all the physical and intellectual skills to be champions exhibited strong perfectionist tendencies. They were ill-at-ease when even the smallest items were out of order; they had to win at everything they did, from checkers to business; and, they seldom enjoyed any accomplishment completely, probably because they sought and found some small factor which negated perfection.

In terms of physical education it seems warranted to note the possible effect of such an emotional structure on the kinetic responses of these individuals. It is possible that the effect on the nervous system of being a perfectionist may in some way deter the muscular coordination of the individual involved. Certainly, further study is encouraged in regard to this relationship.

Again, exceptions can be found to this thesis. Some of the near-greats appeared to be extremely pragmatic persons, not given to perfectionism or idealistic contemplation, just as some had shown tendencies toward inner-directedness. Likewise, certain champions reflected a side to them which one would probably label idealistic, just as several had revealed an other-directedness to their social character. However, the evidence indicated that usually the near-great had
a definite lack of one or the other, the inner-directedness or the pragmatism, while there was a definite abundance of these factors in most of the champions.

To perhaps account for other exceptions, but more importantly, to lend a psychological structure to the discussion, the theories of the psychologist, Carl Jung, were examined.

Jung postulated that "much apparently random variation in human behavior is actually quite orderly and consistent being caused by certain basic differences in mental functioning."^5

Operating on the premise that people will use their minds, specifically perceive and judge, usually in the way they prefer, Jung felt reasonably justified in building a theory containing sixteen possible personality types.

First he said, mankind "perceives" (becomes aware of something) in one of two ways; he becomes aware of things either directly through the five senses or indirectly by way of the unconscious. The first method Jung termed "sensing" perception, the second "intuitive" perception.

People make use of both methods, but for people who prefer sensing, there is too much of interest in the actuality around them to spend much energy listening for ideas out of nowhere. The intuitive perceiver, on the other hand, is too

much interested in the possibilities of a situation to spend much energy on the actualities.

Second, Jung said, men come to conclusions, i.e., they "judge" in two contrasting ways. Some people concentrate on whether an idea is true or not, they apply an impersonal analysis to it. These people prefer what Jung calls "thinking judgment." Other people rely first on a conscious like or dislike of the idea, whether it is sympathetic or antagonistic to other ideas they prize. These people are said to prefer "feeling-judgment."

Third, Jung stated, most people have a preference for either perceiving or judging. The perceiving individual shuts off judgment for the time being in order to come to a conclusion. He prefers to think that the evidence is not all in, that there is much more to it than he sees at the moment.

The judging individual shuts off perception. He prefers to think that the evidence is all in, that anything more is immaterial, irrelevant. The judging people run their lives, the perceptive people just live them. No value-judgment is intended, Jung saw merit in both approaches.

Fourth, and last, Jung said that people have divergent preferences about where to direct their perceptions and judgments. Some people direct both upon the inner world of concepts and ideas. These people are Jung's classic "introverts." Other people prefer to direct both perception and/or judgment on their outside environment of things and people.
These people are the "extraverts" (sometimes spelled today as "extroverts"). The reader who is anxious to get on to the practical application of all this would evidence the extravert point of view. Those who take more interest in the inner illumination it may provide for an understanding of themselves and human nature have the introvert point of view.\(^6\)

Jung's theory provides a framework for discussion about the data of the present study. His point is not that one manner of behavior is "better" than another, but more importantly, if people behave as they prefer to, a most reasonable assumption, then one can predict certain behaviors in certain given situations with reasonable accuracy. Since there could be any one of sixteen combinations from the four alternatives, it would be impossible to integrate the results of the study with them. However, a few implications bear mentioning.

The champions evidenced stronger extravert tendencies than the near-greats. Their aggressiveness toward the single objective goal, their unconcern with the aesthetics of their strokes, the complexities of the game, and their apparent ability to have a fuller emotional expression seem compatible behaviors to Jung's descriptions of an extravert.

\(^6\)Ibid., p. 57.
Certainly some of the near-greats were far from introverted, but the evidence was not so insistent that they be extraverts as it was for the champions.

The difference in being introverted and inner-directed should be clear at this point. The champions exhibit as many extravert tendencies as they do inner-directed ones. The question of whether or not this is compatible can be answered in the understanding of the essential definition of each concept. The direction toward which one decides to employ his energies determines his degree of extraversion or introversion; the sources which one relies upon for information determines the degree of other-directedness or inner-directedness. There is some thought that a relation exists between introversion and inner-directedness, but no proof has ever been forwarded. The evidence from the present study would seem to indicate that if any relationship is present at all, it is in the other direction. But such an argument is immaterial to the present research in terms of the descriptive nature of the goals.

