

Negro Leagues

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Abstract

As Bradshaw left, the lawyer looked at his watch. “And now, Poole, let us get to ours,” he said; and taking the poker under his arm, led the way into the yard. The scud had banked over the moon, and it was now quite dark. The wind, which only broke in puffs and draughts into that deep well of building, tossed the light of the candle to and fro about their steps, until they came into the shelter of the theatre, where they sat down silently to wait. London hummed solemnly all around; but nearer at hand, the stillness was only broken by the sounds of a footfall moving to and fro along the cabinet floor. Code available on GitHub: <https://github.com/hodgettsp/nlmlb>

Introduction

On April 15th, 1947, Jackie Robinson made his debut for the Brooklyn Dodgers and broke the Major League Baseball (MLB) ‘Colour Line’ that had been established as an unwritten agreement amongst league owners preventing non-white players from playing in the MLB. Although not the first Black man to play in the major leagues, historians consider William Edward White the first Black player and Moses Fleetwood Walker as the first openly Black player, Robinson was the first to break the established segregation and usher in an era of integration for the MLB. Indeed, Moses Fleetwood Walker was the last Black player in the Majors and it was the refusal of Cap Anson to take the field against Fleetwood Walker that led to the segregation of baseball and establishment of the “Colour Line”.

Before joining the Brooklyn Dodgers organization in 1946, Robinson spent the 1945 baseball season playing for the Kansas City Monarchs of the Negro American League. While various iterations of the Negro Leagues had existed, it is generally agreed upon by baseball historians that the period of time that is referred to by use of the Negro Leagues is between the 1920 and the establishment of the Negro National League and the early 1960’s with the folding of the Negro American League. In a time during which Black players were not allowed to play in the MLB, the Negro Leagues provided a place for Black players to play and be paid for their efforts. Over the seasons, the Negro Leagues saw such stars as Cool Papa Bell, Satchel Paige, Josh Gibson, Ernie Banks, Willie Mays, and Henry Aaron to name a few. Like Robinson, some of these players saw time in the MLB. However, the integration of the MLB did not eliminate the racism these players experienced, which continued from the fans and other players. Moreover, many players from the Negro Leagues were never given a fair opportunity to play in the MLB, while those who retired from baseball before the 1947 season were never even given a chance.

While the integration of baseball has been considered necessary, the effects that the implementation of integration had on the Negro Leagues and Black-baseball in the United States in general have been questioned. Integration itself was also not an immediate process. For instance, while Jackie Robinson debuted in 1947 for the Brooklyn Dodgers of the National League and Larry Doby debuted in the same year shortly after for the Cleveland baseball team of the American League, it was not until 1959, twelve years after Jackie Robinson and Larry Doby first played and three years after Robinson retired and the same year that Doby retired, that the entire Major Leagues was integrated when Pumpsie Green debuted for the Boston Red Sox. Additionally, the difficulty of making the Major Leagues has been noted by previous Negro League players. Due to both the competition and that teams would often only carry two to three Black players on the roster at a given time.

This paper explores the following: the accessibility of Negro League data as compared to Major League data of the same period as discussed within the larger context of racially based historical data, the process of integration and the number of Black players (those who played in the Negro Leagues and those who did not) carried by teams in the Integration Era, and the effects of integration on the Negro Leagues. The Integration Era of baseball is often classified as the beginning of the 1947 season to the end of the 1960 season. After which, the Major Leagues expanded to include two new teams in the American League at the beginning of the 1961 season. While an official date for the end of the Negro Leagues is not officially agreed upon, Negro League All-Star games were played in 1962. For this reason, this paper will examine integration as from the beginning of the 1947 season to the end of the 1962 season. This is done to include as much of a period of the officially recognized Negro Leagues as possible; however, it does mean including two years in which the Major Leagues expanded (1961 and 1962). As such, a particular focus will be between the 1947 and 1960 seasons as the introduction of the four new teams would change the demographics of the player population. Additionally, the league was fully integrated in 1959, so use of 1960 provides a useful cut-off point to mark the end of initial integration.

The Negro Leagues

In 1920, the Negro National League was founded in large part due to the efforts of Andrew “Rube” Foster. While previous Black teams and leagues had existed in some form, the formulation of this league marked what is commonly considered the beginning of the modern Negro “Major” Leagues. For 11 years the Negro National League was considered the highest level of play amongst Negro league teams, but financial troubles brought on by the Great Depression led to the folding of the league in 1931. With the folding of the Negro National League in 1931, the remaining Negro Southern League, hosting such teams as the Nashville Elite Giants and Birmingham Black Barons, was elevated as the de facto major league for the 1932 season. However, this designation only lasted for the 1932 season as the Negro National League was re-established in 1933 and was again considered the major league for the Negro Leagues. Four years later the Negro National League would be joined at the major league level by the establishment of the Negro American League in 1937. These leagues continued operation until between the 1948 and 1949 seasons, a year after Jackie Robinson debuted for the Brooklyn Dodgers and Larry Doby debuted for the Cleveland baseball team, when the Negro National League folded. The Negro American League would continue operation until between the 1962 and 1963 seasons when the final All-Star game was held. This point is generally marked as the official end of the Negro

League. Other teams, like the Indianapolis Clowns existed and continued operating, but often only for exhibition games and not in a competitive sense.

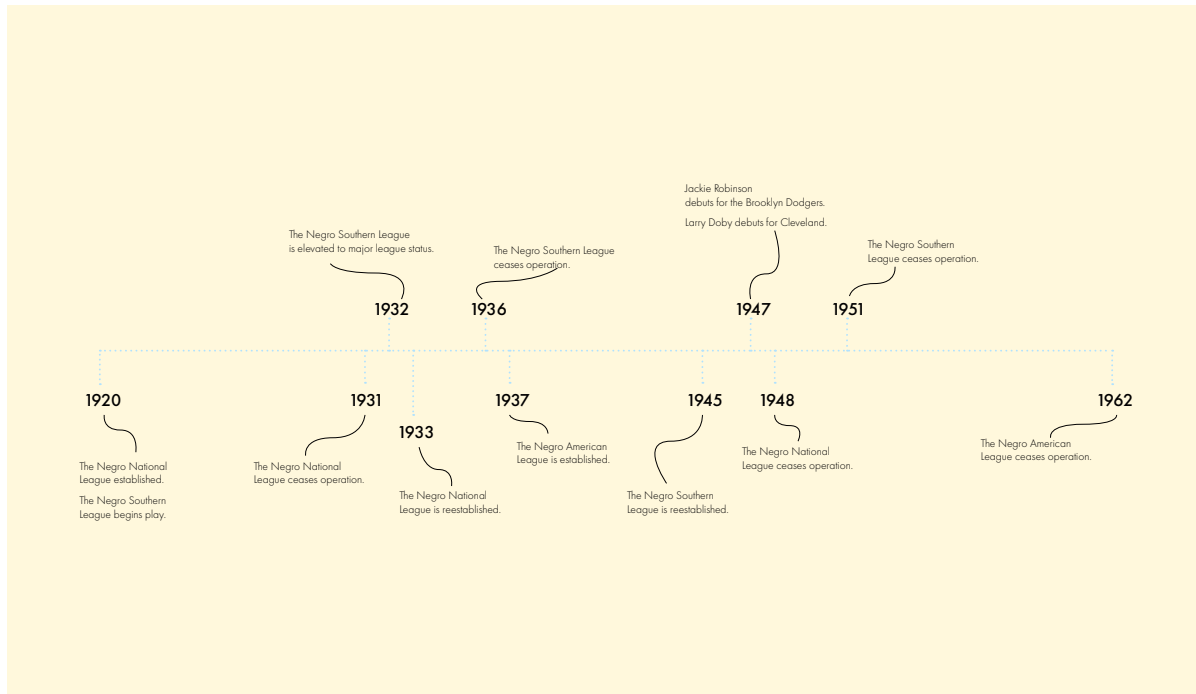


Figure 1: A general timeline of the Negro Leagues.

