

A COMPARISON OF THE PERFORMANCE OF BLACK, WHITE,
AND LATIN PROFESSIONAL BASEBALL PLAYERS

by

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B. S., Kansas State University, 1970

A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Health, Physical Education, and Recreation

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1977

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DEDICATION

This thesis is dedicated to Libby.
Without her it would never have been
or never would be.
For it all, I dedicate this to her.
Thank you, Libby!

ACKNOWLEDGEMENTS

The sincerest gratitude is expressed to my advisor, Dr. John W. Merriman, whose guidance and patience were thoroughly tested in the rather brief period of formulation of this thesis. Dr. Frederick H. Rohles, in addition to his role on the committee, must receive a great measure of credit and thanks for his generosity and helpfulness in supplying the implements necessary for the formulation and completion of this research. A special thanks goes to Kris Arehart for his invaluable assistance in writing the programs and lending advice in developing the analysis of this study. Thanks also is expressed to Dr. Charles Corbin and to Mr. Veryle Snyder for their assistance in helping me to meet the time limitations. Finally, appreciation is extended to Lloyd Thompson and Steve Luebber for their help in preliminary fact-finding.

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Chapter I

INTRODUCTION

Sport is revered in our society as the epitome of our democratic ideals. By most Americans, it is believed to be free of the racism and discrimination prevalent in other areas of our society. But, investigators of sport have devoted an increasing amount of literature to studies that reveal racism and discrimination. The demonstration by Lee Evans and Tommie Smith at the 1968 Olympic games was a visual display to Americans that there were athletes (black athletes in particular) unhappy with their place in American society.

In 1946, Jackie Robinson's first year in professional baseball, the unwritten rule which had barred black men from organized baseball was broken (48:226). After 1898, the beginning of the unofficial ban, Negroes began organizing their own teams to fill the void created by their exclusion from white professional baseball. This gave rise to the Negro professional leagues on which Robert Boyle comments: "Life in the Negro leagues was hard. A star might play as many as three games a day and earn only \$400 or \$500 per month" (10:260).

Jackie Robinson began his career in organized baseball in 1946 with a year of apprenticeship with Montreal, a Dodger minor league team in the International League. The minor leagues are the professional baseball players' training ground for entry into the major leagues. Few players have played major league baseball without some minor league experience.

While researchers have studied the differences of performance relative to ethnic groups in major league baseball, little has been done which has included the farm system of the major league teams, or Latin American players. It is crucial that the sociology of sport be examined and re-examined to try to gain insight into the ethnical patterns in sport as an important aspect of our society. This study is concerned, in particular, with ethnic groups in professional baseball.

STATEMENT OF THE PROBLEM

It was the purpose of this study to determine to what extent discrimination exists in professional baseball with regard to ethnic groups. More specifically, this study was designed to determine if differences of performance and distribution of black, white, and Latin professional baseball players existed by comparison of (1) offensive, defensive, and pitching statistics, (2) playing positions, (3) the American, National, Pacific Coast, and Florida State Leagues, and (4) team organizations. To determine if differences existed among black, white, and Latin players, their distribution by league, team organization, and position was examined. In addition, non-pitchers were compared by ethnic group, by league, by position for various selected offensive performance statistics and for fielding percentage for a defensive comparison. Pitchers were compared by ethnic group by league for selected pitching performance comparison. These comparisons were necessary to evaluate the distribution and performances of black, white, and Latin players to determine if discrimination did indeed occur, and to pinpoint it by league, position, team organization, and/or particular aspects of performance. The development of performance measurements

was also a concern of this investigation to aid in future analysis of performance of professional baseball players.

NEED FOR THE STUDY

Because sport is an important area of our society it deserves the concern of investigators. This was pointed out in an article in the Christian Century when it stated, "Yet it is because sports are so much more than simple amusements that they deserve serious attention" (67:383). Ethnic group discrimination is an area of sport which is receiving increased focus. It is necessary to expose and explore discrimination, as Roscoe C. Brown has indicated: "Right now, we are concerned about race and sports. Obviously this is because race is a very sensitive concern in our society, and the predominantly white society generally attempts to suppress any concerns about race which suggest that all is not well" (15:168). Lodis Rhodes and Johnny S. Butler have expanded upon Brown's statement and have included the exploration of discrimination in an article for Social Science Quarterly. According to Rhodes and Butler, "...it is not adequate to merely assert that racism exists in organized sport. There remains the need to systematically assess whether the patterns identified result solely from racial discrimination against blacks or whether there are alternative explanations for them" (100:924). Loy and McElvogue, in concluding their investigation of segregation in sport, stated, "...we hope that we have been successful in directing the attention of sport sociologists to the matter of integration in American sport, and in providing stimulation for further theoretical and empirical analysis of the subject" (35:473).

Specific research in professional baseball has focused on

discrimination with regard to race and playing position. Rosenblatt pioneered research comparing performances among major league players, but omitted any analysis of defensive statistics. Paul C. Whitehead published a reply to Rosenblatt's article in which he stated:

...the fact remains that the author (Rosenblatt) does not even mention the other records (variables) that may be relevant to whether or not any player makes the grade in the Major Leagues...Other variables that must be taken into consideration include base-running speed, ability to sacrifice (fly, bunt, or both), ability to steal bases, and defensive skills. Rosenblatt's failure to mention (let alone take into account) the importance of the last variable, defensive skills, especially makes me feel that the author's conclusions are open to skepticism at present and possible revision in the future...Future investigations should seek answers to these questions: Is there a difference between the fielding averages of white and Negro ballplayers? Is there a difference between whites and Negroes in that one group plays positions that require more or less fielding ability? Do the hitting stars tend to play positions requiring less fielding ability than the substars?...Finally, since Rosenblatt made no comparison of the performance records of white and Negro pitchers, his speculations as to why Negroes are underrepresented on the mound --as compared with the outfield--are at best hypotheses. They should be tested by at least a comparison of earned-run-averages and won-lost records for white and Negro hurlers, even though the number of Negro pitchers is small (107:63-64).

Defense, base-running, and base-stealing are variables examined in this study. Also included are pitching comparisons in won-lost records and earned-run-average, along with other performance statistics for pitchers.

Research concerning ethnical differences in baseball playing positions has ignored the minor leagues when attempting to arrive at conclusions. This leaves other possibilities open to speculation. Barry D. McPherson has conducted an investigation of segregation by playing position and concludes that:

Until further empirical evidence is presented which indicates that members of minority groups are required by whites to play specific positions in the youth, high school, college, and minor professional leagues, the segregation by playing position hypothesis is open to alternative explanations (95:966).

McPherson further states in an article examining black athletes:

A second explanation is that catchers and pitchers require more coaching and therefore if white managers and coaches prefer not to interact with black players, they would be disadvantaged. This latter suggestion may be plausible: however, it cannot be validated until statistics are available which indicate the percentage of black pitchers and catchers who play these roles in the youth and minor leagues (38:139).

It is the intent of this study to include a sample of minor league teams and players to offer insight into the reasoning for segregation by playing positions.

Little of the research concerning major league baseball has examined the role of the Latin American player. In fact, only three studies, Charnofsky (76), Loy and McElvogue (35), and Pascal and Rapping (46) have made important mention of Latin players. Loy and McElvogue calculated the distribution of black, white, and Latin players in the major leagues by position from 1956 to 1967. Pascal and Rapping distinguish between Latin black and Latin white players, and American black and American white players with regard to percentage of players of each category in the major leagues. Charnofsky extensively examined the attitudes of white, black, and Latin players. Although Charnofsky (a former professional baseball player) was the only investigator recognizing the varying needs of the Latin player, others have recorded the fact through experience. Since Latins have played ball in the United States much of this century and constitute about ten percent of the major league players, this seems to be an important omission. Latins face distinctly different experiences due to their cultural and language barriers. Howie Haak, an esteemed Latin scout, noted this when he said, "Two years ago (1971) 55 players were signed out of the Dominican Republic, 45 out of Puerto Rico, another 21 out of Venezuela and Panama.

Most of them are back in their hovels or jammed into New York tenements hiding out from Immigration. But they are not playing baseball anymore" (77:64). Broom and Selznick expressed the dimension of the Latin player in professional baseball. They said, "Team Management has become complicated by the recruiting of players from the Caribbean who have a different definition of race and a different style of race etiquette" (12:240). Insight into the role of Latin Americans in professional baseball is needed to determine if their nationality does create unique problems.

HYPOTHESES

This investigation was intended as a descriptive study, consequently no hypotheses were proposed. The statistical projection was that there were no differences among subject groups in the variables measured.

ASSUMPTIONS

It is assumed that all the information solicited from other individuals is true. Without their necessary assistance the scope of this study would have been greatly diminished.

DELIMITATIONS

The sample group was limited only to those professional baseball players who had participated in the 1975 season of the American, National, Pacific Coast, and Florida State Leagues. They were compared only by the quantitative measures chosen by the investigator.

Because the number of minor league players was too large, it was

necessary to limit the sample to one triple-A league and one single-A league. These two leagues may not be representative of their respective classifications, or of the minor leagues as a whole. Also, since it was required that pitchers pitch a minimum number of innings and batters have a minimum number of at bats to be included in the study, some players were excluded due to their limited playing time in games.

LIMITATIONS

A distinction was not made between Latin blacks and Latin whites, as the investigator chose to classify anyone born in a Latin American country as "Latin". It may be that discrimination and segregation by position would vary between white and black Latins. Previous studies have used a definition of black versus white and did not consider Latins, but further research regarding this specific area is open to investigation.

All aspects of performance cannot be precisely revealed statistically. Many of the statistical performance comparisons were deemed valuable and relevant by other investigators, and the remainder were determined to be valid by virtue of the experience and understanding of the investigator.

DEFINITION OF TERMS

Assists--A fielding chance statistic that indicates that an out was made but that the player was involved in the play without directly making the put out.

Batting Average--The number of hits divided by the times at bat.

Black--A North American Negro.

Designated Hitter--A rule adopted by the American League and used

throughout the minor leagues that states that a player, called a designated hitter, bats for the pitcher, who does not appear at the plate. The National League did not adopt this rule and pitchers are required to bat for themselves.

Discrimination--The discrepancy in treatment between candidates who are identical in all "relevant" characteristics (46:120).

Earned Run--A run scored without the aid of an error.

Earned Run Average--A calculation of the average number of earned runs a pitcher allows for every nine innings he pitches.

Ethnic Group--Ethnic groups for this investigation are in reference to North American Negroes, North American Caucasians, and Latin Americans.

Fielding Average--The measure used to assess the fielding efficiency of a player. It is calculated by dividing the sum of the put outs and assists by the sum of the put outs, assists, and errors.

Latin--Any player born in a Latin American Spanish-speaking country.

Organized Baseball--The collection of professional baseball clubs bound together by a complex set of rules and regulations in a collection of constitutional documents consisting of the two major leagues and their minor league affiliates (46:121).

Put Outs--A fielding chance statistic which indicates that the player directly made the out in defensive play.

Saves--A pitcher who, appearing in relief, finishes the game and pitches to the potential tying or winning run is credited with a "save".

Segregation by Playing Position--The proposition that the position played on an athletic team is related to ethnic group; ethnic

group is a determinant of the position played.

Slugging Percentage--A statistic used to estimate the production power hitting output of a batter. It is calculated by dividing the total bases by the number of at bats.

Team Organization--The professional major league team and minor league team affiliates which are made up of the players whose contracts are owned by a single enterprise.

Total Bases--The number of bases accumulated by hits over a season (e.g., a single is one, a double two, a triple three, and a home run is four total bases).

Unearned Run--A run scored as the result of an error.

Utility Player--A player who plays more than one position and is frequently a back-up player at some position.

White--A North American Caucasian.

Chapter II

REVIEW OF RELATED LITERATURE

A review of the related literature is presented in this chapter. To give additional insight into the literature reviewed, this chapter is divided into three categories: (1) The relationship of ethnic groups to American sport, (2) Discrimination in sports, and (3) Segregation by playing position in sports.

THE RELATIONSHIP OF ETHNIC GROUPS TO AMERICAN SPORT

For a better understanding of the Negro and Latin players' role in American sport, it helps to present some of the literature concerning the anthropological, anatomical, and sport-related differences among the races. In this section, a discussion by the various authors about race introduces information concerning the factors and arguments surrounding ethnic groups in sport. While some of these articles may not refer specifically to sport, their inclusion is necessary for a better understanding of race in sport.

Montagu (41), in a book concerning race, points to research which has shown that genetic qualities are practically universal except for some minor physical features. Osborn (44) relates the general agreement of scientists on a number of findings about race, some in rather startling contrast to earlier theories. These findings were: (1) differences within races are greater than average differences between

races for many important characteristics; (2) there is no scientific evidence for "superior races"; (3) studies in human genetics indicate no "pure" races; (4) of the major races, none is more "primitive" than another; (5) intelligence and environment are so inextricably intertwined that no conclusions concerning racial intelligence can be determined, but it is unlikely that any difference exists.

A further discussion of the physical anthropology of the American Negro by Montagu (97) disputes any important alleged physical difference between whites and Negroes. He cites Cobb: "...Negroid physical differences are not in any way significantly associated with Negro athletic ability" (97:38).