On another aspect of Jung's thinking, the tendency of the near-greats to find fault with a victory, to not enjoy it as fully as the champions seemed to indicate the kind of person whom Jung called a "thinking-intuitive" type. This indicates that in judging and perceiving about a situation this type prefers to examine whether it was a true or false
result, and whether there should not, could not, be more to grow out of it.

The opposite type would be a "feeling-sensing" person. The champions enjoyed their victories so fully that it indicates them to be this type; i.e., the kind who would judge the result on the basis of like or dislike, and would perceive it in terms of its present and actual value. Perhaps, this difference illustrates how the near-greats subtract from their joy and the champions revel in it.

Jung's theory is far too sophisticated to examine more implications, but these two possibilities seemed so striking as to be worthy of mention.

It would seem, then, that in looking at the tennis champion from several directions it is possible to draw at least a pencil profile of him. The following points would necessarily be a part of the sketch:

The champion is:

1. Inner-directed, or at least the kind of person who finds pleasure in his own attributes and very little pleasure in those of others.

2. A pragmatist, or at least the kind of person who relishes the immediate actualities with very little regard for why these exist or whether they should or not.

3. An extravert, or at least a person who extends his thoughts, joys, and troubles out and away from himself.

The near-greats appeared to evidence different personality factors, perhaps not diametrically opposed, but different in some degree.
The near-great is:

1. Other-directed, or at least somewhat more dependent on knowing the values and expectations of other people for his pleasure than the champion.

2. A non-pragmatist, or at least the type of individual who cannot find joy in the simple, the possible, the actual, or whatever one wishes to label the reality of the moment.

3. Not extraverted enough, or at least he has not grasped the value, nor the timing, of freeing himself from inner turmoil.

These appeared to be the most meaningful conclusions that could be derived from the data within the limits of the study. It is true that other factors seem present which do not fit into the generalizations forwarded here. However, many questions seem more susceptible to an answer than when the study began. Notation is made of the following:

1. Why do the champions seem to practice longer, and concentrate better in a game than the near-greats?

   It seems reasonably in line with their inner-directedness and pragmatic nature that they do so because their pleasure is constant from tennis. As they practice and play the game they derive a sense of enjoyment which the near-great does not. The near-great is seeking his enjoyment from something other than his own ability. Thus he must seek in many directions, and at the same time neglect his own development in one particular area.

2. Why do the champions seem to be able to control their emotions more for their own benefit?

   In line with their extraversion the champions seem able to project their frustrations outwardly after a poor shot, a bad call, or whatever. They may show anger much the way a near-great does, but the champion is actually mad at the linesman or ballboy, while the near-great isn't sure whether he can blame the ballboy or himself. The difference is the sense of guilt is obvious.
3. Why do champions seem so distant, so immune to deep inter-personal relationships?

There seem to be several answers. One possibility is based on their inner-directedness. The champion finds so much pleasure in his own attributes that he has very little time to ponder those of others. Every once in awhile he may form a deep friendship, but the base is more because the friend meshed with the champion's psychic gyroscope than it is because the champion made any extreme effort to know the other person.

Being an extravert the champion may be so open that he is hard to accept. Moreover, he has about him an aura of fame which he cultivates, and which other people fear to penetrate. The effect on communication is devastating.

Finally, being a practical man, he realizes these problems and does not delude himself that they can be overcome. Thus he avoids that which is impossible and grasps at that which is possible, bringing him full-circle back to his inner-directedness.

In time many other questions may appear. It is submitted that within the framework of the inner-directed-pragmatic-extraverted thesis the most reasonable explanation of the personality of a tennis champion may be offered.

Such a recommendation is made with the realization that the more encompassing longitudinal project holds promise of yielding data which may be integrated with those of the present study. The knowledge of the intellectual and physical differences among great tennis players should add a needed dimension to the picture presented here of the personality differences. Moreover, further work is being done in that project on the personality factors.