Data

Access

Access to Negro League data is limited when compared to the accessibility of Major League Baseball data for the same period of time (1920-1962). For example, the `Lahman` [4] R package provides access to MLB player, batting, pitching, and fielding data dating back to 1871. Whereas, no equivalent R package exists for Negro League data. Additionally, batting and fielding data is currently only available for 1920 to 1948 through the ‘Seamheads’ Negro Leagues database website [5]. Additionally, this database only covers games between teams that the managers of the database have deemed as Black major league teams. This means games against white semipro and amateur teams, lower-level white minor league teams, college teams, and teams defined as Black minor league teams. Prior to the 1920 season, these games comprised a large part of Black teams’ schedules, which means statistics from these games are largely unavailable. This is in comparison to the accessibility of MLB data from websites such as Baseball Reference, Fangraphs, and the MLB website. Additionally, in comparison to access to Negro League data, this MLB data is readily accessible through databases like the Lahman database and Retrosheets database. Additionally, packages such as `Lahman` [4], `retrosheet` [3], and `baseballr` [10] make accessing data from these sites easier, while no such equivalent package exists for Seamheads or Negro League data.

Collection

Due to the lack of immediately downloadable data, data for this project was compiled from scraping PDF files made available by the Center for Negro League Baseball Research (CNLBR) [2]. Additional Negro League player lists were scraped from the Wikipedia entries that alphabetically list Negro League players [12]. Code from the Wikipedia pages was scraped using the `rvest` package [11]. In a comparison to Negro League player lists provided by the CNLBR, it was noted that the Wikipedia list of Negro League players was incomplete. To complete this list, these players were manually entered into the Wikipedia scraped list. However, these players were only found because they also played in the MLB, meaning that the list of Negro League players used in this paper may be incomplete. There are indeed discrepancies between both lists, with the Wikipedia list containing players who do not appear on the Center for Negro League Baseball Research list and vice versa. Meaning, the current list of Negro League players is incomplete. Highlighting another issue of the quality and accessibility of Negro League data. The data specifically collected from Wikipedia is a list of Negro League players.

Data collected from the Center For Negro League Baseball Research includes a list of Negro League players who also played in Major League Baseball[7]. This was downloaded as a PDF, from which the data was scraped using the `pdftools` package [9]. This list was chosen as it provides the most complete list of players who played in both the Negro Leagues and MLB. For instance, the list of players provided by Wikipedia only goes up to the 1950 season and then only includes a select few players who debuted in either league after that point. Other lists of players, such as that provided by the Negro League Players Association, only provide the names of players who played in both leagues and do not include the dates at which the players played their final game in the Negro Leagues and debuted in the MLB. These dates are necessary to better understand the timeline of the Negro Leagues and MLB, which is why the Wikipedia list and CNLBR lists were chosen.

To also understand the population of the MLB, the `Lahman` [4] R package was used to access player information for all MLB players. This package provides direct access to Sean Lahman's baseball archive, a free relational database of individual and team statistics that covers games back to 1871, for R users. For non-R users, the database is also available for download in a comma-delimited version (csv), and through MS Access. Seasons previous to the 2020 season are also available through SQL. In R, this database is divided into the sections `People` (player names, dates of birth, death, and other biographical info), `Batting` (batting statistics), `Pitching` (pitching statistics), and `Fielding` (fielding statistics). Information, when available, dates back to 1871. For the purpose of this paper, only the `People` section of data was used.

Analysis

Comparison of Data Sources

Player Debut Season vs. Player Final Season

In addition to exploring the accessibility of Negro League data in comparison to MLB data, a cursory analysis of the effects of integration on the Negro Leagues was also performed. Previous analyses have performed a statistical comparison between Negro League players and MLB players. For instance, a

piece from 538 [8], provides a comparison of Negro League players, those who did and did not play in MLB, to current and historical MLB players. Other analyses, such as this report by Armour and Levitt [6], provide an analysis of racial demographics of baseball from the start of integration in 1947 to 2016. This report by Pavitt [1] examines player participation and fielding position in MLB by player ethnicity from 1946-2018. However, while there has been much written about the end of the Negro Leagues in relation to integration, there is little in regards to a statistical analysis of the process. Particularly as a focus on the Negro Leagues and the players. Two things in particular are examined in this analysis, the count of players in the Negro Leagues pre- and post-integration, and the count of Negro League players and Black players in MLB in the Integration era of MLB (1947 to 1960).

Figure 1 shows the distribution of players who debuted and played their final game for a given season in the Negro Leagues from 1873 to 1975. However, while numbers pre-1920 are available these records are spotty and may not truly represent the actual number of players in the Negro Leagues prior to the 1920 season. The founding of the Negro National League in 1920 can be seen in Figure 1 with the increased number of players making their debut that year and the following season. This could be for two reasons, firstly that there was actually that many players making their debut or that record keeping began for that season and many players who had previously been playing were marked as having debuted for that year. The first collapse of the Negro National League in 1931 can also be seen with close to 70 players their final game. The increase in players making their debut in 1937 can also be attributed to the founding of the Negro American League. Of particular note is the dramatic increase in players who played their final Negro League game in 1948 with 138 players playing their final game. This marks the year after integration formally began with MLB, but also marks the year in which the Negro National League ceased operation. The spike of final games played in 1951 also marks when the Negro Southern League ceased operation.

The Negro American League folded around the 1963 season, and as can be seen in Figure 1 there were very few players to have debuted or played their final game by that point. Indicating the dire state of the league.

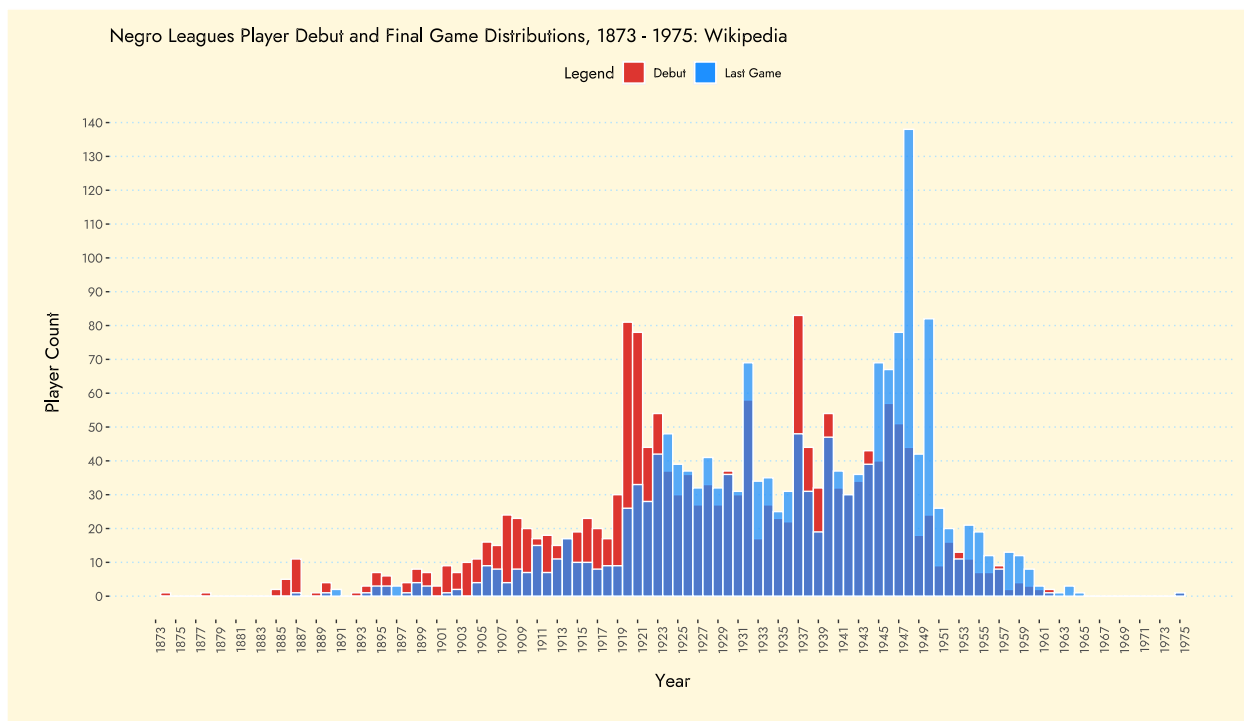


Figure 2: A distribution of the number of players debuting and playing their final game in a given season in the Negro Leagues, 1873 to 1975: Wikipedia Data.

In comparison, Figure 2 shows the distribution of players making their debut or playing their final game according to Seamheads. As can be seen, the distribution is fairly similar as to the distribution collected from Wikipedia; however, the counts from Seamheads are higher, which may be in part to some players not being included on the Wikipedia list due to insufficient data that can be used to confirm the player's identity.