Kane (91) attempts to explain the extraordinary success of black athletes in athletics. He maintains that Negroes are physically better suited than whites to athletic performance, due to longer limbs and other physical advantages. Another advantage of the black athlete, according to Kane, is the greater ability of the Negro to relax under pressure than his white counterpart. Severe living conditions in Africa and later during slavery promoted "survival of the fittest" and produced physical qualities for athletics through generations of breeding. Furthermore, he points out that sports represent an avenue to success which is readily open to black Americans while many others are not.

Edwards (21) questions Kane's genetic and physical contention that blacks are better adapted for athletics than whites. He maintains that Kane's sample was from black athletes and not the representative black population, and points out that scientists note that differences between individual members of any one racial group are greater than between any two groups as a whole. Research, cited by Edwards, has

shown that blacks are actually more serious, concerned, and "uptight", disputing Kane's claim of greater relaxation. Edwards explains that complex societal conditions instill a heightened motivation among black male youths to achieve success in sports. He says, "The simple fact is that the scientific concept of race has no proven biological or genetic validity."

Rhoden (99) writes that the basis for black superiority in athletics is social and physical. He quotes John Wooden (99:144): "I feel that the black athlete is excelling so well in athletics because it's the one area where he has a chance to excel, and so many other areas have been closed to him." Rhoden further points out that for every seven thousand blacks, one is a lawyer; and that one half of one percent of elected officials are black.

The Negro psyche, Hollomon (86) contends, was developed under the adverse conditions in which the black has lived in this country during the period of Negro slavery. Negroes' athletic success is explained through factors of revenge, compensation for not being equal, and identification with the white race through success. Hollomon states, "...we conclude that the supremacy of the Negro athlete in competition with the white group can be accounted for by his hatred and desire for revenge, his efforts to compensate for his feelings of inferiority, and his desire to overcome his oppression by identification with the majority group" (86:162).

Harry Edwards and Bill Russell (79) analyze two prevalent theories of black superiority in sports. The first theory of a matriarchal family structure leading to a strong coach-athlete relationship, and the second theory that superiority is innate or race-linked, are

both rejected. They propose that black superiority is due primarily to racism because whites' talents are spread over a greater range of activities while blacks' talents are focused on athletics as this is their best means of achieving success in American society.

DISCRIMINATION IN SPORTS

Peterson (47) writes about the period from 1898 to 1946 when blacks were barred from organized baseball by an unwritten rule. Negro leagues were formed where teams played from early spring until late fall against black and white teams in farm villages and big cities, and on sandlots and in major league stadiums. In the winter they went to Florida or California, Cuba or Mexico to play some more; thus, they played year-round. Many great Negro league stars never played in the majors, but their ability is recorded nevertheless in baseball history. Peterson concludes with the observation that Negro baseball was both a gladsome thing and a blot on America's conscience.

An article in U.S. News and World Report (68) written in 1967 projects that Negroes have "struck it rich" in professional sports. This article asserts that one fourth of professional football, one third of major league baseball, and fifty-three percent of professional basketball players are black. Further, the salary checks are getting bigger, as evidenced by the stars such as Wilt Chamberlain, Willie Mays, Mike Garrett, etc. It is implied that blacks enter the professional sporting world and achieve success.

In an investigation of minority groups and American athletics, Turbeville and Johnarudy (105) attempted to explain the changing roles of these minority groups. They found that in the field of boxing the

Irish immigrants were the first successful, and after them came the Italians, followed finally by the Negroes. Barriers to Negroes began to fall with the rise to fame of Joe Louis in the late 1930's, and the last major obstacle that was overcome in sports was in baseball. Jackie Robinson broke the color barrier in 1947, and since then numerous blacks have found an avenue to social mobility. Turbeville and Johnarudy suggest that Negroes have used sports as a method to obtain a degree of social equilibrium. But, with over one-half of all professional basketball players, one-third of professional football players, and over a quarter of professional baseball players belonging to the Negro race, they will increasingly be in a position to make demands to better the lot of oppressed groups.

Broom and Selznick (12) discussed the fact that Negroes have become increasingly numerous in the big leagues in the years since Jackie Robinson and are now accepted throughout the country. All difficulties have not been removed, however, since there is a dearth of Negro pitchers and, at that time, no Negro captains or managers (1963). Also, players recruited from the Caribbean create new problems because of their different cultural and language heritage.

Attesting to the rise in the number of black players, Frank Robinson, one of the outstanding major league baseball players in this decade, expressed his desire to be the first black manager. In an interview with Shecter (103), Robinson acknowledged that only a handful of blacks have been allowed to become coaches, umpires, and front office men. In answer to a question of discrimination against black players, he conceded that the situation is not equitable yet, but that it will improve.

Blalock (74) discusses major league baseball since the introduction of Jackie Robinson in 1947. He suggests that once the racial barrier was broken, there was a genuine integration of Negroes into the major leagues. He explains that professional baseball is highly competitive, skill and performance are easily evaluated, prestige is related to productivity, and there is no major hierarchy of position. Success in baseball depends only slightly on interpersonal relations and manipulative skills, which removes many handicaps for the Negro. Blalock formulates thirteen propositions which explain the circumstances which will reduce occupational discrimination.

Edwards (22) views the emergence of the black athlete in sport as a root of the economic squeeze in collegiate and professional athletics. He charges that discrimination exists in nearly every area of sports. Blacks have succeeded immeasurably in every athletic field, but have been used by the system, and then discarded after their careers were over. Stacking of black players at certain positions is widespread and common, blacks are excluded from certain positions, and they are always expected to perform better than whites to keep their jobs. Blacks are rarely second or third string players, as that role is for white players. Edwards further points out that salaries are lower and jobs in the organization are unavailable for blacks. The media is often insensitive to the plight of the black athlete and for the most part prejudiced against him. Edwards states, "The simple truth of the matter is that the sports world is not a rose flourishing in the middle of a wasteland. It is part and parcel of that wasteland, reeking of the same racism that corrupts other areas of our society" (22:34).

A five-part discussion of the black athlete by Olsen (98) in

Sports Illustrated disputes the belief that sports has done everything for the Negro. He notes that black professional athletes say they are underpaid, shunted into certain positions, and are treated like sub-humans. Few black collegiate athletes graduate and they relate that they are dehumanized, exploited, and discarded. Stacking, quotas, racism, and discrimination abound in both collegiate and professional sports, according to Olsen, and he concludes the series of articles by exposing the racism and prejudice occurring on the St. Louis Cardinals football team.

In an article in The Black Scholar, Aikens (70) discusses the fight of Curt Flood against organized baseball's reserve clause. Aikens further relates the racism and discrimination that he (Aikens) felt as a black in the minor leagues. He charges that blacks of equal ability to white players receive much smaller bonuses to sign pro contracts and smaller raises from contract negotiations. Blatant racism by managers, scouts, front office men, umpires, and sports writers is frequent.

An investigation by Charfnosky (16) reports that rigid, conforming social controls are exerted over professional ball players, both in and out of the sporting scene. Also, it is noted that most professional sports exclude most blacks, Latin Americans, and other minorities from important leadership or front office positions. The "public" clamors about sport being color blind, but in private a double standard exists which is analogous to what happens throughout American institutions. Charnofsky concludes that professional baseball is sexist and racist and not the mode of democracy and sportsmanship it claims to be. Major leaguers work hard and enjoy the hero status, but the sport teaches conflict, violence, discrimination, and a philosophy of "win at all costs".

In another investigation of major league ballplayers, Charnofsky (76), from a representative sample of fifteen percent of the active players, found that most feel there is no ill feeling about playing alongside blacks or Latins but that some dissatisfaction does exist. Also, forty-two of the seventy-three players believed there was no difference in treatment of black and Latin players, but there was no cross-racial preference by whites for leisure time association. Latin and black players expressed proportionately greater happiness with their profession than did their Caucasian counterparts.

In an examination of college basketball, Yetman and Eitzen (66) tested the hypothesis that black athletes are disproportionately over-represented as starting players and underrepresented as non-starters. Questionnaires were sent to NCAA-member schools requesting information concerning their intercollegiate basketball teams for the 1969-1970 season. Useful information was provided by two hundred forty-eight (fifty percent of those sampled) integrated schools. While twenty-nine percent of all players were black, forty-seven percent of the number one players were black. Of the schools investigated, two-thirds of the blacks were starters while forty-four percent of the starters were white. From the findings, it was concluded that black players on intercollegiate basketball teams were disproportionately found in starting roles. Discriminatory recruiting and differential motivation of blacks versus whites was accepted as the explanation for the differences.

Yetman and Eitzen (109) expanded their examination of college basketball and included professional basketball in a further analysis of discrimination in sport. One hundred twenty-six major college NCAA schools were analyzed at four-year intervals from 1954 to 1970. Infor-

mation regarding final player and team statistics was acquired and players were compared according to race, which was identified from team pictures in the Converse Basketball Year Book. The most substantial increase in blacks on collegiate teams occurred from 1966 to 1970. Negroes comprised eleven percent of the total American population and accounted for twenty-seven percent of the nation's collegiate players. Nearly one-half of the teams' leading scorers were black between 1958 and 1970, and two-thirds of the black players were starters, while they were underrepresented on the second teams. The NBA Guide provided information on professional basketball for the 1971-1972 season. Differences in professional basketball were not as pronounced as in the college ranks. Scoring averages were 5.2 points per game higher for black players in the 1962-1963 season, but diminished to 2.9 points per game higher in the 1969-1970 season. The magnitude and difference between scoring averages has declined since 1962, but the percentage of Negro players in the top one-half of the league scorers was greater in 1970. Yetman and Eitzen concluded that black players both in the NBA and in college are found disproportionately in starting roles.

Brower (14) examined professional football by observing at a training camp and found that coaches believe in traditional social values. A black who is not accomodative is labeled a troublemaker, since coaches prefer respectful players. The black culture is misunderstood by coaches and they tend to give blacks more instructional explanation than whites. While white players, coaches, and management feel self-righteous because of their association with blacks, they do not understand the black and much prefer white players.

Mogull (96) investigated professional football salaries in

relation to race for the 1970-1971 season. Salary information was obtained from ninety-six players (9.2 percent of the total population) with approximate racial proportions. No significant difference existed between black and white first-year players with regard to salaries or bonuses. Veteran players were evaluated according to years of service and, again, no significant difference was found in salaries paid to blacks and whites.

Research examining racial patterns of athletes at the University of Illinois by Spivey and Jones (104) revealed that blacks are less prepared for college than their white counterparts. Sixty-five percent of the blacks failed to graduate, and their flunk out rate was significantly higher than the university average.

Evans (110) examined the role of the black football player on a predominantly white campus. Through questionnaires administered to both black and white athletes on the Kansas State University campus, Evans found that black athletes compared to whites were more often found in starting roles, were physically superior in speed and size, performed better in high school, experienced discrimination during recruitment, and occupied almost entirely non-central positions.

Scott (55) explains that he believes racism and discrimination to be prevalent in sport. Sports often attenuate rather than lessen racism. White Americans will pay to watch black athletes but still think of them in a demeaning way off the court. Quotas and stacking of Negro players is common and athletics are not the great opportunity for blacks commonly thought. He expresses this idea most succinctly by stating, "Gifted black athletes will usually make out all right but what happens to the thousands of young unathletic black children whose only

heroes are sports stars?" (55:180).

SEGREGATION BY PLAYING POSITION IN SPORTS

Rosenblatt (101) conducted a study comparing the performances of Negro and Caucasian major league baseball players. He found that the batting averages for Negro players were approximately twenty points higher than Caucasians in the period from 1953 to 1965. Furthermore, figures showed that the larger proportion of Negro players hit above .270, while a very small percentage hit below .230. Players were then categorized by official times at bat, and Rosenblatt found that Negroes produce significantly higher averages (over twenty points) among players who play regularly. Also, there was a differential among positions played by the two races. Although each team is made up of twice as many pitchers as outfielders, Negro outfielders were three times as numerous as Negro pitchers. And the most uneven distribution was in the front office, where there was one major league coach and no Negro managers or executives before 1966. Rosenblatt concluded that the superior Negro is not subject to discrimination, but that the average and poor Negro players are. Discrimination also explains the exclusion of Negroes from front office positions.

Pascal and Rapping (46) tested two major hypotheses: namely, that salaries are not linked to race but performance, and that assignment of players to league, team, and position is independent of race. Major league players for 1968 who were on spring rosters were included in the study. Of the seven hundred eighty-four players involved, 2.2 percent were Latin whites, 7.3 percent were Latin blacks, 14.7 percent were American blacks, and 75.8 percent were American whites. Players

were categorized into seven subgroups: pitchers, catchers, first and third basemen, second basemen and shortstops, outfielders, utility players, and miscellaneous players. They found that for each category, performance levels of black players were significantly higher. Batting averages were used for non-pitchers and number of wins was used for pitchers. Black players were underrepresented as pitchers and catchers and overrepresented as outfielders and first basemen in the major leagues. Also, substantial differences in the proportion of black players occurred within teams and leagues (the National League had more blacks). Regarding salary, Pascal and Rapping discovered no significant salary discrimination with regard to race.