It may be concluded, then, that definite personality differences among male tennis champions exist and are
recognizable in terms of tennis situations, that the most successful tennis champions seem to have a pattern of personal behavior and motivation different from the near-greats, and that these behavior patterns lend themselves to certain psychological constructs. Within these constructs it may be possible to indicate and better understand the kind of personality which makes a tennis champion.
APPENDIX A

THE RAW DATA GRAPH
APPENDIX B

LIST OF EXPERTS CONTACTED DURING STUDY

4. Hendrix, John, The Ohio State University Tennis Coach, Columbus, Ohio.
5. Klotz, Don, University of Iowa Tennis Coach, Iowa City, Iowa.
8. Lewis, Dale, Miami University Tennis Coach, Coral Gables, Florida.
9. Lewis, Don, University of Minnesota Tennis Coach, Minneapolis, Minnesota.
13. Murphy, Chet, University of California Tennis Coach, Berkeley, California.
14. Murphy, Bill, University of Michigan Tennis Coach, Ann Arbor, Michigan.
15. Powless, John, University of Wisconsin Tennis Coach, Madison, Wisconsin.
16. Price, Bill, St. Louis Professional, St. Louis Missouri.
17. Riessen, Claire, Northwestern University Tennis Coach, Evanston, Illinois.
18. Toley, George, University of Southern California Tennis Coach, Los Angeles, California.

83
Dear Sir:

Following is a list of some of the greatest tennis players of all time who are still living. In line with a study sponsored by the United States Lawn Tennis Association I am trying to garner a loose classification of the top-flight tennis players. The next step will be to attempt to discern the characteristics which distinguish the "greatest" from the "near-greats." The purpose of this research will be to aid in recruiting potential Davis Cup champions at a younger age than is now being done.

From you and experts like you I hope to put these players into the following three classifications:

Class I - Players who at their prime were or are capable of winning consistently from any other player at any level of tournament pressure.

Class II - Players with tremendous ability but ones that you somehow feel would lose to Class I players in the "big tournament."

Class III - Players with mechanical ability somewhat below Class II level.

Further definition is up to you. Certainly your appraisal of their emotional makeup will affect your evaluation. For me to outline such characteristics would be to negate part of the research itself. The prime criterion which you must consider is their ability to win. This is the crux of the difference between the three classes.

I certainly appreciate any help which you would be able to extend on this research. A self-addressed envelope is provided to enable you to more easily return this to me. If you can work it into your busy Spring I would appreciate an answer by May 14. Thank you.

Place a I, II, or III in the space beside each name. Leave blank if you never saw man play in or near his prime.

(The names were listed)
**APPENDIX D**

**SUMMARY OF RESULTS FROM FIRST POLL**

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85
Dear Sir:

Recently you helped participate in classifying the great tennis players into three categories with the following definitions:

Class I - Players who at their prime were or are capable of winning consistently from any other player at any level of tournament pressure.

Class II - Players with tremendous ability but ones that you somehow feel would lose to Class I players in the "big tournament."

Class III - Players with mechanical ability somewhat below Class II level.

Enclosed within this letter are the results tabulated from the experts who were able to answer. I thought that you might be interested in these.

As you can see, there were only a few players who were considered by consensus to be "champions." The National Foundation under Mr. Robert Pease is sponsoring some research with the hope of discovering what makes these few so unique. The ultimate purpose will be to identify possible Davis Cup winners earlier and more accurately than we are at present. Many other values should accrue from the study which may be helpful to coaches and players, but this is the primary one.

My reason for writing to you again is to thank you very much for your help and to attempt to enlist your "tennis mind" just once more. Your reputation in tennis enables us to classify you as an expert. Your ideas may be able to provide us with some leads towards answers.

As you can see from the results, three players, Don Budge, Jack Kramer, and Pancho Gonzales were unanimous Class I choices. Players like Barry MacKay, Hamilton Richardson, and Ken McGregor were consensus Class II players. What we would like your opinion on is this. What separates one group
from the other? Is it something physical? Mental? Emotional?

In Envelope 1 are several sheets of paper with these three general categories listed. What would be of immense help to us would be for you to let your mind wander in any direction it chooses as you try to pinpoint the answers. Put anything down you think of—even the wildest notions. From such "winging" we hope to draw up a meaningful psychological instrument to use in measuring younger players. We have some physical measurements already under way, but by securing your ideas we may be able to add something important that we missed.

In Envelope 2 are some rather specific questions—ideas we have received so far. Your opinions relative to these could prove most illuminating. We have made this envelope number two with the specific purpose of not influencing your answers in Envelope 1. So if you please, do not open it until you have completed number one. This is vital in order to insure your using the full originality of your mind.