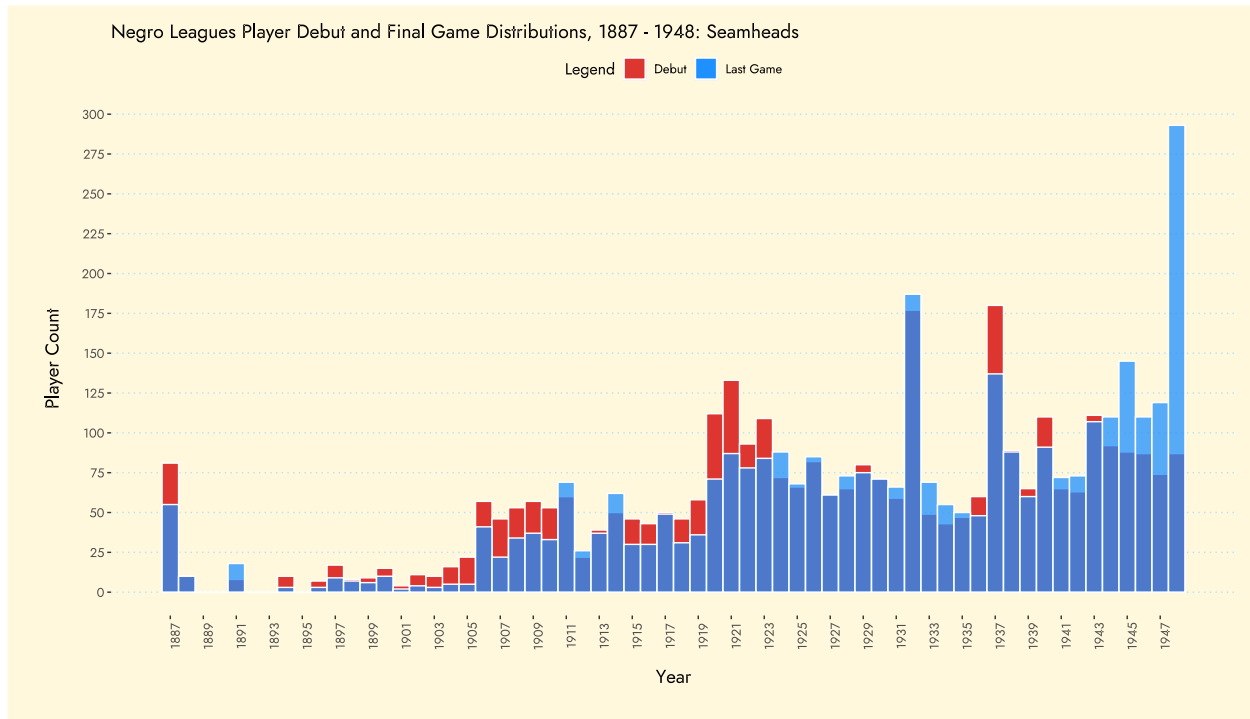


Figure 3: A distribution of the number of players debuting and playing their final game in a given season in the Negro Leagues, 1887 to 1948: Seamheads Data.

Figure 3 again shows the distribution of the Wikipedia data, however, it has been filtered to only include the same range of years as is in the Seamheads data. This provides a more direct comparison between the two datasets. As can be seen between Figure 2 and Figure 3, the counts are indeed higher in the Seamheads data and the slightly different pattern is more evident between the two with Seamheads (Figure 2) showing a greater number of debuts in 1921 than 1920 whereas the Wikipedia data (Figure 3) shows a greater number of players making their debut in 1920 than 1921.

Other differences between the two include Seamheads show a greater number of debut seasons than final seasons in 1929, whereas Wikipedia shows the opposite. Wikipedia shows a greater number of final season than debut season for 1936, whereas Seamheads shows the opposite. Other similar patterns can be seen throughout the various seasons between the datasets. This is of particular interests as the Wikipedia list is reliant upon the Seamheads database for the information contained within its list of players.

An issue that also was found in the process of this analysis was that in some cases Wikipedia had the birth-date of the player for the player's debut date in the Negro Leagues. This discrepancy may partially explain the inclusion of dates earlier than 1887 in the Wikipedia list of Negro League players.

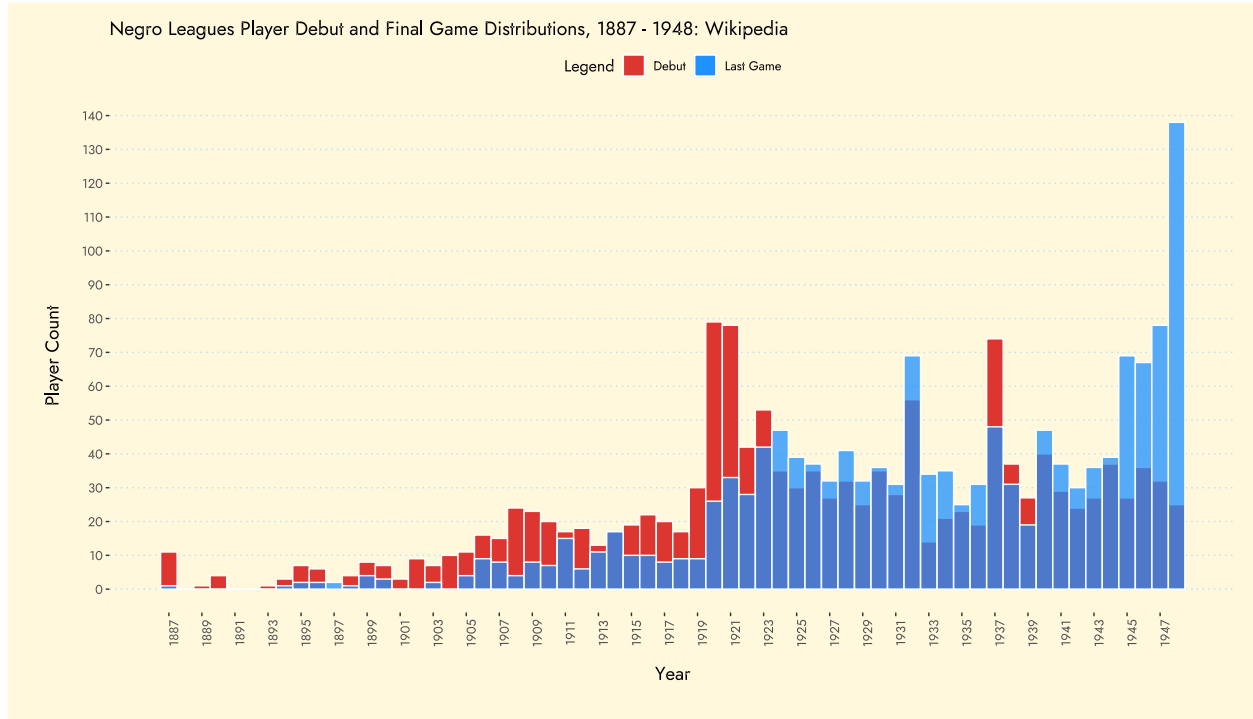


Figure 4: A distribution of the number of players debuting and playing their final game in a given season in the Negro Leagues, 1887 to 1948: Wikipedia Data.

Player Counts

While Figures 1 through 3 show the distribution of players who debuted or played their final game for a given season in the Negro Leagues, it is also necessary to understand the total number of players in the Negro League for a given season. Figure 4 shows the distribution of total number of players for the Negro Leagues from 1873 to 1975. This distribution shows a peak of total number of players in the Negro Leagues in the 1923 season with 383 players, shortly after the Negro National League was established and the Negro Southern League began play. Additionally, the decrease of players in the Negro Leagues due to the folding of leagues is evident towards the middle of the distribution with a resurgence when leagues were re-established or new leagues established. Interestingly, this decrease is greater than the one found during the United States' involvement in World War II (1941 to 1946). Moreover, the steep decline in players in the Negro Leagues that is evident in Figure 1 beginning between 1948 and 1949 is also evident here.