Scully (56) examined major league baseball to determine if discrimination against black players did, indeed, exist. He recorded percentage of black players per team and league for the periods 1947 to 1953, 1953 to 1960, and 1960 to 1971. He found that few blacks were added to rosters from 1947 to 1953, and that from 1953 to 1960 the National League added 2.2 percent per year, while the American League added only 0.6 percent per year. From 1960 to 1971 it was 1.4 percent additional blacks per year for the American League and 0.6 percent per year for the National League. The Pittsburgh Pirates led all teams with the highest percentage of black players from 1960 to 1971. Furthermore, Scully revealed that blacks occupied 24.1 percent of all 1969 playing positions. Blacks (Latin and American) comprised 49.6 percent of the outfielders and eleven percent of the pitchers. American blacks were forty percent of the outfielders, ten percent of the infielders (catchers included), 8.1 percent of the pitchers, and 4.2 percent of the coaches in 1969. From 1960 to 1971 the real gains made by Negro players were

only in the outfield; of an increase of eighty-four black players, forty-eight of them were outfielders. Using batting average as a measure of performance for non-pitchers, Scully found that where there is less exclusion of blacks, the performance difference is generally narrower than in the high-exclusion positions of catcher and pitcher. From 1947 to 1967 there were one hundred eight major league managers, and 67.6 percent of all managers were former infielders. Exclusion of blacks from managerial and coaching positions appears to be linked to their underrepresentation in the infield. From a statistical analysis of salaries where he used batting average as a performance variable for infielders and slugging percentage for outfielders (because slugging percentage is a measure of power, which is expected of outfielders and not of infielders), Scully learned that blacks must play longer and perform better to earn more than whites. However, analysis of black versus white pitchers revealed no salary discrimination. From lengthy examination of major league baseball, Scully concluded that, (1) fans, players, and owners have demonstrated prejudice which can be statistically verified; (2) there is an historical and constant interleague racial difference (the National League has a higher percentage of black players); (3) racial position exclusion exists; and (4) blacks earn more than whites on the average, but this is due to their consistently higher performance. Statistical equation analysis reveals that they are actually paid less.

Grusky (84) investigated the recruitment of major league managers from the standpoint of high and low interactors. Interactors were defined with respect to (1) spatial location, (2) nature of the task, and (3) frequency of interaction with others. Grusky divided professional

baseball teams into outfielders, infielders, and the battery (pitcher and catcher). High interactors were defined as infielders and catchers, and low interactors as pitchers and outfielders. A random sample of four hundred sixty-five players who had ever appeared in a major league game revealed that thirteen had become managers, with catchers and infielders overrepresented. Also, all field managers during the years 1921 to 1941 and 1951 to 1958 were categorized according to position played, and similar results occurred. Catchers had the highest percentage of managers (26.2 percent). Grusky concluded that type of position occupied as a player is related significantly to chances for obtaining managerial office, thus high interactors are selected for executive positions more often than low interactors.

An investigation of interscholastic baseball teams conducted by Loy and Sage (36) was based on Grusky's model of interaction. Starting high school baseball players from twelve southern California teams in 1968 submitted data following their seasons. Each subject responded to a questionnaire which ranked his teammates by popularity and team importance, and concluded with the California Psychology Inventory. Subjects were divided into high and low interactors on the basis of their position (catchers and infielders were high interactors; pitchers and outfielders were defined as low interactors, according to Grusky's model). Loy and Sage found that (1) catchers and infielders are more likely to be selected as team captains, (2) catchers and infielders are more likely to be perceived as better liked, and (3) pitchers and catchers are more likely to be perceived as more valuable. However, high and low interactors did not differ in the psychological factors tested.

The segregation of blacks by playing position in football was

examined by Sanford and Eitzen (102). By 1971, they found that blacks were represented in all positions but that they were underrepresented as quarterbacks, centers, offensive interior linemen, kickers, and linebackers, and overrepresented as defensive linemen, receivers, running backs, and defensive backs. Eitzen and Sanford were interested in discovering the reason behind Negroes' occupying proportionately more non-central positions than central positions. Several explanations were offered, such as: coaches and scouts hold stereotypes that blacks tend to be poor leaders, do not react well under pressure, and are not very intelligent; coaches interact with central positions more and thus prefer whites; black youths emulate black sports stars; and blacks themselves, seeing the situation, will change from "central" to "non-central" positions in order to make the team and play. To try to determine which of these explanations might be most viable, Eitzen and Sanford selected thirty-eight colleges known for providing a large share of professional football players. Complete football information from high school to pro football was gathered on three hundred eighty-seven players (two hundred thirty white and one hundred fifty-seven black). They discovered that as the black football player emerges from high school there is a definite trend to shift from central to non-central positions. Of sixty-five pro athletes who played quarterback in high school, fifty percent of the white players remained at that position while one of the twenty-two blacks did. There is a stronger relationship between race and position with each higher level of play, with blacks occupying more non-central positions. Racial stereotypes held by coaches was offered as an explanation for these results.

Loy and McElvogue (35) examined professional baseball and football

to determine if segregation does exist in these sports. Grusky's model of interaction was modified to include a definition of "centrality," which designated both how close a member is to the "center" of the group's interaction network and also frequency of interaction. Three interaction units were defined for baseball as (1) the battery, consisting of pitcher and catcher, (2) the infield, and (3) the outfield. Major league players appearing in fifty or more games during 1967 were included in the study and were categorized according to race and playing position. Most Negroes were found in the outfield, with the fewest in the battery. For professional football, the central positions were center, right and left guard, quarterback, and linebacker, with the remaining positions being defined as low interactors. Centrality was significantly linked to race for both professional sports. Segregation was exhibited in the excluding of blacks from the positions of centrality. Loy and McElvogue continued their research and discussion to include a study of the major leagues between the years 1956 and 1967. They found the largest increase in number of Latin players from 1956 to 1967. They state, "...there has been a substantial increase in the number of Latin American players in recent years which indicates that there exists an intermediate 'brown zone' between the 'white and black belts' of major league baseball" (35:465). Latins and blacks were most often found in the outfield and least often found as catchers (pitchers were not included). In addition, they used fielding assists as an indicator of centrality and found that the rank order of field positions with respect to number of annual assists correlated perfectly between their measures of segregation and centrality. That is, whites dominated positions connected with most assists and correlated perfectly the ranking of percentage of players

and number of assists, while Negroes ranked exactly opposite those positions having the most fielding assists. This was taken as further proof that segregation in team sports is related to centrality.

A comparison of black and white professional football players in Canada by Ball (73) was conducted with respect to central and non-central positions. Central positions were defined as those with the greatest interaction with other positions and likelihood of dependent or coordinative task performance. Central positions were linebacker (on defense), and center, quarterback, and guard (on offense). All other positions were defined as non-central. Ball compiled vital statistics on two hundred nine players, or seventy-five percent of the rosters, and compared this with those of Loy and McElvogue (35). He found that blacks in professional football will be stacked at non-central positions and excluded from central ones in Canadian football as well as American pro football. Also, stacking of American players in central positions occurs in Canadian football due to the restriction of recruitment placed on Americans.

In an attempt to explain stacking in professional football, Landers and Madison (31) investigated a possible hypothesis that black athletes change from central positions in college to peripheral positions in professional football more often than whites. Information consisting of playing position, race, college attended, and college playing position was accumulated on six hundred sixty-one players. Central positions were defined as quarterback, center, left and right guard, left and right tackle, and fullback on offense, while central defensive positions were linebacker and tackle. All other positions were defined as being peripheral. They found that twenty-four blacks and twenty-nine white players

changed from a central to a peripheral position, but only six blacks made the change from peripheral to central while twenty-nine white players made this change. Also, few blacks (ten) made the change from one central position to another compared to sixty-eight white players. These significant results raised questions as to the motives for the changes. Were they player- or coach-motivated?

McPherson (95) offered some alternative explanations to the segregation by playing position research. He theorized that the social situation for blacks differs from whites and this alters factors for black youths. Also, black youths appear to have different values and different achievement motivation, which may account for differential socialization into sport involvement, and black youths especially emulate black sports stars. Questionnaires were given to ninety-six white and seventeen black Olympic Track and Field Trial athletes to test for these attributes. Basic differences were found between black and white athletes in the roles that others played in their high school athletic careers, and blacks experienced athletic success earlier than their white counterparts. Also, the black athlete's social situation was poorer, more urban, and less involved with school than the white athlete's. McPherson concluded that until further evidence is accumulated concerning athletes' careers from high school up to the point they enter the major professional leagues, there are several explanations possible for segregation by playing position.

Castine and Roberts (75) investigated the hypothesis that black athletes are socialized to certain sport roles through social role modeling of previous successful black athletes. Questionnaires were completed by one hundred twenty-nine black college athletes competing in

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the 1971-72 academic year. The questionnaires provided background information, family information, educational and religious experiences, and athletic information. They found that the peer group and coach exerted an enormous amount of influence over the athlete and that most of the athletes (71.3 percent) indicated that the coach had placed them in their positions. Furthermore, since most of the black athletes had sportsman idols early in their athletic careers, since none of the reported idols was white, and since the black athlete chose that idol's position most often, the theory of role modeling was considered significant. With role attractiveness and high level of achievement of the black athlete, imitation of these roles by aspiring black youths is prominent.

Worthy and Markle (108) tested the hypothesis that black athletes, relative to white athletes, perform better in sports activities that are reactive in nature than in sports activities that are self-paced in nature. A self-paced activity is one in which the individual responds when he chooses to a relatively static or unchanging stimulus. A reactive activity is one which requires response at the right time to changes in the stimulus situation. Major league baseball was analyzed and it was hypothesized that whites would dominate at pitching positions (self-paced) and blacks at the other positions (reactive). There was strong support for the hypothesis for baseball. However, some supportive evidence was found for basketball, too, but the interpretation of these findings was admittedly still open.

Jones and Hochner (88) examined the self-paced versus reactive hypothesis originated by Worthy and Markle. The performance of major league hitters with four hundred or more times at bat and pitchers with fourteen or more decisions was compared by race (Latinos excluded) to test

this hypothesis. Basic performance statistics for hitters were at bats, runs scored, hits, home runs, and runs batted in, which were all computed as a ratio of times at bat. For pitchers, basic performance statistics analyzed for racial differences were innings pitched, hits given up, walks, strike outs, wins, losses, earned run average, and winning percentage. To control for the number of innings pitched and to provide data on more subtle elements of pitching performance, hits given up, walks, and strike outs per inning pitched were computed, as well as the ratio of strike outs to walks. They found that blacks excelled at both hitting and pitching. Black hitters have more times at bat, score more runs per time at bat, make more hits, hit more home runs per time at bat, and have higher batting averages. Black pitchers, though limited in number (twelve blacks versus one hundred forty-four whites), have consistently superior performances to whites, by pitching more innings, striking out more batters per inning pitched, having a higher winning percentage, giving up fewer hits, and having a higher ratio of strike outs to walks. Worthy and Markle's conclusions were questioned, since black pitchers were superior to white pitchers. Jones and Hochner concluded that the selection process for black pitchers is more rigorous than for whites. They further examined Worthy and Markle's hypothesis for college and professional basketball and rejected their hypothesis as too simple a description of performance differences. For this reason, Jones and Hochner suggest that there are many variables such as social, political, etc., that may account for the differences in performance and positions of black and white athletes.

From the research presented in this chapter, some general conclusions were drawn regarding race and ethnic groups in sport. These

conclusions were:

1. There are no significant biological or genetic differences among the ethnic groups which can account for differences which may occur in athletic performance.
2. The black athlete's success in sports is a result of social factors and not any race-linked or ethnic group characteristics.
3. Sport is an avenue of mobility for racial and ethnic groups, but discrimination is still prevalent in many areas of athletics.
4. Race and ethnic group is linked to the position played in professional baseball and collegiate and professional football.

Chapter III

PROCEDURES

The specific problem of this study was to compare the performances of black, white, and Latin professional baseball players at the major and minor league levels with respect to position. Information presented in this chapter concerns the procedures necessary to carry out the comparisons of the subject groups. A step-by-step account of these processes is included in this chapter. The chapter is divided into the following categories: Pilot study, Collection of the data, and Analysis of the data.

PILOT STUDY

One pilot study was completed by this investigator in the spring of 1974. A comparison of performances of black, white, and Latin players for 1973 aided in establishing procedures useful to the present research. The Official Baseball Guide was found to be the most extensive source of major and minor league statistics. Also, the need to establish some minimum playing requirements for a player's inclusion in the investigation was apparent, and the procedure used in this study was developed to satisfy that need. Methods of grouping players, defining the various positions, and formulation of comparisons were all developed in the pilot study. Including the minor leagues proved necessary to give the investigation a scope broader than previous research, and the pilot study further revealed the need of biographical

information for major and minor league players. The pilot study proved extremely useful in the formulation of the procedures for the present study.