This is a great imposition upon your time and for this I deeply apologize. Of some help might be the fact that we do not need an answer until September 1st. Hopefully, this will give you the entire summer to be gathering ideas, and pondering the problem, and all in a relaxed way.

Your classification as an "expert" was not made loosely. Your opinions are valued by many people. It is to be hoped that you will be able to find time this summer to help in this project. Thank you very much for anything that you can do. It is promised that your "good will" will not be overused.
APPENDIX F

TWO-PART QUESTIONNAIRE

PART I (ENVELOPE 1)
Do you feel that the physical differences between Class I and Class II players are observable? On this page jot down some which you feel may be important. Bear in mind that the "differences" are between the world champions and the so-called "near-greats."
Do you feel that there may be differences in mental ability or intellectual capacity between these classes? Use this page to jot down any ideas you have in this regard.
Do you feel that there are some differences between classes in the emotional makeup of the individuals? Use this page to forward your suggestions concerning this factor. As you finish this page, please open Envelope 2.
APPENDIX G

TWO-PART QUESTIONNAIRE

PART II (ENVELOPE 2)
In responding to these please remember that the differences we are speaking about are between world champions and near-champions.

1. Is there a difference in the degree of self-confidence? Does the champion appear conceited, introspective, extroverted, calm, nervous, etc.?

2. Is there a difference in the degree to which the champion relates to others? Is he concerned with personal popularity? Does he seem to disdain certain social concerns more than the near-greats? Does he almost seem above certain things--a referee's decision, a personal snub, a boo from the crowd . . . ?
3. Is there a difference in ability to concentrate? Does he focus more fully on his immediate situation? Does he do it longer? Can he practice by himself for longer periods of time than the near-great? Do side things distract him more or less?

4. During competition is there a difference in attitude toward the opponent? Does the champion seem to hate, ignore, "kill with kindness," condescendingly regard, love . . . his opponent? How real is this?
5. Is there a difference in the ability to come from behind? Can the champion come back better, or is it that he can also go on to win after a comeback? Does he enjoy winning more? How do losses affect him?

6. Is there a difference in the gambling-instinct, the so-called risk taking trait of the champion compared to the near-great? In personal things as well as in sport, does he take more or less changes; e.g., crossing the street, driving his car, ordering food, risking injury in another game . . . ?
7. Is there a difference in philosophical makeup? How concerned is the champion with the aesthetics of a situation? Is he dominated by practical considerations? How much does he care about the ethics, the justice, the beauty of an endeavor?

8. How varied are his interests compared to the near-greats? Does he try other sports? Does he succeed? Does he enjoy discussing and doing things other than tennis? Is he a "genius" in anything else, or is he a standout in tennis alone?
9. If you knew any champions at a younger age—how were they as children? Were they pampered more? Were they loners or quite gregarious? Were they insecure in any way? Were they stronger, or faster, or bigger, or more mature than others?

10. Does the champion appear to revel in his physical power? Is he prideful of his physique? Is he somewhat vain? Is he extremely aggressive? Does he engage in such things as arm-punching, hugging a partner, etc., to a greater degree than the near-great?
11. Is there anything distinctly pathological about the champion? Does he suffer from nightmares? A fear of heights? An almost irresistible urge to be best at all he does? Other extreme behaviors?

12. When hitting the ball does the champion seem to person-alize the inanimate? Does the ball seem to become a projection of some intra-personal frustration or hope? Is he possessive about his racket?

If you have any ideas to add, please do so on the extra sheets.
APPENDIX H

TABULATION OF RETURNS FROM
TWO-PART QUESTIONNAIRE

PART I

PHYSICAL ASPECTS:

"Class II 'more athletic' looking" 1
"Some II handicapped by posture" 1
"Class I move as a top athlete" 1
"Class I have more speed and balance" 2
"Some II lack stamina and strength" 1
"Class I have more height" 1
"Class I in top condition and proper weight" 1
"Class I solid, muscular legs, but not too muscular, thighs solid, but not bulky" 1
"No differences" 1

INTELLECTUAL ASPECTS:

"No differences" 5
"Outstanding students stayed in Class II, too many other interests" 1
"Flexible thinkers among Class I" 1
"Class I definitely have more mental ability" 1

PSYCHOLOGICAL ASPECTS:

"I's win the 'big one'" 2
"I's more stable in every respect, even off court" 1
"II's lack control in all situations, nothing bothers the I's" 2
"I's love tennis more" 1
"I's discipline selves better" 1
"I's have more desire to play" 1
"No differences" 1
PART II

QUESTION 1:

"Champs have supreme confidence, conceited appearing." 2
"Champ less conceited, calm and self-confident, tho." 5
"Champs are self-assured in matters other than tennis
  to a greater degree than II's." 1
"Champ hides his nervousness." 1
"Champ more confident because he has won." 1
"Champ nervous until match starts." 1

QUESTION 2:

"Champs have extreme desire to be popular with public,
  pride in the image." 2
"Champs don't care about others particularly,
  personal basis." 3
"Class II more concerned with popularity in public." 1
"Umpires decisions ignored at important time by I's." 4
"Champs not concerned with social groups." 2
"Champs above a snub." 4
"Champs have normal concern for social acceptance." 1
No differences.

QUESTION 3:

"Champs have better concentration at all times." 5
"Champs turn concentration on and off." 3
"Champs more resolute toward goal." 3
"Champs use concentration power better in practice." 2
"Champs do not use concentration power better in
  practice, particularly." 1

QUESTION 4:

"Champ detaches himself from opponent, ignores him." 4
"Champ makes opponent his enemy." 2
"Champ does congratulate once in a great while." 1
"Champ does not try to crush opponent, but the near-
  great does." 1
"Class II more likely to hate opponents." 1
"Champ is close analyst of opponent." 2
"Champ kills them with kindness." 1
"Champs are hard losers." 1
QUESTION 5:
"Champ comes back better to win." 4
"Champ enjoys winning more." 3
"Champ wants a quick rematch after a loss." 2
"Champ hates to lose." 3
"Some champs let up early in a match." 2
"Champ seldom lets up when ahead." 1
"Champ does not get behind much." 1

QUESTION 6:
"Champs are percentage players, seldom gamble." 4
"They gamble less in personal things." 1
"They are more willing to take a chance." 1
"They gamble more on personal things." 2
No difference.

QUESTION 7:
"Champs more concerned with aesthetics." 1
"Champs secure in their philosophy." 1
"Champs have little concern for anything but winning." 3
"Champs practical at all times." 2
"Near-great more concerned with aesthetics." 1
"Champ more concerned with self than anything else." 1
"Champ is no cheater, but he takes every inch." 1

QUESTION 8:
"Champs are good athletes in many sports." 5
"Champs talk only tennis well." 1
"Champs are broad in outlook on life, have other interests." 3
"Near-great only a tennis player." 1
"Near-great more broad in outlook." 1
"Tennis is whole life for champ." 3
"Champs were good basketball players." 1

QUESTION 9:
"Champs mature earlier." 1
"Champs very active." 1
"Champs interested in everything." 1
"Champs have great imaginations." 1
"Champs were stronger physically." 1
No differences.
QUESTION 10:
"Champs less on each point."
"Champ is not a loner, but has only a few well-chosen friends."
"Champ is self-conscious about physique."

QUESTION 11
"One Class II player is very superstitious."
"Champs revel in extremes."

QUESTION 12:
"Champ personalizes the inanimate."
"Champ possessive about his rackets, has favorites."
APPENDIX I

INITIAL INTERVIEW
(Rejected)

I. INTRODUCTION

"... just hope to get your thoughts on some things through this conversation ... as I wrote, we're trying to find out a few things about great tennis players ... perhaps unique things which may help in recruiting youngsters, setting up youth programs, and maybe eventually improving the United States' performance in the Davis Cup.

"The form of the interview may strike you as somewhat peculiar. Informal and relaxed answers are what is needed. ... analyze them later for clues. "Hope nothing will be offensive and I assure you that anything you wish to be left private will be."

II. BACKGROUND

A. Present connection with tennis
B. Occupation
C. Age

III. THE SOCIAL QUESTIONS

A. First date?
B. Kid parties? Ever try to get out of them? Do you now?
   1. Given a choice of going to a party or staying home . . . ?
   2. Size of the party?
C. Girl friend or wife? (development of the relationship)
   1. How met?
   2. Any special reasons? (attraction factor)
   3. Did you date a lot in general? (Pursue somewhat deeply)
D. How about close friends?
1. Any special reasons? (attraction factor)
3. Best man at wedding?

E. Have any of these people been vital to your tennis?
1. Moral support; negatively affect, other?
2. Ever seek anyone special out when things are going bad?
3. . . . good?