Given that the data available only provided the number of players who debuted or played their final game for a season, the total number of players was not available. In the following formula let d stand for the debut games for a season, p stand for the player count for the previous season, and f stand for the count of final games played in the previous season. As such, the count for the number of players for a given season was calculated as:

$$(d + p) - f$$

The collected data from Wikipedia contained missing values for both debut and final game counts for various seasons. These missing values were replaced with a value of 0. This was done to keep those seasons included in the count, as the complete-case approach would remove these seasons. These missing values were created when there was no data for either debuts or final games for a season. However, this approach of imputing missing values with 0 while allowing for keeping these seasons does mean the distribution for players may be off or less than the actual count. There were no missing values for the Seamheads data.

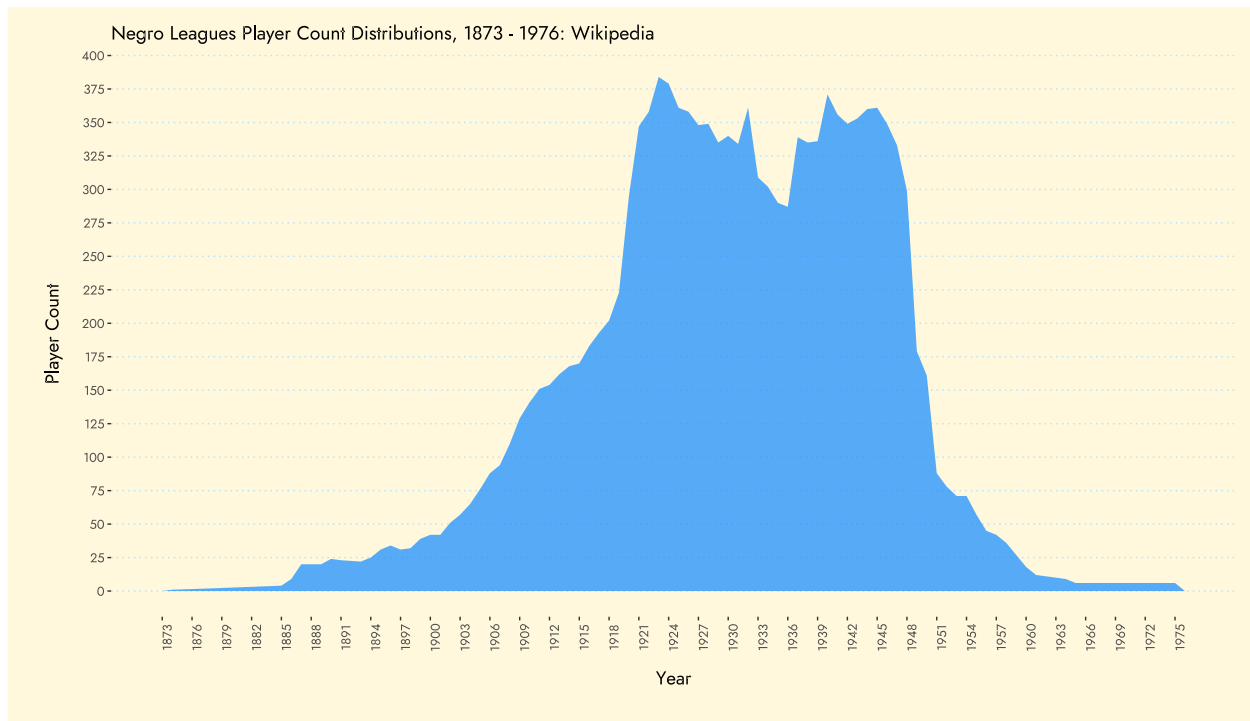


Figure 5: The estimated distribution of players in the Negro Leagues, 1873 to 1975: Wikipedia data.

In comparison, Figure 5 shows the estimated player distribution for the Negro Leagues from 1886 to 1948 according to the data collected from Seamheads. Figure 6, likewise, shows the estimated player distribution for the Negro Leagues according to the Wikipedia data but filtered to only include dates from the same range as the Seamheads data (1886 to 1948). A notable difference between Figure 5 and Figure 6 is that the peak for players in the Negro Leagues comes in 1932 for the Seamheads data ($N = 504$) while it comes in 1923 for the Wikipedia data ($N = 384$). Additionally, these total counts differ by a difference of 120. Again, the discrepancies between the data may be due to Wikipedia contributors excluding players, players with only one name in the Seamheads database being counted twice, or the imputation of 0 to replace NA values skews the Wikipedia distribution.

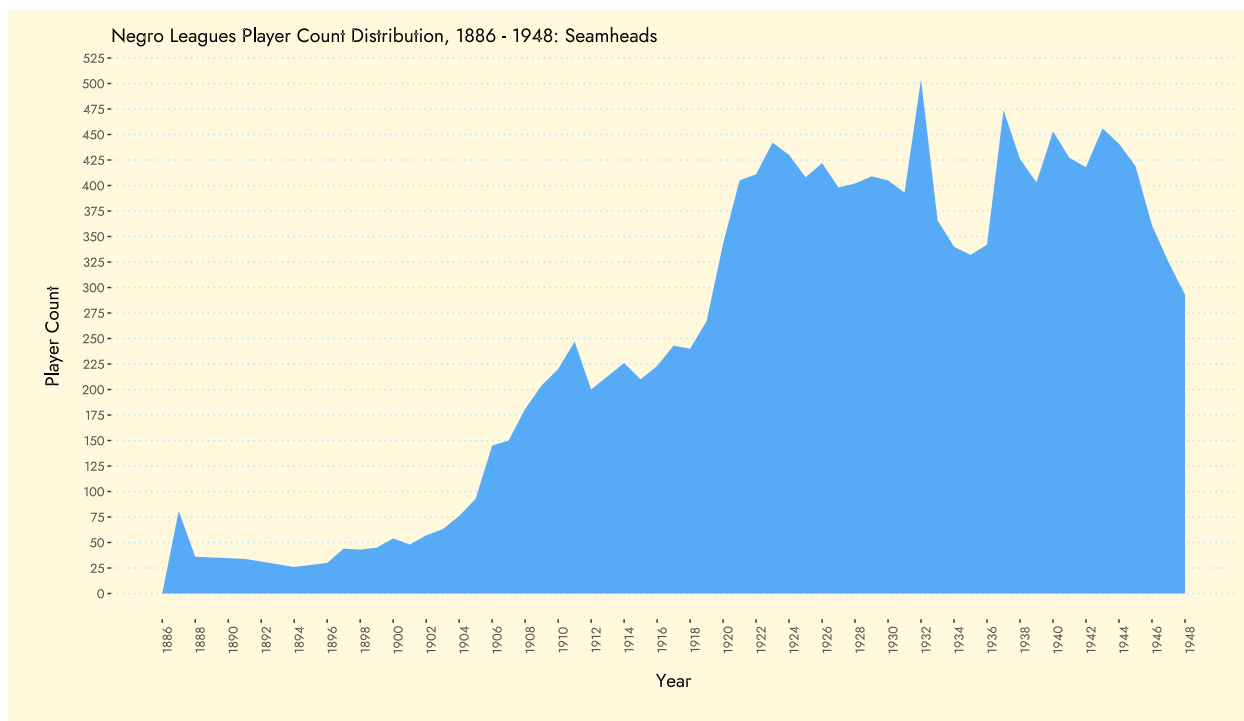


Figure 6: The estimated distribution of players in the Negro Leagues, 1886 to 1948: Seamheads data.