COLLECTION OF THE DATA

Selection of the Subjects

Professional baseball players performing in the major leagues (National and American Leagues), the Pacific Coast League, and the Florida State League for the 1975 season were selected as subjects. Of the total six hundred thirty-four non-pitchers selected, one hundred ninety-five were American Leaguers, one hundred eighty were National Leaguers, one hundred thirty-two Pacific Coast League players, and one hundred twenty-seven Florida State League players. In addition, four hundred thirty-nine pitchers were examined with two hundred fifty-one in the major leagues (American and National Leagues), ninety-four in the Pacific Coast League, and ninety-four in the Florida State League. These subjects were selected by criteria, described in an ensuing section of this chapter, which limited the number of players included in this investigation.

Sources of the Data

All statistical information used in this study was found in the Official Baseball Guide (93). This source provides complete data for all the major and minor leagues. Included are all batting, pitching, and fielding statistics for each player, and the position or positions of each player.

Biographical information for major leaguers was found in the

Official Baseball Register (92). This provided birthplaces for the identification of Latin and North American players. Identification of major leaguers was primarily done through the personal knowledge of the investigator and acquaintances in the major leagues familiar with the 1975 major league players. Team pictures in the Official Baseball Guide provided for additional identification.

Identifying minor league players presented a more complex problem since there is little national publicity given to them and turnover of players is very high. Lloyd Thompson, a player for West Palm Beach, a Montreal Expos-affiliated team in the Florida State League for the 1975 season, identified players in the Florida State League according to ethnic group. With a full understanding of the nature of this study, Thompson provided information from his personal knowledge of the players and positively identified all but twelve of them. The remaining uncategorized players were with the Winter Haven Red Sox and the Lakeland Tigers. The general managers for both teams were contacted and they readily identified those players in question. To verify the birthplaces of the players, Lloyd Thompson supplied team roster information. This source contained all pertinent biographical information of the players.

Pacific Coast League players were identified through the personal knowledge of the investigator, who was a player for the Albuquerque Dukes of that league for the 1975 season. Because of the numerous times that the Pacific Coast League teams competed against each other, the identification of the players according to black, white, or Latin was relatively easy. For the few players who remained in question, two sources were used. Steve Luebber, a 1975 player for the Tacoma Twins who was knowledgeable of the players, and the Pacific Coast League 1976

Player Guide (106) were used to verify the categorization of Pacific Coast League players.

Type of Data Collected

The types of data collected differed for pitchers and non-pitchers. The data for pitchers included wins (w), losses (l), games appeared in (g), games started (gs), saves (sv), innings pitched (ip), hits given up (h), unintentional bases on balls (bb), and strike outs (so). Data of offensive statistics for non-pitchers included games played (g), at bats (ab), runs (r), hits (h), total bases (tb), runs batted in (rbi), stolen bases (sb), and times caught attempting to steal (cs). Fielding statistics included games played (g), put outs (po), assists (a), and errors (e) for each position played. All data was prepared and recorded on computer cards.

Selection of the Data

The four leagues studied were selected because they represented the various levels of professional baseball and because the information necessary for the completion of this research was readily available to the investigator.

The professional baseball industry, referred to as "organized baseball", includes the two major leagues consisting of twenty-four teams, and sixteen minor leagues with a total of one hundred thirteen teams in 1975. The sixteen minor leagues are classified into AAA (three leagues), AA (three leagues), A (seven leagues), and Rookie (three leagues). Players on the minor league teams are almost entirely under contract to one of the major league teams and, unlike other labor markets, the player is an asset owned by the club. Because of the reserve

clause, a player is not allowed alternative employment in organized baseball without permission of the club owning his contract.

The sample in this investigation includes both of the major leagues, the top echelon in professional baseball and the most familiar to most Americans; one of the three AAA leagues, which is the highest classification of minor league baseball; no AA leagues; one of the seven A leagues; and none of the Rookie leagues. These classifications of leagues were chosen to give a representative sample of the processes of organized baseball with regard to the black, white, and Latin players. The major leagues are the ones most visible. The Pacific Coast League is a member of the AAA minor leagues which are closest to the major leagues. It will be possible to see if there is a selectivity by ethnic group occurring between AAA and the major leagues, or whether this is a factor in the promotion of players. Accumulating the necessary player information was prohibitive for the Rookie leagues, since their playing season is much shorter and the number and turnover of players is so much higher than the A leagues. For this reason the A league was selected to serve as the test for the players' introduction to organized baseball, and the Florida State League teams play nearly as many games as the major league clubs, making performance comparisons more similar in scope. Including AA leagues was not a concern of this study.

Because of the enormous number of players participating in these four leagues and the fact that there are some players who are given a limited opportunity to play (hence, their performances suffer from inactivity), it became necessary to establish minimum requirements of player participation in the games for individual players to be included in the study. Individual players were selected for the study by

a method for equalizing the differences of games played in the leagues. Both major leagues schedule one hundred sixty-two games, while the Pacific Coast League scheduled one hundred forty-two games and the Florida State League scheduled one hundred thirty-five games. Since few games are cancelled, it was decided by the investigator to use the number of scheduled games rounded off to the nearest ten to form a simple equation to account for the difference in games scheduled to be played.

The equation was devised for non-pitchers by multiplying the number of games scheduled (rounded to the nearest ten) by twenty percent. That number would then be multiplied by two, which would represent the minimum number of at bats a hitter would need in order to qualify for the study. As an example, for the major leagues the equation would be $160 \times 20\% \times 2 = 64$ at bats, and for the Pacific Coast and Florida State Leagues $140 \times 20\% \times 2 = 56$ at bats or more to be included in this research. This form of calculation creates comparable exclusion of players of different leagues and allows for the player's having had an opportunity to demonstrate his ability to perform.

To accumulate fielding statistics, a player was required to play at a position a minimum of ten games in any league. If a player had played ten or more games at each of two or more positions, then his fielding statistics were recorded for each of those positions for which he met the minimum standard. This was for the purpose of establishing fielding statistics by league for each position. By requiring a player to have played at least ten games at a position, it was insured that the player probably had a chance to become at least somewhat familiar with the position to establish a reliable fielding average. Also, many

players appeared at many positions only a few times, and their elimination proved useful to the economy of the data collection.

The equation differed slightly for pitchers, due to the unique requirements of the position. Because there are more pitchers on a team than players of any other position, pitchers have a slightly reduced chance of appearing as often as non-pitchers. This fact is taken into account in the equation for pitchers. The number of scheduled league games (rounded to the nearest ten) was multiplied by twenty percent to represent the minimum number of innings pitched (ip) required to be included in this study. For example, the major league equation would be $160 \times 20\% = 32$ innings pitched, and for the Pacific Coast and Florida State Leagues, $140 \times 20\% = 28$ or more innings pitched to be included in this investigation.

Classifying the Players by Position

Pitchers were easily identified from information printed in the Official Baseball Guide for 1976 (93). Since neither batting, base running, nor defensive statistics were required by this investigation, and since there were not any pitchers who played a non-pitching position enough to meet the minimum standards of playing time, it was a straightforward matter of classifying pitchers.

The classification of non-pitchers into positions required that standards for classification be developed. Any player playing sixty percent or more of the games in which he appeared at one particular position was classified in that position for this research (e.g., if a player appeared in one hundred games and played in sixty percent or more of them as a catcher, he was classified a catcher). The positions

included in this study were catcher, first base, second base, third base, shortstop, outfield (no distinction is made among the three outfield positions), utility, designated hitter, and outfield/first base. Non-pitchers were assigned to these positions on the basis of the requirements designed.

An explanation of the utility, designated hitter, and outfield/first base positions is necessary. Players were assigned to the utility position when they played two or more positions (and none of the positions more than sixty percent of the time), except in the case of a player playing the outfield and first base on an approximately equal basis. The designation of utility player in this study implies that the player plays at least two positions and probably more, and that the player did not play regularly but as a back-up at these positions in most cases. If a player had been a regular, then he would have played sixty percent of the games he appeared in at a single position. This was the case except for outfield/first base, where a separate position was assigned for those players playing outfield and first base equally. This designation of outfielder/first baseman was found to be necessary because of the number of players who played these two positions regularly and equally often, and it was believed by the investigator that they did not belong in the utility position. A player appearing over sixty percent of the time as a designated hitter was classified in that position.

Method of Collection

Once the players were selected and classified to positions, their statistical data was coded on computer coding sheets for eventual transfer to data cards. Each player was given an identification number,

an ethnic group identification code, a league code number, and a code number for position. Each player was also identified with one of the twenty-four major league teams he last played for or with the major league team with which the minor league player was affiliated. For a listing of the teams in each league and their affiliations, see APPENDIX A, TABLE 22.

All the hitting and base running statistics described in the selection of the data were then recorded for each of the players. Fielding figures were coded on separate cards to allow for a player to be included in more than one position. All players playing in ten or more games at a non-pitching position were coded by ethnic group, team, games played at that position, put outs, assists, and errors. Separating a player's fielding statistics to each position rather than taking them as a total allowed for eventual ethnic comparison of fielding performance for each position. Coding was done for each of the non-pitching positions, which were catcher, first base, second base, third base, shortstop, and outfield.

ANALYSIS OF THE DATA

All the data cards were prepared by the investigator and these cards were programmed through the computer at the Kansas State University Computer Center. Comparison by ethnic group, team, league, and position was done for all pitching and non-pitching data. Comparisons between players by ethnic group were done on a mean performance basis. Pitchers were compared by distribution within leagues (American League, National League, Pacific Coast League, and Florida State League), number of games pitched, innings pitched, games started percentage ($g \div gs$), winning

percentage $[w \div (w + 1)]$, saves, hits given up per inning pitched $(h \div ip)$, earned run average $[er \div (ip \div 9)]$, unintentional bases on balls per inning pitched $(bb \div ip)$, and strike outs per inning pitched $(so \div ip)$. These computations gave an indication of several factors of performance necessary for the comparison by ethnic group. Non-pitching batting comparisons calculated were distribution of players by league (American League, National League, Pacific Coast League, and Florida State League), position, and team; games played; batting average $(h \div ab)$; total base percentage $(tb \div ab)$; and runs batted in percentage $(rbi \div ab)$. These measured several aspects of non-pitching performance. Base running performance was compared by ethnic group for runs per at bat percentage $(r \div ab)$ and stolen base percentage $[sb \div (sb + cs)]$, and fielding percentage $[(a + po) \div (a + po + e)]$ was used as the comparison for fielding performance.

A Chi Square statistical procedure was used to analyze the significance of the distribution of pitchers and non-pitchers by position, team, and league. The one way analysis of variance through the use of an integrated package for social sciences was used to measure the differences of the ethnic groups' performances.

Chapter IV

ANALYSIS OF DATA AND DISCUSSION

For analysis of the data, this chapter contains the comparisons of the playing performances of three subject groups. For purposes of comparison, the data was divided into distribution of non-pitchers by team, league, and position; non-pitcher offensive performance data; non-pitcher defensive performance data; non-pitcher base running performance data; and pitcher performance data. Comparison of the distribution percentages of each subject group employed the Chi Square statistical technique. All other comparisons utilized the one way analysis of variance statistical method.

NON-PITCHING PLAYERS BY TEAM, LEAGUE, AND POSITION

Team organizations were compared with respect to their distribution by subject groups. Using the Chi Square test, no significant difference at the .05 level was found among any of the organizations in the distribution of black, white, and Latin players (TABLE 1).

TABLE 1

A COMPARISON OF THE DISTRIBUTION OF BLACK,
WHITE, AND LATIN NON-PITCHERS
WITHIN TEAM ORGANIZATIONS

Chi Square	Degrees of Freedom	Significance Level
35.368	46	0.872

Since no significant difference was found, the distribution of the three ethnic groups throughout the team organizations was assumed to be consistent. Distribution data of the twenty-four team organizations is contained in APPENDIX A, TABLES 22 and 23.

A comparison of the distribution of black, white, and Latin players with respect to the league in which they performed produced findings in agreement with the previous comparison. Regarding racial and ethnic composition of the four leagues, no significant difference was found (TABLE 2).

TABLE 2

A COMPARISON OF THE DISTRIBUTION OF BLACK,
WHITE, AND LATIN NON-PITCHERS
WITH RESPECT TO LEAGUE

Chi Square	Degrees of Freedom	Significance Level
8.777	6	0.187

The fact that no difference was found indicates that the distribution ratio of the three groups was consistent throughout the leagues investigated. Data concerning racial and ethnic distribution of players for the four leagues is found in TABLE 3.

A comparison of the distribution of black, white, and Latin players by position within each league was made. A significant difference at the .01 level was discovered for the American and National Leagues and for all the leagues combined, but there was no significant difference in the distribution of the Pacific Coast and Florida State League non-pitchers (TABLE 4).