F. Do you like to practice—alone—what I mean is—kind of quietly with maybe one person and few other disturbances?
1. Would it bother you to have others around at these times or to have interruptions?
2. Has this always been the way you went at practice—even when younger?
3. Do you have a hobby? (Degree of desire to be alone)
a. (Maybe ask about favorite or least-liked school subject)

G. Make sure I have gotten some idea of the following:
1. How gregarious or loner-directed.
2. Evidences of egotism verging on conceit or extreme self-sufficiency, or dependency-dominated, extremely humble.
3. How centered around tennis.

IV. CONCENTRATION, ATTITUDES ABOUT SUCCESS, DEFEAT, GOAL-DIRECTED (PRACTICALITY OF NATURE)

A. First play tennis? Who? Where?
B. Continuous since? Never tire of it?
C. When did you first become serious?
D. Parent's role in this? The interest of each . . . you know, buy you a racket, ask you how you did . . .
   1. One more than the other?
   2. Was any one parent more strict than the other? (get at dominance, force towards tennis)
E. Did you practice more one way than another when growing up?
   1. (Strokes or games to one extreme or the other)
   2. Did you enjoy practicing and do you now?
   3. Were you ever looking for practice situations, asking people to hit a certain way to you, or something?
   4. Conditioning programs?
   5. Do you ever diet special or watch your health in some special way?
F. When did you reach your peak in tennis? Or how far away?
   1. What makes you think that was it? A specific tournament?
   2. Exactly what was it that made that tournament the turning point?

G. Was that your most satisfying win ever? What was?
   1. The reasons? (Discern whether it was opponent's makeup or satisfaction with own performance.)
   2. What did you do afterwards, or really, after any big win? Did you say anything to yourself, what was your first thought?
   3. Did you want to talk about it more than, maybe, it was?

H. Have you ever tried to beat anyone badly?
   1. Why?
   2. Do 0-0 scores satisfy you more than real close ones?
   3. What makes a win so satisfying to you?

J. Do you enjoy coming from behind?
   1. Enough to do it on purpose? (Watch for great self-confidence.)
   2. What do you do special when down?
      a. Gamble?
      b. Change strategy some? What?
   3. Ever gamble in some everyday things? Cards, driving, off-hand things?

K. Do you talk much at the breaks?
   1. Just what do you do?
   2. Ever try to "psych" an opponent? How?
   3. Just how much does the opponent figure in your approach to a match?

L. Do you "psych" yourself up?
   1. How? Why not?
   2. How about little superstitions? You know, wear same socks, or something?

M. What do you think of all this "psyching" business?
   1. Are there any guys who do too much of it? Or might be better off doing more of it?

N. Are you kind of a kidder or even a practical joker?
   1. Do you ever "put people on?"
   2. Did you as a youngster?

O. Do you ever play to the crowd?
   1. Do they usually root for you, or . . . ?

P. Do you ever feel restricted by having fame—maybe you . . .
   1. Hide your feelings from the fans or friends?
   2. Feel you can't form or couldn't form normal friendships due to the demands.
3. Or do you feel you have had a fairly satisfactory life even with some of these problems?

Q. Have you ever felt that the umpires have cost you an important match?
1. How do you approach the frustration of bad calls? Was this your philosophy as a youth?

R. What was your most frustrating loss? Who? How?
1. What makes it more frustrating than some others?
2. What did you think about right after it?
3. Do you ever lose sleep over a loss? A win?
4. How about the next time you met that opponent?
   (Try to get at the level of confidence.)

S. Make sure I have gotten some idea of the following:
1. Forces behind development.
2. Enjoyment of winning.
3. How he prepares for matches.
4. Role of the opponent in his eyes.
5. Role of the fans to him.
6. Role of the officials on it all.
7. Effect of frustration on him.
8. Importance of goals, especially tennis achievement

V. PHYSICAL DEVELOPMENT QUESTIONS

A. How normal was your growth?
   1. Height, then and now, size of certain parts, hands, feet.
   2. Weight—ever chunky or thin—greatest weight ever.
   3. First shave?
B. Strength relative to others?
C. Balance?
D. Speed—quickness? Ever get timed?
E. Jumping ability?
F. Eyesight?
G. Any defects? (See if he will dwell on it.)
H. Strongest physical asset to tennis?