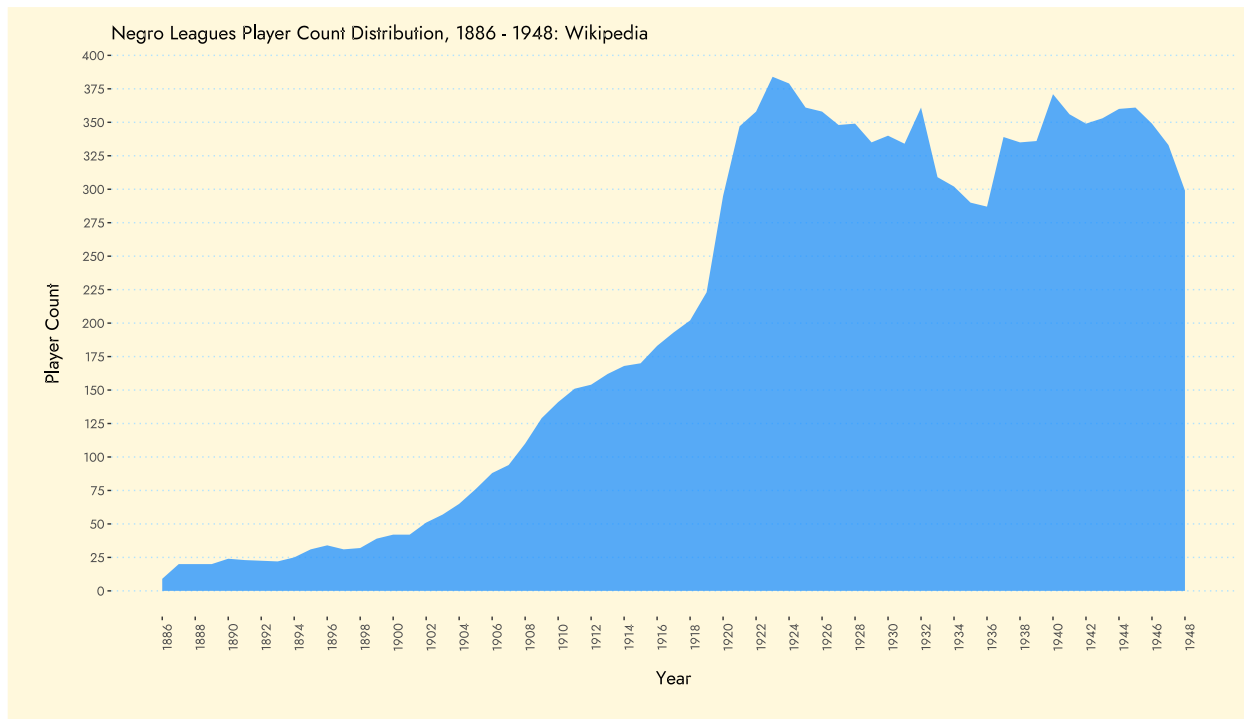


Figure 7: The estimated distribution of players in the Negro Leagues, 1886 to 1948: Wikipedia data.

Negro League Players in Major League Baseball

While Jackie Robinson was the first player from the Negro Leagues to cross the color line when he debuted for the Brooklyn Dodgers in 1947, he was not the only player to do so. Four others joined Robinson that year: Larry Doby for Cleveland (becoming the first Black player for the American Leagues), Hank Thompson and Willard Brown for the St. Louis Browns (team moved in 1953 to Baltimore and became the Baltimore Orioles), and Dan Bankhead also for the Brooklyn Dodgers (team moved in 1957 to Los Angeles and became the Los Angeles Dodgers). Over the years, the number of Negro League players who debuted for MLB teams fluctuated until 1978 when Harry Chappas became the last Negro League player to debut for an MLB team (Harry Chappas is actually white but played for the Indianapolis Clowns who are considered to be a Negro League team). In total, 87 players who played in the Negro Leagues also played for MLB teams. Figure 8 shows the years at which Negro League players debuted in MLB and the total count of players debuting that season. The greatest number of Negro Leagues players to debut in an MLB season was 11 in 1954.

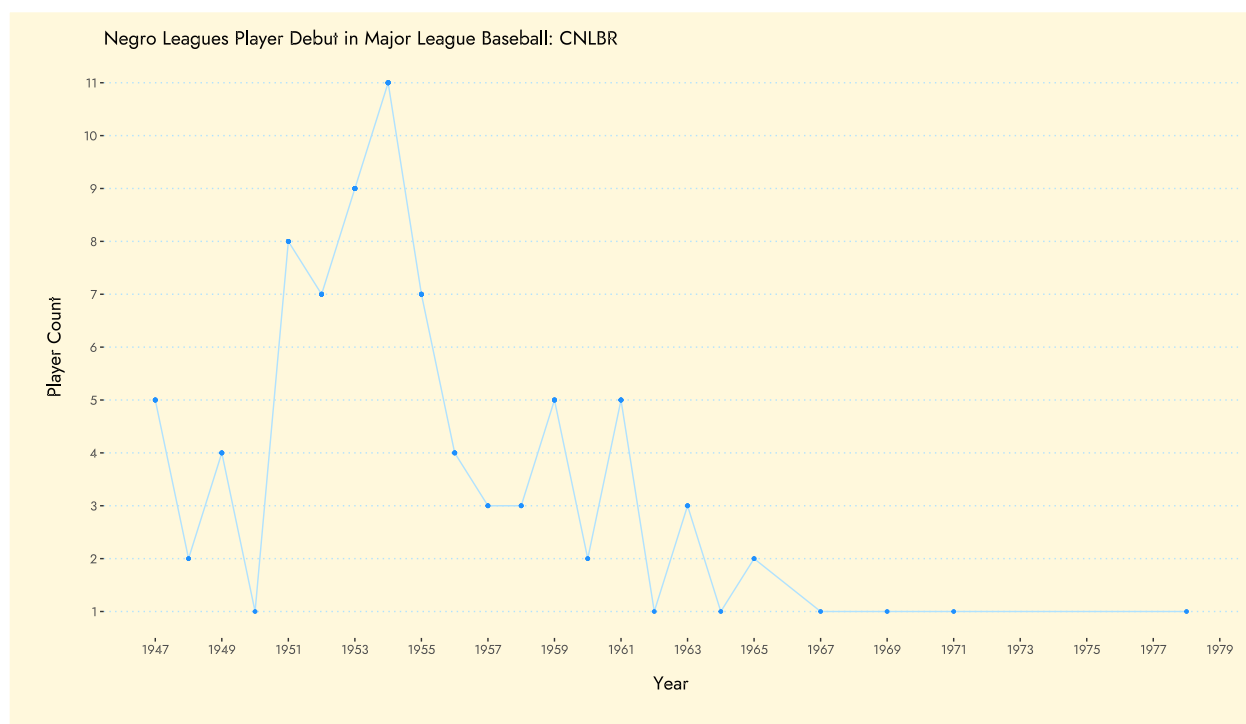


Figure 8: The number of players debuting for a given season in Major League Baseball who also played in the Negro Leagues.

However, while the greatest number of Negro Leagues players debuting in a year may be 11, this does not mean that only 11 Negro Leagues players were playing in MLB at the time. To get the actual count of Negro Leagues players playing in MLB for a given season, roster data was pulled from the Retrosheet database for the 1947 to 1987 seasons using the `get_retrosheet()` function from the `retrosheet` package [3]. These seasons were chosen as 1947 marked the first season in MLB in which Negro Leagues players played. The 1987 season was chosen as it provided a 40 year period, and as can

be seen in Table 3 no Negro Leagues players played on an MLB team after 1980. The last being Harry Chapas who debuted in 1978 and played his last MLB game in 1980.

As can be seen in Figure 9, the MLB season with the greatest number of Negro Leagues players was 1955 with 36 Negro Leagues players. This, at the time, represented 6% of the total MLB player population and equalled approximately 2.25 Negro Leagues players per MLB team (16 MLB teams existed in 1955 compared to the current 30). Which, fits with the notion that MLB teams would only carry two or three Black players on the roster. However, not every team had integrated by 1955 (the Boston Red Sox would be the last team to carry a Black player on their roster in 1959), and so some teams would have had more than the 2.25 average. Additionally, according to the SABR article **CITE** this was the season in which approximately 10% of the MLB player population consisted of Black players, whether those players had played in the Negro Leagues or not. Given that the MLB player population was 599 for the 1955 season, this means that there were approximately 60 Black players in MLB. Meaning that in addition to the 36 Negro Leagues players, there was 24 players who would most likely not have been able to play in MLB before 1947. This total also increases the average number of Black players on MLB teams in 1955 from 2.25 to 3.75 players. Which, while above the assumed three Black players per MLB team, still means that the average number of Black players per team at the height of Negro Leagues players in MLB was below four players per team even when including non-Negro Leagues players. For instance, the Milwaukee MLB team, Cleveland MLB team, and Brooklyn Dodgers each carried a total of six players who had previously played in the Negro Leagues on their roster in 1955. Indeed, the greatest amount of previous Negro Leagues players carried by any MLB team was six (see Table 4 in Appendix A for the count of Negro Leagues players for each MLB team). Additionally, it should be noted that in some cases a player may have played for more than one team in a season, thereby contributing to the total number of previous Negro League players a team employed for more than one team for a season. For instance, the Cleveland team carried five Negro Leagues players on their roster, but one of those players, Minnie Minoso, had also played for the Chicago White Sox that same season. So while a team may have carried above the average in Negro Leagues players, the number of Negro Leagues plays in the major leagues would not necessarily increase.