TABLE 3
A COMPARISON OF NON-PITCHERS BY ETHNIC GROUP
WITH RESPECT TO LEAGUE

Ethnic Group	American League	National League	Pacific Coast League	Florida State League	Totals by Ethnic Group
Black					
Number of Non-pitchers	56	49	22	33	160
% of Black Non-pitchers	35.0	30.6	13.8	20.6	
% of League Non-pitchers	28.7	27.2	16.7	26.0	
% of All Non-pitchers	8.8	7.7	3.5	5.2	25.2
White					
Number of Non-pitchers	118	105	95	78	396
% of White Non-pitchers	29.8	26.5	24.0	19.7	
% of League Non-pitchers	60.5	58.3	72.0	61.4	
% of All Non-pitchers	18.6	16.6	15.0	12.3	62.5
Latin					
Number of Non-pitchers	21	26	15	16	78
% of Latin Non-pitchers	26.9	33.3	19.2	20.5	
% of League Non-pitchers	10.8	14.4	11.4	12.6	
% of All Non-pitchers	3.3	4.1	2.4	2.5	12.3
Totals by League					
Number of Non-pitchers	195	180	132	127	634
% of All Non-pitchers	30.8	28.4	20.8	20.0	100.0

The fact that no difference for the Pacific Coast and Florida State Leagues was found indicates that the groups were distributed throughout those leagues consistently by position. However, because a significant difference existed for the distribution of the ethnic groups with regard to position played in the American and National Leagues, it

TABLE 4

A COMPARISON OF THE DISTRIBUTION OF BLACK, WHITE,
AND LATIN NON-PITCHERS BY POSITION
WITHIN EACH LEAGUE

League	Chi Square	Degrees of Freedom	Significance Level
American	63.510	16	0.000*
National	48.552	14	0.000*
Pacific Coast	21.818	16	0.149
Florida State	10.783	18	0.903
Leagues Combined	89.493	18	0.000*

*Significant at the .01 level

was taken as evidence that the distribution of the subject groups was not consistent for position played in these leagues. APPENDIX A, TABLE 25 shows that blacks in the American League are concentrated in the outfield, at first base, and outfield/first base, and are least represented at catcher, second base, third base, and shortstop. Latin players in the American League are overrepresented as second basemen, utility players, designated hitters, and shortstops, and least represented as first basemen, outfielders, and outfielder/first basemen. The heaviest concentration of white players was at the positions of catcher, third base, shortstop, and outfield/first base, while they were underrepresented at the designated hitter and outfield positions. Blacks in the National League (APPENDIX A, TABLE 26) were proportionately most heavily distributed at the positions of outfield/first base, outfield, second base, and first base, respectively, and underrepresented proportionately at catcher, shortstop, and third base, respectively. Latins were concentrated proportionately at second base and shortstop, with the

other positions being proportionately near the mean percentage for Latins in the National League. White players were overrepresented proportionately at the catcher, third base, and shortstop positions, and least represented as outfielder/first basemen, second basemen, outfielders, and first basemen, respectively. The difference found for the distribution of the subject groups by position for the leagues combined indicated that the subject groups are disproportionately represented in some positions. APPENDIX A, TABLE 24 reveals that blacks are greatly underrepresented at catcher, shortstop, third base, and second base, and overrepresented at the outfield/first base, outfield, and first base positions. Latins are less likely to be found at outfield/first base, first base, catcher, and third base, and most likely to be at the second base and shortstop positions. White players on the other hand are overrepresented at catcher, third base, and shortstop, and underrepresented at outfield and designated hitter positions. The comparison data concerning distribution of the subject groups within leagues is found in APPENDIX A, TABLES 24, 25, 26, 27, and 28.

BATTING

The average number of games played was compared by ethnic groups with respect to position and league. Using the analysis of variance test, no significant difference was found for the comparisons made concerning the ethnic groups, but a significant difference was found for position and league comparisons (TABLE 5).

The finding of no difference indicates that the average number of games played by the three ethnic groups was approximately equal and that the average number of games played by the three groups with respect

TABLE 5

A COMPARISON OF THE MEAN NUMBER OF GAMES PLAYED
PER ETHNIC GROUP, PER POSITION, PER LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	1631.403	815.701	0.624	0.536
Position	8	31788.150	3973.519	3.037	0.002*
League	2	30571.553	15285.773	11.685	0.000*
Ethnic Group by Position	15	23697.271	1579.818	1.208	0.261
Ethnic Group by League	4	10732.459	2683.115	2.051	0.086
Position by League	16	15047.752	940.484	0.719	0.776

*Significant at the .01 level

to position and league was also approximately the same. The comparisons of games by league and games by position show an expected significant difference, since the two minor leagues played approximately twenty fewer games than the two major leagues. Games played per position was significantly different also, due to the fact that some positions such as catcher do not play as many games as other positions such as outfielder. Information which led to these results is contained in APPENDIX B, TABLES 29 and 30.

Batting averages were compared by ethnic group, position, and league. No significant difference was discovered for the comparisons of ethnic groups and ethnic groups by league. However, a significant difference did exist for comparisons of positions and ethnic groups by positions (TABLE 6).

TABLE 6

A COMPARISON OF THE MEAN BATTING AVERAGES OF
BLACK, WHITE, AND LATIN NON-PITCHERS
BY POSITION AND LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	6.804	3.402	0.226	0.798
Position	8	452.783	56.598	3.752	0.000*
League	2	500.502	250.251	16.592	0.000*
Ethnic Group by Position	15	423.022	28.201	1.870	0.023†
Ethnic Group by League	4	79.005	19.751	1.310	0.265
Position by League	16	247.529	15.471	1.026	0.427

*Significant at the .001 level

†Significant at the .05 level

The fact that, using the analysis of variance test, no significant difference was found for the comparisons of subject groups and subject groups by league by batting averages indicates that the groups' batting averages were relatively equal. However, since a significant difference was found for the comparisons for position and league, this was evidence that batting averages differ for positions played and leagues. Statistics reveal that outfielders, designated hitters, outfielder/first basemen, first basemen, and third basemen had higher batting averages than shortstops, second basemen, utility players, and catchers. The significant difference found for ethnic group by league can be assumed to be a result of the significance of batting averages by position and league, since batting average by ethnic group was not

significant. Data on which this comparison was based is contained in APPENDIX B, TABLE 31.

Black, white, and Latin players were compared on the basis of their mean total base percentage. They were compared additionally by position and league with respect to total base percentage. Using the analysis of variance test, no significant difference was found for any of the ethnic group comparisons, but a significant difference was found for the comparisons of total base percentage by position and by league (TABLE 7).

TABLE 7

A COMPARISON OF THE MEAN TOTAL BASE PERCENTAGE
FOR BLACK, WHITE, AND LATIN NON-PITCHERS
BY POSITION AND LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	7.550	3.775	0.079	0.924
Position	8	2350.205	293.776	6.119	0.000*
League	2	2436.047	1218.023	25.371	0.000*
Ethnic Group by Position	15	1048.869	69.925	1.457	0.116
Ethnic Group by League	4	386.542	96.635	2.013	0.091
Position by League	16	525.477	32.842	0.684	0.811

*Significant at the .001 level

The fact that no difference was found for the ethnic group comparisons indicates that the average total base percentage for the subject groups was consistent among positions and leagues investigated. The

difference in total base percentage for position and for league was expected since certain positions (e.g., outfield) are expected to supply more power than other positions (e.g., shortstop and second base). The difference in total base percentage per league was also expected since differences in facilities (ballparks and travel), weather, and many such variables are different in each league. Comparison data is contained in APPENDIX B, TABLE 32.

The mean numbers of runs batted in per at bat for black, white, and Latin players were compared, and then further compared with regard to position and league. Results showed no significant difference among the subject groups for this comparison for any of the leagues or positions examined. A significant difference was found for runs batted in per position and per league (TABLE 8).

TABLE 8

A COMPARISON OF MEAN NUMBER OF RBI'S PER AT BAT OF BLACK,
WHITE, AND LATIN PLAYERS BY POSITION AND LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	0.001	0.000	0.348	0.706
Position	8	0.070	0.009	6.842	0.000*
League	2	0.028	0.014	10.853	0.000*
Ethnic Group by Position	15	0.026	0.002	1.334	0.176
Ethnic Group by League	4	0.004	0.001	0.873	0.480
Position by League	16	0.017	0.001	0.828	0.653

*Significant at the .001 level

Since no significant difference existed among the comparisons of the ethnic groups regarding average number of runs batted in per at bat, it was taken as evidence that their performance was consistent by position and league for runs batted in per at bat. Again, a significant difference was expected for runs batted in per position and runs batted in per league, for the same reasons previously offered for total base percentage differences by position and league. For reference to the data comparisons, see APPENDIX B, TABLE 33.

BASE RUNNING

Runs per at bat were compared for the three subject groups for the average number of runs scored per at bat by position and league. Using the analysis of variance test, no significant difference was discovered for any of the ethnic group comparisons made, but a significant difference existed for position and league (TABLE 9).

The finding of no significant difference indicates that the average number of runs scored per at bat is relatively equal for the subject groups throughout the positions played and leagues investigated. The differences in position and league are explained by the reasons previously given for the other comparisons. All individual category comparisons are included in APPENDIX C, TABLE 34.

Another comparison used for the evaluation of base running performance was the mean stolen base percentage for black, white, and Latin players. The mean stolen base percentage was compared by subject group, position, subject group by position, and subject group by league. A significant difference was found for position played and for ethnic group by position played at the .01 and .05 levels, respectively. No signifi-

TABLE 9

A COMPARISON OF THE MEAN RUNS PER AT BAT
OF BLACK, WHITE, AND LATIN PLAYERS
BY POSITION AND LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	0.001	0.000	0.497	0.609
Position	8	0.024	0.003	2.987	0.003*
League	2	0.045	0.022	22.355	0.000†
Ethnic Group by Position	15	0.015	0.001	0.979	0.476
Ethnic Group by League	4	0.001	0.002	2.336	0.054
Position by League	16	0.011	0.001	0.715	0.780

*Significant at the .01 level

†Significant at the .001 level

cant difference was revealed for the comparison of ethnic groups alone or ethnic groups by league (TABLE 10).

The fact that no significant difference was found for the subject groups and subject groups by league indicates that they had similar mean stolen base percentages per ethnic group for the non-pitchers of this study and per ethnic group per league. The significant difference found for position is shown in APPENDIX C, TABLE 35. Outfielders, outfielders/first basemen, shortstops, and second basemen had greater stolen base percentages than catchers, first basemen, utility players, and designated hitters. The significance shown for ethnic group by position was a result of the influence of the highly significant difference in positions and the fact that ethnic groups were previously found to

TABLE 10

A COMPARISON OF MEAN STOLEN BASE PERCENTAGE
OF BLACK, WHITE, AND LATIN PLAYERS
BY POSITION AND LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	1907.613	953.806	0.989	0.373
Position	8	31737.007	3967.126	4.112	0.000*
League	2	4769.880	2384.940	2.472	0.085
Ethnic Group by Position	15	26167.164	1744.478	1.808	0.030†
Ethnic Group by League	4	4567.030	1141.757	1.183	0.317
Position by League	16	10280.814	642.551	0.666	0.829

*Significant at the .001 level

†Significant at the .05 level

be unevenly distributed among the positions examined. Stolen base percentage data comparisons are contained in APPENDIX C, TABLE 35.

FIELDING

The mean fielding percentage for each subject group for position and league classification was computed and compared through the use of the analysis of variance. There was no significant difference found among the subject groups comparison by position, by league, and by position by league; however, a significant difference was found for fielding percentage by position and by league (TABLE 11).

Evidence indicates, from the findings of no difference, that the subject groups are relatively equal in their mean fielding percentages

TABLE 11

A COMPARISON OF THE MEAN FIELDING PERCENTAGE FOR
BLACK, WHITE, AND LATIN NON-PITCHERS WITH
REGARD TO POSITION AND LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	21.232	10.616	0.593	0.553
Position	5	537.801	107.560	6.008	0.000*
League	2	141.412	70.706	3.949	0.020†
Ethnic Group by Position	10	51.076	5.108	0.285	0.985
Ethnic Group by League	4	53.007	13.252	0.740	0.565
Position by League	10	108.097	10.810	0.604	0.811
Ethnic Group by Po- sition by League	20	129.321	6.466	0.361	0.996

*Significant at the .001 level

†Significant at the .01 level

with regard to position and league. The differences found for position and league were expected, since some positions such as outfielder have less chance to make errors than the infield positions; and the difference in leagues can be accounted for by the poorer fields and less skilled fielders in the minor leagues. For further reference to this data, see APPENDIX D, TABLE 36.

PITCHERS

The distribution of pitchers by ethnic group by league was compared. Regarding the distribution of the group by league, a difference

to the .01 level of significance was found using the Chi Square testing method (TABLE 12).