VI. MORE BACKGROUND

A. How far in school?
B. Grades in school?
C. Types of school?
D. Any other sports? Do you now enjoy these?
E. Any honors other than in tennis?
F. Any disciplinary trouble while in school?
G. Have you ever taken a personality test? Do you remember any results?

VII. OPINIONS ABOUT OTHERS

A. Introduction--show him the list and ask him to identify three or four he knows well. "Would you mind giving me some opinions on them relative to these questions?"

B. Working back . . . how about these physical characteristics? (both now and as an adolescent.)

C. How did take losses, just general frustration?
   1. Was less confident the next time out?
   2. Did he want a quick rematch after you beat him?
   3. Did he seem to dwell on a defeat, you know, lose sleep or something?
   4. Did he seem to blame others for his defeat? Umpires? Fans? Travel?

D. What was his attitude toward the fans?
   1. Ever play up to them?
   2. Hide his feelings from them or others?
   3. Did crowd like him?
   4. Was he popular with other players? Many close friends?

E. Were any of these players real "psyche" artists?
   1. Talk much at the break?

F. How were they at coming from behind?
   1. Did any ever try to get behind?
   2. Were any of them great gamblers in tennis? Everyday life?

G. Ever see any of them try to crush an opponent? Why would they try to do it, do you suppose?

H. Which one seemed to enjoy winning the most? Did he talk about it a lot, or what would he do that made you think of him?
   1. Were any of them sort of self-deprecating after a win?

J. How serious were they as youngsters?
   1. Practice long hours? Alone?

K. How do you think he chose his friends? On what basis?

L. Were any of them real party-goers? Or really averted to parties?
VIII. CONCLUSION

A. Have you enjoyed one part of this interview more than the other? Any particular line of questions?
B. Was it harder to talk about yourself or the others?
C. Do you ever humble yourself on purpose? Would it bother you to be called conceited?
APPENDIX J

SAMPLE LETTERS REQUESTING INTERVIEWS

Dec. 16, 1965

Mr. Jack Kramer
11 Monticello Drive
Rolling Hills Estates, California 90274

Dear Mr. Kramer:

I am writing to ask your help in a study which I am doing for the U.S.L.T.A. Mr. Robert Pease of the Junior Development Committee has asked me to find out what makes a tennis champion "tick"—to put it loosely. We are launching a ten-year study in which we plan to follow many of today's young (12-18 Yr. olds) players, testing them periodically on such things as reaction-time, eye-sight, personality, and analyzing them through to their peak years. Out of such close scrutiny we may be able to improve recruitment among the very young players. Other benefits may definitely accrue, but identification and recruitment are the most easily foreseen.

As a part of the initial work I am interviewing some of the great players of all time. The interview questions are a result of other interviews and questionnaires to expert coaches. I have narrowed the time of the interview to about thirty minutes.

I wrote to you this past summer with this same request. If you would consent to an interview with me in the near-future it would be most helpful to the study. Enclosed is a self-addressed envelope to facilitate your reply.

If you do consent to the interview, would you please include a tentative schedule of where you will be over the next three months. I understand from Dr. John Hendrix of our staff here that you may be in Columbus in February. But whatever your schedule, having it would help me in planning my itinerary.

Thank you for your consideration.  

Sincerely,  

Edw. C. Olson
Dec. 16, 1965

Mr. Dennis Ralston
609 N. Cahuenga Blvd.
Los Angeles, California 90004

Dear Mr. Ralston:

I am writing to you to ask your help in a study which I am doing for the U.S.L.T.A. Mr. Robert Pease of the Junior Development Committee has asked me to find out what makes a tennis champion "tick"—putting it loosely. We are launching a ten-year study in which we plan to follow many of today's young (12-18 Yr. olds) players, testing them periodically on such things as reaction time, eye-sight, personality, and analyzing them through to their peak years. Out of such close scrutiny we may be able to improve recruitment among the very young players. Other benefits may definitely accrue, but identification and recruitment are the most easily foreseen.

As a part of the initial work I am interviewing some of the great players of today. The interview questions are a result of other interviews and questionnaires to expert coaches. I have narrowed the time of the interview to about thirty minutes.

If you would consent to an interview with me in the near-future it would be most helpful to the study. Enclosed is a self-addressed envelope to facilitate your reply.

If you do consent to the interview, would you please include a tentative schedule of where you will be over the next three months. This is necessary for me to plan my itinerary and make the most of the available time and money.

Thank you for your consideration.

Sincerely,

Edw. C. Olson
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