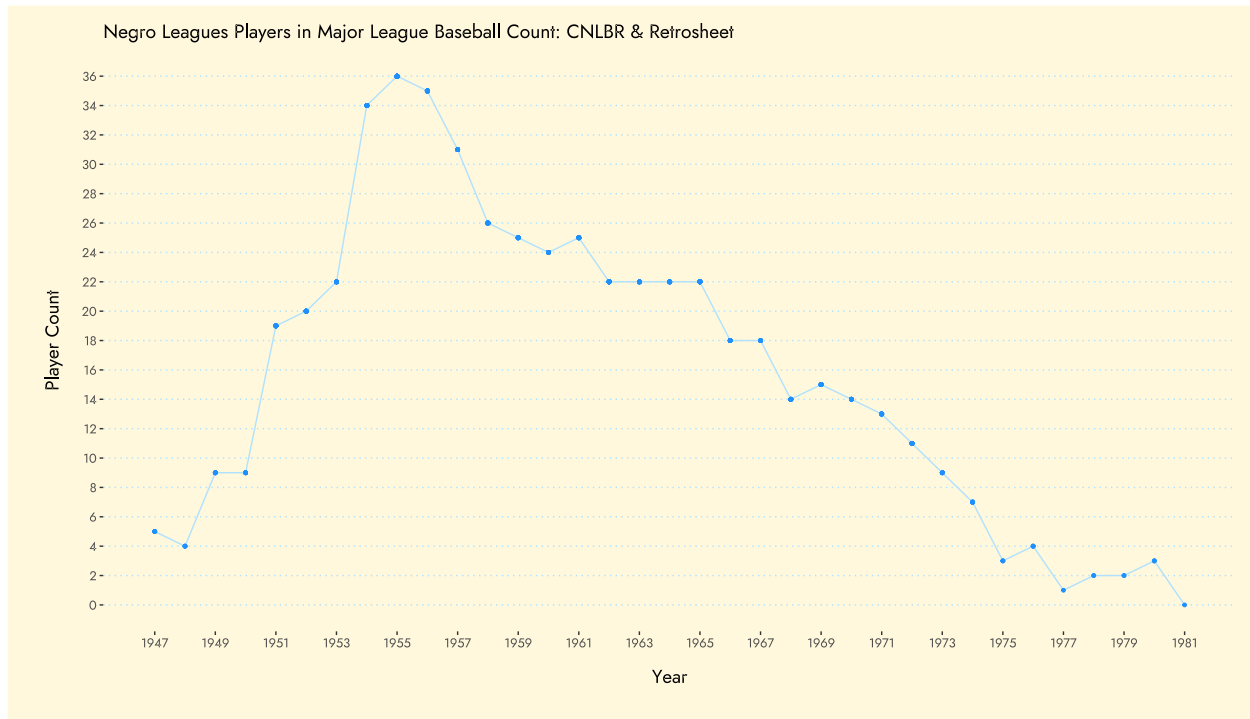


Figure 9: The number of players for a given season in Major League Baseball who also played in the Negro Leagues, 1947 to 1981.

Discussion

Limitations

Appendix A: Tables

Table 1: Negro Leagues Player Counts, 1887-1948: Seamheads Data.

Season	Player Debut Count	Player Final Game Count	Player Count
1887	81	55	81
1888	10	10	36
1891	8	18	34
1894	10	3	26
1896	7	3	30
1897	17	9	44
1898	8	7	43
1899	9	6	45
1900	15	10	54
1901	4	2	48
1902	11	4	57
1903	10	3	63
1904	16	5	76
1905	22	5	93
1906	57	41	145
1907	46	22	150
1908	53	34	181
1909	57	37	204
1910	53	33	220
1911	60	69	247
1912	22	26	200
1913	39	37	213
1914	50	62	226
1915	46	30	210
1916	43	30	223
1917	50	49	243
1918	46	31	240
1919	58	36	267
1920	112	71	343
1921	133	87	405
1922	93	78	411
1923	109	84	442
1924	72	88	430
1925	66	68	408
1926	82	85	422

Table 1: Negro Leagues Player Counts, 1887-1948: Seamheads
Data. (*continued*)

Season	Player Debut Count	Player Final Game Count	Player Count
1927	61	61	398
1928	65	73	402
1929	80	75	409
1930	71	71	405
1931	59	66	393
1932	177	187	504
1933	49	69	366
1934	43	55	340
1935	47	50	332
1936	60	48	342
1937	180	137	474
1938	89	88	426
1939	65	60	403
1940	110	91	453
1941	65	72	427
1942	63	73	418
1943	111	107	456
1944	92	110	441
1945	88	145	419
1946	87	110	361
1947	74	119	325
1948	87	293	293

Table 2: Negro Leagues Player Counts, 1874-1975: Wikipedia
Data.

Season	Player Debut Count	Player Final Game Count	Player Count
1874	1	0	1
1878	1	0	2
1885	2	0	4
1886	5	0	9
1887	11	1	20
1889	1	0	20
1890	4	1	24
1891	0	2	23
1893	1	0	22
1894	3	1	25

Table 2: Negro Leagues Player Counts, 1874-1975: Wikipedia
Data. (*continued*)

Season	Player Debut Count	Player Final Game Count	Player Count
1895	7	3	31
1896	6	3	34
1897	0	3	31
1898	4	1	32
1899	8	4	39
1900	7	3	42
1901	3	0	42
1902	9	1	51
1903	7	2	57
1904	10	0	65
1905	11	4	76
1906	16	9	88
1907	15	8	94
1908	24	4	110
1909	23	8	129
1910	20	7	141
1911	17	15	151
1912	18	7	154
1913	15	11	162
1914	17	17	168
1915	19	10	170
1916	23	10	183
1917	20	8	193
1918	17	9	202
1919	30	9	223
1920	81	26	295
1921	78	33	347
1922	44	28	358
1923	54	42	384
1924	37	48	379
1925	30	39	361
1926	36	37	358
1927	27	32	348
1928	33	41	349
1929	27	32	335
1930	37	36	340
1931	30	31	334

Table 2: Negro Leagues Player Counts, 1874-1975: Wikipedia
Data. (*continued*)

Season	Player Debut Count	Player Final Game Count	Player Count
1932	58	69	361
1933	17	34	309
1934	27	35	302
1935	23	25	290
1936	22	31	287
1937	83	48	339
1938	44	31	335
1939	32	19	336
1940	54	47	371
1941	32	37	356
1942	30	30	349
1943	34	36	353
1944	43	39	360
1945	40	69	361
1946	57	67	349
1947	51	78	333
1948	44	138	299
1949	18	42	179
1950	24	82	161
1951	9	26	88
1952	16	20	78
1953	13	11	71
1954	11	21	71
1955	7	19	57
1956	7	12	45
1957	9	8	42
1958	2	13	36
1959	4	12	27
1960	3	8	18
1961	2	3	12
1962	2	1	11
1963	0	1	10
1964	0	3	9
1965	0	1	6
1975	1	1	6

Table 3: Table Title

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1947	Boston Red Sox	544	5	0.01	0	0.31
	Brooklyn Dodgers	544	5	0.01	2	0.31
	Boston	544	5	0.01	0	0.31
	Chicago White Sox	544	5	0.01	0	0.31
	Chicago Cubs	544	5	0.01	0	0.31
	Cincinnati Reds	544	5	0.01	0	0.31
	Cleveland	544	5	0.01	1	0.31
	Detroit Tigers	544	5	0.01	0	0.31
	New York Giants	544	5	0.01	0	0.31
	New York Yankees	544	5	0.01	0	0.31
	Philadelphia Athletics	544	5	0.01	0	0.31
	Philadelphia Phillies	544	5	0.01	0	0.31
	Pittsburgh Pirates	544	5	0.01	0	0.31
	St. Louis Browns	544	5	0.01	2	0.31
	St. Louis Cardinals	544	5	0.01	0	0.31
	Washington Senators	544	5	0.01	0	0.31
	Boston Red Sox	542	4	0.01	0	0.25