TABLE 12
A COMPARISON OF PITCHERS BY ETHNIC GROUP
WITH RESPECT TO LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals by Ethnic Group
Black				
Number of Pitchers	15	0	16	31
% of Black Pitchers	48.4	0.0	51.6	
% of League Pitchers	6.0	0.0	17.0	
% of All Pitchers	3.4	0.0	3.6	7.0
White				
Number of Pitchers	223	88	66	377
% of White Pitchers	59.2	23.3	17.5	
% of League Pitchers	88.8	93.6	70.2	
% of All Pitchers	50.8	20.1	15.0	85.9
Latin				
Number of Pitchers	13	6	12	31
% of Latin Pitchers	41.9	19.4	38.7	
% of League Pitchers	5.2	6.4	12.8	
% of All Pitchers	3.0	1.4	2.7	7.1
Totals by League				
Number of Pitchers	251	94	94	439
% of All Pitchers	57.2	21.4	21.4	100.0
Chi Square	Degrees of Freedom		Significance Level	
29.500	4		0.005	

The findings indicate that there is a difference among the leagues by composition of the ethnic groups. Table 12 shows that there are thirty-one black pitchers, three hundred seventy-seven white pitchers, and thirty-one Latin pitchers in the sample. Of the pitchers in each league, blacks are distributed greatest proportionately by the Florida State League, major leagues, and Pacific Coast League, respectively, and Latins are distributed greatest by the Florida State League, Pacific Coast League, and major leagues, respectively. The number of white pitchers per league also reflects the variance demonstrated by the other two ethnic groups.

The number of games pitched and number of innings pitched reveal the relative amount of pitching a player does. Comparison of the average number of games pitched per subject group and per subject group per league by classification revealed no significant difference in either case for the analysis of variance statistical test (TABLE 13).

TABLE 13

A COMPARISON OF THE MEAN NUMBER OF GAMES PITCHED
BY BLACKS, WHITES, AND LATINS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	466.217	233.108	1.576	0.208
League	2	6940.085	3470.042	23.455	0.000*
Ethnic Group by League	3	496.880	165.627	1.120	0.341

*Significant at the .001 level

The findings indicate that there is no difference in the average number of games pitched for the ethnic groups with regard to any of the

leagues investigated. The significant difference in the number of games pitched per league is due to the difference in the number of games played per league. Data for games pitched comparisons is found in APPENDIX E, TABLE 37.

The mean number of innings pitched was also compared by ethnic group and then further by ethnic group by league. Using the analysis of variance test, no significant difference was found for the ethnic group comparisons, but a significant difference was found for the leagues compared (TABLE 14).

TABLE 14
A COMPARISON OF MEAN NUMBER OF INNINGS PITCHED
FOR BLACKS, WHITES, AND LATINS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	4832.274	2416.137	0.563	0.570
League	2	60232.714	30116.355	7.017	0.001*
Ethnic Group by League	3	4669.815	1556.605	0.363	0.780

*Significant at the .001 level

The finding of no significant difference for the comparison of the average number of innings pitched of the subject groups by league suggested that the groups were equal in this respect. Expected differences occurred in the leagues compared due to the difference in number of games played. Data concerning the comparison of innings pitched is found in APPENDIX E, TABLE 38.

A mean of games started percentage was found for each subject

group. Comparisons were made of groups and groups by league. No significant difference was found for any comparison made through the use of the analysis of variance statistical test (TABLE 15).

TABLE 15
A COMPARISON OF THE MEAN GAMES STARTED PERCENTAGE
FOR BLACKS, WHITES, AND LATINS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	0.158	0.079	0.493	0.611
League	2	0.376	0.188	1.177	0.309
Ethnic Group by League	3	1.157	0.386	2.414	0.066

The fact that no difference was found indicates that the three groups were relatively equal in the number of innings pitched in each league. Data for the comparison of games started percentage is found in APPENDIX E, TABLE 39.

The mean number of saves for each subject group was found. These computations were compared by league and no significant difference was found for either of these comparisons using the analysis of variance test (TABLE 16).

Blacks, whites, and Latins had a relatively equal mean number of saves for each league and for the leagues combined, based on the results of no significant differences occurring. Information on the comparison of saves is found in APPENDIX E, TABLE 40.

The mean winning percentage was calculated for each subject group. These figures were then compared by ethnic group by league.

TABLE 16

A COMPARISON OF THE MEAN NUMBER OF SAVES FOR
BLACK, WHITE, AND LATIN PITCHERS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	9.800	4.900	0.295	0.745
League	2	39.328	19.664	1.185	0.307
Ethnic Group by League	3	40.529	13.510	0.814	0.487

Using the analysis of variance test, no significant difference was found (TABLE 17).

The fact that no significant difference was found indicates that the ethnic groups' mean winning percentages were at least approximately the same for all leagues and as a sample group. APPENDIX E, TABLE 41 contains the data of comparisons of winning percentage.

TABLE 17

A COMPARISON OF THE MEAN WINNING PERCENTAGE FOR
BLACK, WHITE, AND LATIN PITCHERS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	1297.846	648.923	2.006	0.136
League	2	1078.306	539.153	1.482	0.228
Ethnic Group by League	3	1753.654	584.551	1.807	0.145

Another comparison of pitching performance involved earned run averages. The mean earned run average was found for each group of

pitchers and compared by subject groups by league. The comparisons revealed no significant difference among the three groups for any league, but a difference in leagues was discovered via the analysis of variance test (TABLE 18).

TABLE 18
A COMPARISON OF MEAN EARNED RUN AVERAGE FOR BLACK,
WHITE, AND LATIN PITCHERS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	4.483	2.241	1.712	0.182
League	2	51.213	25.606	19.561	0.000*
Ethnic Group by League	3	2.874	0.958	0.732	0.534

*Significant at the .001 level

No subject group differed significantly in the performance comparison of mean earned run average. This suggests that the groups' performance was consistent throughout the leagues studied with respect to earned run average. The difference in earned run average per league is explained by the lower skill level of the pitchers in the minor leagues, and is apparently not limited to any ethnic group. APPENDIX E, TABLE 42 contains the information pertaining to this comparison.

Black, white, and Latin pitchers were further analyzed according to hits given up per each inning pitched. The mean for each subject group's hits per inning was compared by subject group by league. Using the analysis of variance test, a significant difference was found only by league (TABLE 19).

TABLE 19

A COMPARISON OF THE MEAN NUMBER OF HITS PER
INNING PITCHED FOR BLACK, WHITE, AND
LATIN PITCHERS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	0.048	0.024	1.000	0.369
League	2	0.788	0.394	16.314	0.000*
Ethnic Group by League	3	0.023	0.008	0.321	0.811

*Significant at the .001 level

The fact that no difference was found among the groups regarding mean number of hits allowed per inning pitched and also among the subject groups by league, indicates that for this variable the groups performed equally. Differences in skill levels between the minor leagues and the major leagues accounted for the difference in hits per inning pitched per league. Data for this comparison of hits per inning pitched is in APPENDIX E, TABLE 43.

The mean number of strike outs per inning pitched was computed for each subject group. This strike out average was compared by subject group by league and no significant difference was found using the analysis of variance test (TABLE 20).

Because no significant difference was found, the results indicate that the subject groups were relatively equal in performance regarding the mean number of strike outs per inning pitched. This was true for the performance of this variable by the groups by league, also. Data concerning the comparison of the strike out average for pitchers is found in APPENDIX E, TABLE 44.

TABLE 20

A COMPARISON OF THE MEAN STRIKE OUT AVERAGE OF
BLACK, WHITE, AND LATIN PITCHERS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	0.028	0.014	0.505	0.604
League	2	0.056	0.028	0.991	0.372
Ethnic Group by League	3	0.159	0.053	1.889	0.131

The base on balls average was found for each subject group. Using the analysis of variance statistical test, those findings were compared by ethnic group by league and revealed that there was no significant difference among the subject groups, but that a significant difference did occur in base on balls average per league (TABLE 21).

TABLE 21

A COMPARISON OF THE MEAN BASE ON BALLS AVERAGE OF
BLACK, WHITE, AND LATIN PITCHERS BY LEAGUE

Source	Degrees of Freedom	Sums of Squares	Mean Squares	F-Ratio	Prob.
Ethnic Group	2	0.002	0.001	0.058	0.944
League	2	0.205	0.102	4.746	0.009*
Ethnic Group by League	3	0.143	0.048	2.212	0.086

*Significant at the .01 level

The result of no significant difference among the ethnic groups indicates that the groups were approximately equal for their base on

balls averages. This was true for the subject groups per league, too. The differences among the leagues was expected since the skill levels differ among the leagues examined. Data for the comparison of base on balls average is found in APPENDIX E, TABLE 45.

SUMMARY

Based on the analysis of the data collected in this study, the following findings seem appropriate:

1. The black, white, and Latin players are distributed equally throughout the teams and team organizations.
2. Black, white, and Latin players are not distributed equally with respect to the positions and leagues investigated for both pitchers and non-pitchers.
3. There is no difference in the batting performances investigated for any ethnic group.
4. The evidence for base running performance is unclear as to the differences found between subject groups. There is a definite difference among positions for stolen base percentage which may account for the difference found for players by position.
5. There is no difference among black, white, and Latin players at any position or in any league investigated by this study with respect to fielding percentage.
6. Pitchers for all subject groups and leagues performed equally well according to the comparisons investigated.

Chapter V

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to compare black, white, and Latin professional baseball players to determine if any discrimination existed. Teams, leagues, positions, and offensive, pitching, and defensive figures were compared by the ethnic groups. These comparisons were statistically analyzed to determine if any significant differences existed and a discussion of those findings was included. This chapter's purpose is to draw conclusions from the data presented and recommend a direction for future related research.

DISCUSSION

Many factors could account for the results of this research. For this reason it is necessary to discuss some of these to lend further insight into this study and its implications.

Rosenblatt (101), Pascal and Rapping (46), and Scully (56) discovered differences in performances of black and white major league baseball players which were not supported by this study. Comparisons of batting averages did not produce any significant differences between black, white, or Latin players in this study, which was in contrast to previous research. This may be explained by stating that discrimination does not exist in the major or minor leagues so that the best players play, that once given an opportunity a player performs to that standard of play, or that only a certain number of players of any ethnic group

is allowed the opportunity to play professional baseball. The explanation that no discrimination exists in professional baseball with regard to performance is the one accepted within the limits of this study.

This research produced some findings similar to and some new findings related to previous investigations (35, 36, 46, 56, 84, 101) pertaining to the segregation of ethnic groups by non-pitching playing position. Information in APPENDIX A, TABLES 24, 25, 26, 27, and 28 reveals that blacks are least often found at catcher, shortstop, third base, and second base; and most often found as outfielder/first basemen, outfielders, and designated hitters. This agrees with Grusky's (84) model of centrality and interaction, and the subsequent research based on Grusky's model. The findings for white players were as expected from Grusky's model, with them being underrepresented at the positions of outfield and designated hitter, and overrepresented at catcher, third base, and shortstop. It was expected that white players would also be overrepresented as second basemen, but this was not found. Latin players were distributed by position much differently than either the white or black non-pitchers. They occupied the positions of outfield/first base, first base, and catcher least often, and the positions of second base, shortstop, and utility player most often, which does not link the Latin players with either the black or white players in position distribution. While centrality and interaction are strong arguments for position distribution, Grusky's model does not offer a full and complete explanation for the findings of this study.

The difference in position distribution between the major leagues and the minor leagues suggests several possible explanations. It could be attributed to the existence of discrimination when promoting players

to the major leagues; or it may be that a change in the distribution of ethnic groups has recently begun, is starting in the minor leagues, and will come to the major leagues soon; or possibly that players of ethnic groups are placed in certain positions upon their promotion to the major leagues. Discrimination in promoting ethnic groups by position is the explanation accepted by the researcher.

Pitchers were not distributed evenly by ethnic group throughout the three classifications investigated. However, the differences varied from non-pitcher distributions. TABLE 12 reveals that the Florida State League has the highest distribution in terms of percentage of the black and Latin players. It may be assumed that it is harder for black and Latin pitchers to be promoted upwards from the lower minor leagues, which accounts for their low distribution in the Pacific Coast League and the major leagues.

The processes which occur in the formation of a player's position before he enters professional baseball are not accounted for in this investigation. This may occur in the selection of players signed to professional contracts, or in high school, or even before. Further research is needed to determine why so few black pitchers enter professional baseball, for example, and the reasons for ethnic group dominance in certain positions.

CONCLUSIONS

Within the limitations of this study the following conclusions were drawn from the data analyzed:

1. In agreement with previous studies, the segregation of ethnic groups by non-pitching playing positions does occur within the major

leagues. However, a difference in the position distribution of ethnic groups was not found in the two minor leagues studied, which implies that the segregation occurs in the step from the minor leagues to the major leagues for non-pitchers.

2. Although the number of black and Latin pitchers is relatively small for all leagues investigated, the evidence indicates that discrimination does occur in the advancement of black and Latin pitchers from the low classifications of the minor leagues to the high minor (AAA) and major leagues.

3. Contrary to previous investigations, since performance comparisons of this research did not differ significantly, it is concluded that the best players are being used and no discrimination is in evidence in this respect.

RECOMMENDATIONS

The following recommendations are made for further study:

1. Longitudinal investigation of the major leagues, Pacific Coast League, and Florida State League is needed to determine if there is any significant variance or consistency of the performances and distribution of black, white, and Latin players.

2. Investigation of Latins regarding skin color is essential to determine if any difference exists in performance and distribution between dark-skinned and light-skinned Latin Americans.

3. Research concerning the recruitment of players to professional baseball, and the distribution of ethnic groups in amateur and youth programs for baseball is needed to draw inferences for the distribution of the ethnic groups in professional baseball.

4. Investigation regarding those players who try out for baseball teams and positions at the various levels of play is needed. Also, the follow-up of those who eventually succeed in professional baseball would be valuable to sport sociologists.

5. Players excluded from this study because of their limited playing time need to be investigated to give insight into the role of the different ethnic groups for part-time players.

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APPENDIX A

TABLE 22

TEAMS BY LEAGUE AND ORGANIZATION

Major Leagues	AAA	A
American League	Pacific Coast League	Florida State League
Boston		Winter Haven
Baltimore		Miami
New York		Ft. Lauderdale
Cleveland		
Milwaukee	Sacramento, California	
Detroit		Lakeland
Oakland	Tuscon, Arizona	
Kansas City		
Chicago		
Texas	Spokane, Washington	
Minnesota	Tacoma, Washington	
California	Salt Lake City, Utah	
National League	Pacific Coast League	Florida State League
Cincinnati		Tampa
Los Angeles	Albuquerque, New Mexico	
San Francisco	Phoenix, Arizona	
San Diego	Honolulu, Hawaii	
Atlanta		
Houston		
Pittsburgh		
Philadelphia		
New York		
St. Louis		St. Petersburg
Chicago		Key West
Montreal		West Palm Beach

TABLE 23

ETHNIC GROUP BY TEAM ORGANIZATION

Team Organization	Number of Players by Organization	Ethnic Group	Number of Players In Group	Percentage of Team Organization
Boston	39	Black	9	23.1
		White	27	69.2
		Latin	3	7.7
Baltimore	27	Black	9	33.3
		White	15	55.6
		Latin	3	11.1
New York (AL)	36	Black	12	33.3
		White	19	52.8
		Latin	5	13.9
Cleveland	16	Black	4	25.0
		White	11	68.8
		Latin	1	6.3
Milwaukee	34	Black	7	20.6
		White	22	64.7
		Latin	5	14.7
Detroit	32	Black	8	25.0
		White	21	65.6
		Latin	3	9.4
Oakland	29	Black	9	31.0
		White	15	51.7
		Latin	5	17.2
Kansas City	15	Black	6	40.0
		White	8	53.3
		Latin	1	6.7
Chicago (AL)	12	Black	3	25.0
		White	8	66.7
		Latin	1	8.3

TABLE 23 (continued)

Team Organization	Number of Players by Organization	Ethnic Group	Number of Players In Group	Percentage of Team Organization
Texas	32	Black	5	15.6
		White	25	78.1
		Latin	2	6.3
Minnesota	37	Black	5	13.5
		White	27	73.0
		Latin	5	13.5
California	39	Black	7	17.9
		White	25	64.1
		Latin	7	17.9
Cincinnati	28	Black	9	32.1
		White	16	57.1
		Latin	3	10.7
Los Angeles	32	Black	7	21.9
		White	19	59.4
		Latin	6	18.8
San Francisco	30	Black	8	26.7
		White	21	70.0
		Latin	1	3.3
San Diego	29	Black	6	20.7
		White	19	65.5
		Latin	4	13.8
Atlanta	15	Black	7	46.7
		White	8	53.3
		Latin	0	0.0
Houston	16	Black	5	31.3
		White	9	56.3
		Latin	2	12.5

TABLE 23 (continued)

Team Organization	Number of Players by Organization	Ethnic Group	Number of Players In Group	Percentage of Team Organization
Pittsburgh	14	Black	4	28.6
		White	7	50.0
		Latin	3	21.4
Philadelphia	15	Black	4	26.7
		White	10	66.7
		Latin	1	6.7
New York (NL)	17	Black	2	11.8
		White	13	76.5
		Latin	2	11.8
St. Louis	31	Black	11	35.5
		White	17	54.8
		Latin	3	9.7
Chicago (NL)	28	Black	7	25.0
		White	16	57.1
		Latin	5	17.9
Montreal	31	Black	6	19.4
		White	18	58.1
		Latin	7	22.6
Totals	634	Black	160	25.2
		White	396	62.5
		Latin	78	12.3

TABLE 24

DISTRIBUTION OF NON-PITCHERS BY ETHNIC GROUP AND POSITION

Ethnic Group	C	1B	2B	3B	SS	U	DH	OF	OF/1B	Totals
Black										
Number of Players	5	19	9	7	5	12	11	86	6	160
% of Ethnic Group	3.1	11.9	5.6	4.4	3.1	7.5	6.9	53.8	3.8	
% of All Players at the Position	5.5	31.1	16.1	14.0	7.4	21.1	36.7	41.7	42.9	
% of All Players	0.8	3.0	1.4	1.1	0.8	1.9	1.7	13.6	0.9	25.2
White										
Number of Players	79	38	35	39	49	35	16	96	8	396
% of Ethnic Group	19.9	9.6	8.8	9.8	12.4	8.8	4.0	24.2	2.0	
% of All Players at the Position	86.8	62.3	62.5	78.0	72.1	61.4	53.3	46.6	57.1	
% of All Players	12.5	6.0	5.5	6.2	7.7	5.5	2.5	15.1	1.3	62.5
Latin										
Number of Players	7	4	12	4	14	10	3	24	0	78
% of Ethnic Group	9.0	5.1	15.4	5.1	17.9	12.8	3.8	30.8	0.0	
% of All Players at the Position	7.7	6.6	21.4	8.0	20.6	17.5	10.0	11.7	0.0	
% of All Players	1.1	0.6	1.9	0.6	2.2	1.6	0.5	3.8	0.0	12.3
Totals										
Number of Players	91	61	56	50	68	57	30	206	14	634
Positions as a % of the	14.4	9.6	8.8	7.9	10.7	9.0	4.7	32.5	2.2	100.0
Total Number of Players										

TABLE 25

DISTRIBUTION OF AMERICAN LEAGUE NON-PITCHERS BY ETHNIC GROUP AND POSITION

Ethnic Group	C	1B	2B	3B	SS	U	DH	OF	OF/1B	Totals
Black										
Number of Players	1	6	1	1	0	2	8	35	2	56
% of All AL Black Players	1.8	10.7	1.8	1.8	0.0	3.6	14.3	62.5	3.6	
% of All AL Players by Position	3.7	37.5	5.9	6.7	0.0	14.3	47.1	56.5	25.0	
% of All AL Players	0.5	3.1	0.5	0.5	0.0	1.0	4.1	17.9	1.0	28.7
White										
Number of Players	24	10	11	12	16	9	6	24	6	118
% of All AL White Players	20.3	8.5	9.3	10.2	13.6	7.6	5.1	20.3	5.1	
% of All AL Players by Position	88.9	62.5	64.7	80.0	84.2	64.3	35.3	38.7	75.0	
% of All AL Players	12.3	5.1	5.6	6.2	8.2	4.6	3.1	12.3	3.1	60.5
Latin										
Number of Players	2	0	5	2	3	3	3	3	0	21
% of All AL Latin Players	9.5	0.0	23.8	9.5	14.3	14.3	14.3	14.3	0.0	
% of All AL Players by Position	7.4	0.0	29.4	13.3	15.8	21.4	17.6	4.8	0.0	
% of All AL Players	1.0	0.0	2.6	1.0	1.5	1.5	1.5	1.5	0.0	10.8
Totals										
Number of Players	27	16	17	15	19	14	17	62	8	195
% of Players by Position	13.8	8.2	8.7	7.7	9.7	7.2	8.7	31.8	4.1	100.0

TABLE 26

DISTRIBUTION OF NATIONAL LEAGUE NON-PITCHERS BY ETHNIC GROUP AND POSITION

Ethnic Group	C	1B	2B	3B	SS	U	DH	OF	OF/1B	Totals
Black										
Number of Players	1	8	6	1	1	3	--	26	3	49
% of All NL Black Players	2.0	16.3	12.2	2.0	2.0	6.1	--	53.1	6.1	
% of All NL Players by Position	3.8	36.4	37.5	6.7	4.5	23.1	--	41.3	100.0	
% of All NL Players	0.6	4.4	3.3	0.6	0.6	1.7	--	14.4	1.7	27.2
White										
Number of Players	24	11	5	14	15	8	--	28	0	105
% of All NL White Players	22.9	10.5	4.8	13.3	14.3	7.6	--	26.7	0.0	
% of All NL Players by Position	92.3	50.0	31.3	93.3	68.2	61.5	--	44.4	0.0	
% of All NL Players	13.3	6.1	2.8	7.8	8.3	4.4	--	15.6	0.0	58.3
Latin										
Number of Players	1	3	5	0	6	2	--	9	0	26
% of All NL Latin Players	3.8	11.5	19.2	0.0	23.1	7.7	--	34.6	0.0	
% of All NL Players by Position	3.8	13.6	31.3	0.0	27.3	15.4	--	14.3	0.0	
% of All NL Players	0.6	1.7	2.8	0.0	3.3	1.1	--	5.0	0.0	14.4
Totals										
Number of Players	26	22	16	15	22	13	--	63	3	180
% of Players by Position	14.4	12.2	8.9	8.3	12.2	7.2	--	35.0	1.7	100.0

TABLE 27

DISTRIBUTION OF PACIFIC COAST LEAGUE NON-PITCHERS BY ETHNIC GROUP AND POSITION

Ethnic Group	C	1B	2B	3B	SS	U	DH	OF	OF/1B	Totals
Black										
Number of Players	1	2	0	2	0	3	1	13	0	22
% of All PCL Black Players	4.5	9.1	0.0	9.1	0.0	12.6	4.5	59.1	0.0	
% of All PCL Players by Position	5.3	16.7	0.0	22.2	0.0	20.0	11.1	30.2	0.0	
% of All PCL Players	0.8	1.5	0.0	1.5	0.0	2.3	0.8	9.8	0.0	16.7
White										
Number of Players	16	9	10	7	10	10	8	24	1	95
% of All PCL White Players	16.8	9.5	10.5	7.4	10.5	10.5	8.4	25.3	1.1	
% of All PCL Players by Position	84.2	75.0	100.0	77.8	71.4	66.7	88.9	55.8	100.0	
% of All PCL Players	12.1	6.8	7.6	5.3	7.6	7.6	6.1	18.2	0.8	72.0
Latin										
Number of Players	2	1	0	0	4	2	0	6	0	15
% of All PCL Latin Players	13.3	6.7	0.0	0.0	26.7	13.3	0.0	40.0	0.0	
% of All PCL Players by Position	10.5	8.3	0.0	0.0	28.6	13.3	0.0	14.0	0.0	
% of All PCL Players	1.5	0.8	0.0	0.0	3.0	1.5	0.0	4.5	0.0	11.4
Totals										
Number of Players	19	12	10	9	14	15	9	43	1	132
% of Players by Position	14.4	9.1	7.6	6.8	10.6	11.4	6.8	32.6	0.8	100.0

TABLE 28

DISTRIBUTION OF FLORIDA STATE LEAGUE NON-PITCHERS BY ETHNIC GROUP AND POSITION

Ethnic Group	C	1B	2B	3B	SS	U	DH	OF	OF/1B	Totals
Black										
Number of Players	2	3	2	3	4	4	2	12	1	33
% of All FSL Black Players	6.1	9.1	6.1	9.1	12.1	12.1	6.1	36.4	3.0	
% of All FSL Players by Position	10.5	27.3	15.4	27.3	30.8	26.7	50.0	31.6	50.0	
% of All FSL Players	1.6	2.4	1.6	2.4	3.1	3.1	1.6	9.4	0.8	26.0
White										
Number of Players	15	8	9	6	8	8	2	20	1	78
% of All FSL White Players	19.2	10.3	11.5	7.7	10.3	10.3	2.6	25.6	1.3	
% of All FSL Players by Position	78.9	72.7	69.2	54.5	61.5	53.3	50.0	52.6	50.0	
% of All FSL Players	11.8	6.3	7.1	4.7	6.3	6.3	1.6	15.7	0.8	61.4
Latin										
Number of Players	2	0	2	2	1	3	0	6	0	16
% of All FSL Latin Players	12.5	0.0	12.5	12.5	6.3	18.8	0.0	37.5	0.0	
% of All FSL Players by Position	10.5	0.0	15.4	18.2	7.7	20.0	0.0	15.8	0.0	
% of All FSL Players	1.6	0.0	1.6	1.6	0.8	2.4	0.0	4.7	0.0	12.6
Totals										
Number of Players	19	11	13	11	13	15	4	38	2	127
% of Players by Position	15.0	8.7	10.2	8.7	10.2	11.8	3.1	29.9	1.6	100.0

APPENDIX B

TABLE 29

NUMBER OF PLAYERS BY POSITION, ETHNIC GROUP, AND LEAGUE

Position	Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Catcher	Black	2	1	2	5
	White	48	16	15	79
	Latin	3	2	2	7
First Base	Black	14	2	3	19
	White	21	9	8	38
	Latin	3	1	0	4
Second Base	Black	7	0	2	9
	White	16	10	9	35
	Latin	10	0	2	12
Third Base	Black	2	2	3	7
	White	26	7	6	39
	Latin	2	0	2	4
Shortstop	Black	1	0	4	5
	White	31	10	8	49
	Latin	9	4	1	14
Utility	Black	5	3	4	12
	White	17	10	8	35
	Latin	5	2	3	10
Designated Hitter	Black	8	1	2	11
	White	6	8	2	16
	Latin	3	0	0	3
Outfield	Black	61	13	12	86
	White	52	24	20	96
	Latin	12	6	6	24
Outfield/ First Base	Black	5	0	1	6
	White	6	1	1	8
	Latin	0	0	0	0