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1948	Brooklyn Dodgers	542	4	0.01	2	0.25
	Boston	542	4	0.01	0	0.25
	Chicago White Sox	542	4	0.01	0	0.25
	Chicago Cubs	542	4	0.01	0	0.25
	Cincinnati Reds	542	4	0.01	0	0.25
	Cleveland	542	4	0.01	2	0.25
	Detroit Tigers	542	4	0.01	0	0.25
	New York Giants	542	4	0.01	0	0.25
	New York Yankees	542	4	0.01	0	0.25
	Philadelphia Athletics	542	4	0.01	0	0.25
	Philadelphia Phillies	542	4	0.01	0	0.25
	Pittsburgh Pirates	542	4	0.01	0	0.25
	St. Louis Browns	542	4	0.01	0	0.25
	St. Louis Cardinals	542	4	0.01	0	0.25
	Washington Senators	542	4	0.01	0	0.25
	Boston Red Sox	532	9	0.02	0	0.56
	Brooklyn Dodgers	532	9	0.02	3	0.56

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1949	Boston	532	9	0.02	0	0.56
	Chicago White Sox	532	9	0.02	0	0.56
	Chicago Cubs	532	9	0.02	0	0.56
	Cincinnati Reds	532	9	0.02	0	0.56
	Cleveland	532	9	0.02	4	0.56
	Detroit Tigers	532	9	0.02	0	0.56
	New York Giants	532	9	0.02	2	0.56
	New York Yankees	532	9	0.02	0	0.56
	Philadelphia Athletics	532	9	0.02	0	0.56
	Philadelphia Phillies	532	9	0.02	0	0.56
	Pittsburgh Pirates	532	9	0.02	0	0.56
	St. Louis Browns	532	9	0.02	0	0.56
	St. Louis Cardinals	532	9	0.02	0	0.56
	Washington Senators	532	9	0.02	0	0.56
	Boston Red Sox	530	9	0.02	0	0.56
	Brooklyn Dodgers	530	9	0.02	4	0.56
	Boston	530	9	0.02	1	0.56

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1950	Chicago White Sox	530	9	0.02	0	0.56
	Chicago Cubs	530	9	0.02	0	0.56
	Cincinnati Reds	530	9	0.02	0	0.56
	Cleveland	530	9	0.02	2	0.56
	Detroit Tigers	530	9	0.02	0	0.56
	New York Giants	530	9	0.02	2	0.56
	New York Yankees	530	9	0.02	0	0.56
	Philadelphia Athletics	530	9	0.02	0	0.56
	Philadelphia Phillies	530	9	0.02	0	0.56
	Pittsburgh Pirates	530	9	0.02	0	0.56
	St. Louis Browns	530	9	0.02	0	0.56
	St. Louis Cardinals	530	9	0.02	0	0.56
	Washington Senators	530	9	0.02	0	0.56
	Boston Red Sox	543	19	0.03	0	1.19
	Brooklyn Dodgers	543	19	0.03	4	1.19
	Boston	543	19	0.03	2	1.19
	Chicago White Sox	543	19	0.03	3	1.19

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1951	Chicago Cubs	543	19	0.03	0	1.19
	Cincinnati Reds	543	19	0.03	0	1.19
	Cleveland	543	19	0.03	5	1.19
	Detroit Tigers	543	19	0.03	0	1.19
	New York Giants	543	19	0.03	5	1.19
	New York Yankees	543	19	0.03	0	1.19
	Philadelphia Athletics	543	19	0.03	0	1.19
	Philadelphia Phillies	543	19	0.03	0	1.19
	Pittsburgh Pirates	543	19	0.03	0	1.19
	St. Louis Browns	543	19	0.03	1	1.19
	St. Louis Cardinals	543	19	0.03	0	1.19
	Washington Senators	543	19	0.03	0	1.19
	Boston Red Sox	556	20	0.04	0	1.25
	Brooklyn Dodgers	556	20	0.04	4	1.25
	Boston	556	20	0.04	3	1.25
	Chicago White Sox	556	20	0.04	2	1.25
	Chicago Cubs	556	20	0.04	0	1.25

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1952	Cincinnati Reds	556	20	0.04	0	1.25
	Cleveland	556	20	0.04	6	1.25
	Detroit Tigers	556	20	0.04	0	1.25
	New York Giants	556	20	0.04	4	1.25
	New York Yankees	556	20	0.04	0	1.25
	Philadelphia Athletics	556	20	0.04	0	1.25
	Philadelphia Phillies	556	20	0.04	0	1.25
	Pittsburgh Pirates	556	20	0.04	0	1.25
	St. Louis Browns	556	20	0.04	1	1.25
	St. Louis Cardinals	556	20	0.04	0	1.25
	Washington Senators	556	20	0.04	0	1.25
	Boston Red Sox	534	22	0.04	0	1.38
	Brooklyn Dodgers	534	22	0.04	4	1.38
	Chicago White Sox	534	22	0.04	3	1.38
	Chicago Cubs	534	22	0.04	2	1.38
	Cincinnati Reds	534	22	0.04	0	1.38
	Cleveland	534	22	0.04	5	1.38

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1953	Detroit Tigers	534	22	0.04	0	1.38
	Milwaukee	534	22	0.04	3	1.38
	New York Giants	534	22	0.04	3	1.38
	New York Yankees	534	22	0.04	0	1.38
	Philadelphia Athletics	534	22	0.04	1	1.38
	Philadelphia Phillies	534	22	0.04	0	1.38
	Pittsburgh Pirates	534	22	0.04	0	1.38
	St. Louis Browns	534	22	0.04	1	1.38
	St. Louis Cardinals	534	22	0.04	0	1.38
	Washington Senators	534	22	0.04	0	1.38
	Baltimore Orioles	536	34	0.06	2	2.12
	Boston Red Sox	536	34	0.06	0	2.12
	Brooklyn Dodgers	536	34	0.06	6	2.12
	Chicago White Sox	536	34	0.06	2	2.12
	Chicago Cubs	536	34	0.06	3	2.12
	Cincinnati Reds	536	34	0.06	1	2.12
	Cleveland	536	34	0.06	6	2.12

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1954	Detroit Tigers	536	34	0.06	0	2.12
	Milwaukee	536	34	0.06	4	2.12
	New York Giants	536	34	0.06	3	2.12
	New York Yankees	536	34	0.06	0	2.12
	Philadelphia Athletics	536	34	0.06	2	2.12
	Philadelphia Phillies	536	34	0.06	0	2.12
	Pittsburgh Pirates	536	34	0.06	3	2.12
	St. Louis Cardinals	536	34	0.06	2	2.12
	Washington Senators	536	34	0.06	1	2.12
	Baltimore Orioles	599	36	0.06	1	2.25
	Boston Red Sox	599	36	0.06	0	2.25
	Brooklyn Dodgers	599	36	0.06	6	2.25
	Chicago White Sox	599	36	0.06	2	2.25
	Chicago Cubs	599	36	0.06	3	2.25
	Cincinnati Reds	599	36	0.06	4	2.25
	Cleveland	599	36	0.06	6	2.25
	Detroit Tigers	599	36	0.06	0	2.25

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1955	Kansas City Athletics	599	36	0.06	2	2.25
	Milwaukee	599	36	0.06	6	2.25
	New York Giants	599	36	0.06	3	2.25
	New York Yankees	599	36	0.06	1	2.25
	Philadelphia Phillies	599	36	0.06	0	2.25
	Pittsburgh Pirates	599	36	0.06	2	2.25
	St. Louis Cardinals	599	36	0.06	1	2.25
	Washington Senators	599	36	0.06	2	2.25
	Baltimore Orioles	552	35	0.06	3	2.19
	Boston Red Sox	552	35	0.06	0	2.19
	Brooklyn Dodgers	552	35	0.06	6	2.19
	Chicago White Sox	552	35	0.06	3	2.19
	Chicago Cubs	552	35	0.06	4	2.19
	Cincinnati Reds	552	35	0.06	5	2.19
	Cleveland	552	35	0.06	3	2.19
	Detroit Tigers	552	35	0.06	0	2.19
	Kansas City Athletics	552	35	0.06	2	2.19