TABLE 30

GAMES PLAYED BY POSITION, ETHNIC GROUP, AND LEAGUE

Position	Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Catcher	Black	46.5	76.0	48.5	53.2
	White	87.0	72.1	60.5	79.0
	Latin	102.7	21.5	78.5	72.6
First Base	Black	115.1	136.0	71.0	110.3
	White	98.9	82.9	79.8	91.1
	Latin	128.7	76.0	--	115.5
Second Base	Black	111.6	--	58.0	99.7
	White	101.6	88.3	71.2	90.0
	Latin	139.2	--	126.0	137.0
Third Base	Black	91.5	104.5	102.3	99.9
	White	127.2	78.4	98.3	114.0
	Latin	103.0	--	104.5	103.8
Shortstop	Black	141.0	--	77.5	90.2
	White	101.7	103.0	72.9	97.2
	Latin	99.9	67.0	132.0	92.8
Utility	Black	121.4	105.7	51.3	94.1
	White	71.0	76.1	72.6	72.8
	Latin	60.8	58.0	75.7	64.7
Designated Hitter	Black	112.1	35.0	34.0	90.9
	White	83.5	59.3	84.5	71.5
	Latin	123.3	--	--	123.3
Outfield	Black	111.3	85.5	83.1	103.5
	White	103.8	85.2	89.4	96.1
	Latin	112.1	97.7	73.3	98.8
Outfield/ First Base	Black	123.2	--	92.0	118.0
	White	102.3	80.0	121.0	101.9
	Latin	--	--	--	--

TABLE 31

BATTING AVERAGES BY POSITION, ETHNIC GROUP, AND LEAGUE

Position	Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Catcher	Black	.203	.259	.221	.221
	White	.238	.252	.214	.237
	Latin	.259	.211	.203	.230
First Base	Black	.257	.256	.223	.252
	White	.258	.273	.229	.255
	Latin	.295	.306	--	.298
Second Base	Black	.257	--	.213	.248
	White	.255	.269	.232	.253
	Latin	.270	--	.240	.265
Third Base	Black	.295	.280	.250	.271
	White	.253	.282	.244	.257
	Latin	.240	--	.256	.248
Shortstop	Black	.234	--	.232	.232
	White	.232	.270	.238	.241
	Latin	.226	.242	.215	.229
Utility	Black	.276	.287	.237	.266
	White	.226	.268	.199	.232
	Latin	.195	.269	.194	.209
Designated Hitter	Black	.233	.258	.223	.234
	White	.245	.316	.287	.286
	Latin	.278	--	--	.278
Outfield	Black	.270	.292	.222	.267
	White	.255	.265	.245	.255
	Latin	.266	.310	.217	.265
Outfield/ First Base	Black	.253	--	.247	.252
	White	.256	.323	.235	.262
	Latin	--	--	--	--

TABLE 32

TOTAL BASE PERCENTAGE BY POSITION, ETHNIC GROUP, AND LEAGUE

Position	Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Catcher	Black	.315	.446	.279	.327
	White	.343	.362	.292	.337
	Latin	.376	.306	.280	.329
First Base	Black	.432	.390	.322	.410
	White	.376	.419	.300	.370
	Latin	.423	.457	--	.431
Second Base	Black	.345	--	.266	.327
	White	.322	.369	.289	.327
	Latin	.369	--	.293	.357
Third Base	Black	.451	.393	.304	.372
	White	.375	.438	.329	.379
	Latin	.334	--	.357	.346
Shortstop	Black	.293	--	.268	.273
	White	.306	.351	.271	.309
	Latin	.277	.317	.289	.289
Utility	Black	.409	.386	.278	.360
	White	.292	.374	.255	.307
	Latin	.240	.364	.223	.260
Designated Hitter	Black	.411	.398	.280	.386
	White	.441	.508	.335	.461
	Latin	.398	--	--	.398
Outfield	Black	.403	.423	.293	.390
	White	.379	.395	.316	.370
	Latin	.363	.456	.265	.362
Outfield/ First Base	Black	.383	--	.345	.376
	White	.396	.396	.352	.390
	Latin	--	--	--	--

TABLE 33

RBI'S PER AT BAT BY POSITION, ETHNIC GROUP, AND LEAGUE

Position	Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Catcher	Black	.101	.203	.076	.112
	White	.109	.135	.113	.115
	Latin	.137	.088	.070	.104
First Base	Black	.158	.142	.110	.148
	White	.129	.159	.113	.133
	Latin	.176	.178	--	.177
Second Base	Black	.091	--	.060	.084
	White	.087	.104	.081	.090
	Latin	.109	--	.077	.103
Third Base	Black	.127	.151	.092	.119
	White	.123	.156	.130	.130
	Latin	.084	--	.112	.098
Shortstop	Black	.081	--	.083	.083
	White	.088	.111	.078	.091
	Latin	.063	.087	.076	.071
Utility	Black	.132	.112	.102	.117
	White	.097	.105	.082	.096
	Latin	.077	.144	.084	.092
Designated Hitter	Black	.142	.161	.103	.137
	White	.157	.182	.081	.160
	Latin	.121	--	--	.121
Outfield	Black	.116	.134	.099	.116
	White	.114	.139	.092	.116
	Latin	.102	.159	.080	.111
Outfield/ First Base	Black	.125	--	.123	.124
	White	.129	.142	.157	.134
	Latin	--	--	--	--

APPENDIX C

TABLE 34

RUNS PER AT BAT BY POSITION, ETHNIC GROUP, AND LEAGUE

Position	Ethnic Group	Major Leagues	Pacific Coast League	Florida Coast League	Totals
Catcher	Black	.139	.171	.065	.116
	White	.102	.123	.106	.107
	Latin	.119	.138	.078	.113
First Base	Black	.131	.140	.110	.129
	White	.116	.145	.100	.120
	Latin	.119	.142	--	.125
Second Base	Black	.160	--	.088	.144
	White	.104	.146	.117	.120
	Latin	.122	--	.103	.119
Third Base	Black	.131	.168	.109	.132
	White	.112	.162	.096	.118
	Latin	.120	--	.106	.113
Shortstop	Black	.104	--	.120	.117
	White	.098	.143	.094	.107
	Latin	.108	.136	.141	.119
Utility	Black	.141	.159	.080	.125
	White	.112	.157	.125	.128
	Latin	.099	.144	.100	.108
Designated Hitter	Black	.127	.108	.066	.114
	White	.127	.187	.117	.156
	Latin	.126	--	--	.126
Outfield	Black	.140	.159	.129	.141
	White	.133	.157	.126	.138
	Latin	.131	.169	.127	.140
Outfield/ First Base	Black	.130	--	.136	.131
	White	.130	.173	.115	.133
	Latin	--	--	--	--

TABLE 35

STOLEN BASE PERCENTAGE BY POSITION, ETHNIC GROUP, AND LEAGUE

Position	Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Catcher	Black	.250	.545	.400	.369
	White	.417	.590	.378	.445
	Latin	.352	.000	.250	.222
First Base	Black	.364	.573	.278	.372
	White	.356	.395	.328	.359
	Latin	.333	.667	--	.417
Second Base	Black	.734	--	.625	.710
	White	.359	.500	.473	.429
	Latin	.538	--	.655	.558
Third Base	Black	.281	.717	.782	.620
	White	.464	.620	.812	.546
	Latin	.250	--	.000	.125
Shortstop	Black	.571	--	.549	.553
	White	.472	.581	.691	.530
	Latin	.491	.746	.500	.564
Utility	Black	.680	.690	.487	.618
	White	.398	.503	.557	.464
	Latin	.286	.250	.706	.405
Designated Hitter	Black	.337	.000	.000	.245
	White	.222	.725	.726	.537
	Latin	.382	--	--	.382
Outfield	Black	.643	.788	.719	.676
	White	.472	.695	.613	.557
	Latin	.495	.646	.807	.611
Outfield/ First Base	Black	.550	--	.600	.559
	White	.605	.500	.696	.603
	Latin	--	--	--	--

APPENDIX D

TABLE 36

FIELDING PERCENTAGE BY POSITION, ETHNIC GROUP, AND LEAGUE

Position	Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Catcher	Black	.961	.983	.966	.967
	White	.983	.979	.977	.981
	Latin	.991	.958	.970	.976
First Base	Black	.988	.981	.990	.987
	White	.991	.989	.986	.989
	Latin	.985	.989	.976	.985
Second Base	Black	.970	.950	.943	.963
	White	.976	.972	.956	.971
	Latin	.980	.922	.958	.969
Third Base	Black	.968	.899	.939	.931
	White	.943	.921	.952	.937
	Latin	.971	.923	.932	.958
Shortstop	Black	.947	.944	.928	.938
	White	.957	.942	.938	.951
	Latin	.954	.945	.943	.951
Outfield	Black	.978	.970	.970	.975
	White	.962	.973	.969	.966
	Latin	.974	.950	.953	.963

APPENDIX E

TABLE 37

MEAN NUMBER OF GAMES PITCHED BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	32.1	--	21.0	26.4
White	34.5	23.7	20.9	29.6
Latin	40.8	31.2	19.6	30.7

TABLE 38

MEAN NUMBER OF INNINGS PITCHED BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	156.1	--	92.9	123.5
White	132.5	99.3	90.2	117.4
Latin	124.8	104.3	96.4	109.8

TABLE 39

MEAN GAMES STARTED PERCENTAGE BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	.670	--	.501	.583
White	.495	.575	.600	.532
Latin	.297	.469	.702	.487

TABLE 40
MEAN NUMBER OF SAVES BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	1.133	--	1.813	1.484
White	2.668	1.670	1.439	2.220
Latin	3.385	1.333	0.750	1.968

TABLE 41
MEAN WINNING PERCENTAGE BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	.481	--	.470	.475
White	.491	.493	.487	.491
Latin	.592	.438	.453	.509

TABLE 42
MEAN EARNED RUN AVERAGE BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	4.06	--	3.20	3.61
White	3.74	4.37	2.99	3.76
Latin	3.72	5.14	2.98	3.71

TABLE 43

MEAN OF HITS PER INNING PITCHED BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	.972	--	.870	.919
White	.983	1.053	.872	.980
Latin	1.006	1.143	.890	.987

TABLE 44

MEAN STRIKE OUT AVERAGE BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	.616	--	.548	.581
White	.551	.585	.595	.567
Latin	.529	.630	.672	.604

TABLE 45

MEAN BASE ON BALLS AVERAGE BY ETHNIC GROUP AND LEAGUE

Ethnic Group	Major Leagues	Pacific Coast League	Florida State League	Totals
Black	.420	--	.389	.404
White	.355	.439	.454	.392
Latin	.313	.457	.459	.397

A COMPARISON OF THE PERFORMANCE OF BLACK, WHITE,
AND LATIN PROFESSIONAL BASEBALL PLAYERS

by

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B. S., Kansas State University, 1970

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Health, Physical Education, and Recreation

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1977

ABSTRACT

The purpose of this study was to compare the performances and distribution of black, white, and Latin professional baseball players. Of the total sample of one thousand seventy-five pitching and non-pitching players, five hundred twenty-six were major leaguers, two hundred twenty-six were Pacific Coast League players, and two hundred twenty-one were Florida State League players. All players were then identified by ethnic group (black, white, or Latin), the position they played, and the team for which they played. Positions which were examined for non-pitchers were catcher, first base, second base, third base, shortstop, utility, designated hitter, outfield, and outfield/first base. Comparison of the data for non-pitchers by ethnic group, league, and position included the distribution of players, distribution of players by team, number of games played, batting average, total base percentage, runs batted in per at bat, runs scored per at bat, stolen base percentage, and fielding percentage. Pitchers were compared by ethnic group and league by their distribution, games pitched, innings pitched, games started percentage, saves, winning percentage, earned run average, hits per inning pitched, strike outs per inning pitched, and bases on balls per inning pitched. A significant difference to the .05 level was found for the Chi Square analysis of the ethnic group distribution of non-pitchers by position in the major leagues and for the distribution of pitchers for all leagues, with the most even distribution both for pitchers and non-pitchers occurring in the Florida State

League. No significant difference was found for the distribution by team. The one way analysis of variance for the comparison of the ethnic groups for all non-pitching performance comparisons by league and position resulted in the finding of no significant difference among the groups to the .05 level, with the exception of stolen base percentage, which showed a significant difference for position and ethnic group by position. No significant difference was found for any of the pitching performance comparisons by ethnic group and league. It was concluded that:

1. Segregation by playing position occurs in the promotion of ethnic groups from the minor leagues to the major leagues.
2. Pitchers' advancement from the lower minor leagues is connected to ethnic group and hence discrimination occurs.
3. All pitchers and non-pitchers perform equally and no discrimination exists in this respect.