Table 3: Table Title *(continued)*

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1956	Milwaukee	552	35	0.06	3	2.19
	New York Giants	552	35	0.06	2	2.19
	New York Yankees	552	35	0.06	1	2.19
	Philadelphia Phillies	552	35	0.06	0	2.19
	Pittsburgh Pirates	552	35	0.06	2	2.19
	St. Louis Cardinals	552	35	0.06	3	2.19
	Washington Senators	552	35	0.06	1	2.19
	Baltimore Orioles	563	31	0.06	3	1.94
	Boston Red Sox	563	31	0.06	0	1.94
	Brooklyn Dodgers	563	31	0.06	5	1.94
	Chicago White Sox	563	31	0.06	2	1.94
	Chicago Cubs	563	31	0.06	2	1.94
	Cincinnati Reds	563	31	0.06	3	1.94
	Cleveland	563	31	0.06	4	1.94
	Detroit Tigers	563	31	0.06	0	1.94
	Kansas City Athletics	563	31	0.06	1	1.94
	Milwaukee	563	31	0.06	2	1.94

Table 3: Table Title (*continued*)

1957 season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	New York Giants	563	31	0.06	1	1.94
	New York Yankees	563	31	0.06	2	1.94
	Philadelphia Phillies	563	31	0.06	2	1.94
	Pittsburgh Pirates	563	31	0.06	2	1.94
	St. Louis Cardinals	563	31	0.06	4	1.94
	Washington Senators	563	31	0.06	1	1.94
	Baltimore Orioles	580	26	0.04	3	1.62
	Boston Red Sox	580	26	0.04	0	1.62
	Chicago White Sox	580	26	0.04	1	1.62
	Chicago Cubs	580	26	0.04	1	1.62
	Cincinnati Reds	580	26	0.04	3	1.62
	Cleveland	580	26	0.04	4	1.62
	Detroit Tigers	580	26	0.04	0	1.62
	Kansas City Athletics	580	26	0.04	1	1.62
	Los Angeles Dodgers	580	26	0.04	4	1.62
	Milwaukee	580	26	0.04	2	1.62
	New York Yankees	580	26	0.04	2	1.62

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Philadelphia Phillies	580	26	0.04	2	1.62
	Pittsburgh Pirates	580	26	0.04	2	1.62
	San Francisco Giants	580	26	0.04	1	1.62
	St. Louis Cardinals	580	26	0.04	3	1.62
	Washington Senators	580	26	0.04	0	1.62
	Baltimore Orioles	571	25	0.04	2	1.56
	Boston Red Sox	571	25	0.04	0	1.56
	Chicago White Sox	571	25	0.04	3	1.56
	Chicago Cubs	571	25	0.04	2	1.56
	Cincinnati Reds	571	25	0.04	3	1.56
	Cleveland	571	25	0.04	1	1.56
	Detroit Tigers	571	25	0.04	2	1.56
	Kansas City Athletics	571	25	0.04	1	1.56
	Los Angeles Dodgers	571	25	0.04	4	1.56
	Milwaukee	571	25	0.04	2	1.56
	New York Yankees	571	25	0.04	1	1.56
	Philadelphia Phillies	571	25	0.04	0	1.56

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Pittsburgh Pirates	571	25	0.04	1	1.56
	San Francisco Giants	571	25	0.04	3	1.56
	St. Louis Cardinals	571	25	0.04	3	1.56
	Washington Senators	571	25	0.04	0	1.56
	Baltimore Orioles	575	24	0.04	1	1.50
	Boston Red Sox	575	24	0.04	0	1.50
	Chicago White Sox	575	24	0.04	2	1.50
	Chicago Cubs	575	24	0.04	3	1.50
	Cincinnati Reds	575	24	0.04	2	1.50
	Cleveland	575	24	0.04	2	1.50
	Detroit Tigers	575	24	0.04	1	1.50
	Kansas City Athletics	575	24	0.04	0	1.50
	Los Angeles Dodgers	575	24	0.04	4	1.50
	Milwaukee	575	24	0.04	2	1.50
	New York Yankees	575	24	0.04	1	1.50
	Philadelphia Phillies	575	24	0.04	2	1.50
	Pittsburgh Pirates	575	24	0.04	1	1.50

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	San Francisco Giants	575	24	0.04	3	1.50
	St. Louis Cardinals	575	24	0.04	3	1.50
	Washington Senators	575	24	0.04	0	1.50
	Baltimore Orioles	620	25	0.04	0	1.39
	Boston Red Sox	620	25	0.04	1	1.39
	Chicago White Sox	620	25	0.04	2	1.39
	Chicago Cubs	620	25	0.04	2	1.39
	Cincinnati Reds	620	25	0.04	1	1.39
	Cleveland	620	25	0.04	2	1.39
	Detroit Tigers	620	25	0.04	1	1.39
	Kansas City Athletics	620	25	0.04	3	1.39
	Los Angeles Angels	620	25	0.04	1	1.39
	Los Angeles Dodgers	620	25	0.04	3	1.39
	Minnesota Twins	620	25	0.04	0	1.39
	Milwaukee	620	25	0.04	2	1.39
	New York Yankees	620	25	0.04	1	1.39
	Philadelphia Phillies	620	25	0.04	1	1.39

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Pittsburgh Pirates	620	25	0.04	2	1.39
	San Francisco Giants	620	25	0.04	3	1.39
	St. Louis Cardinals	620	25	0.04	1	1.39
	Washington Senators	620	25	0.04	0	1.39
	Baltimore Orioles	702	22	0.03	0	1.10
	Boston Red Sox	702	22	0.03	0	1.10
	Chicago White Sox	702	22	0.03	1	1.10
	Chicago Cubs	702	22	0.03	2	1.10
	Cincinnati Reds	702	22	0.03	0	1.10
	Cleveland	702	22	0.03	2	1.10
	Detroit Tigers	702	22	0.03	2	1.10
	Houston Astros	702	22	0.03	2	1.10
	Kansas City Athletics	702	22	0.03	1	1.10
	Los Angeles Angels	702	22	0.03	0	1.10
	Los Angeles Dodgers	702	22	0.03	2	1.10
	Minnesota Twins	702	22	0.03	0	1.10
	Milwaukee	702	22	0.03	2	1.10

Table 3: Table Title (*continued*)

1962	season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
		New York Yankees	702	22	0.03	2	1.10
		New York Mets	702	22	0.03	1	1.10
		Philadelphia Phillies	702	22	0.03	0	1.10
		Pittsburgh Pirates	702	22	0.03	1	1.10
		San Francisco Giants	702	22	0.03	2	1.10
		St. Louis Cardinals	702	22	0.03	1	1.10
		Washington Senators	702	22	0.03	1	1.10
		Baltimore Orioles	695	22	0.03	1	1.10
		Boston Red Sox	695	22	0.03	0	1.10
		Chicago White Sox	695	22	0.03	0	1.10
		Chicago Cubs	695	22	0.03	1	1.10
		Cincinnati Reds	695	22	0.03	1	1.10
		Cleveland	695	22	0.03	0	1.10
		Detroit Tigers	695	22	0.03	3	1.10
		Houston Astros	695	22	0.03	1	1.10
		Kansas City Athletics	695	22	0.03	2	1.10

Table 3: Table Title *(continued)*

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1963	Los Angeles Angels	695	22	0.03	1	1.10
	Los Angeles Dodgers	695	22	0.03	2	1.10
	Minnesota Twins	695	22	0.03	0	1.10
	Milwaukee	695	22	0.03	1	1.10
	New York Yankees	695	22	0.03	2	1.10
	New York Mets	695	22	0.03	1	1.10
	Philadelphia Phillies	695	22	0.03	0	1.10
	Pittsburgh Pirates	695	22	0.03	1	1.10
	San Francisco Giants	695	22	0.03	2	1.10
	St. Louis Cardinals	695	22	0.03	2	1.10
	Washington Senators	695	22	0.03	2	1.10
	Baltimore Orioles	700	22	0.03	1	1.10
	Boston Red Sox	700	22	0.03	1	1.10
	Chicago White Sox	700	22	0.03	1	1.10
	Chicago Cubs	700	22	0.03	1	1.10
	Cincinnati Reds	700	22	0.03	0	1.10
	Cleveland	700	22	0.03	1	1.10

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1964	Detroit Tigers	700	22	0.03	2	1.10
	Houston Astros	700	22	0.03	1	1.10
	Kansas City Athletics	700	22	0.03	3	1.10
	Los Angeles Angels	700	22	0.03	2	1.10
	Los Angeles Dodgers	700	22	0.03	2	1.10
	Minnesota Twins	700	22	0.03	0	1.10
	Milwaukee	700	22	0.03	1	1.10
	New York Yankees	700	22	0.03	1	1.10
	New York Mets	700	22	0.03	1	1.10
	Philadelphia Phillies	700	22	0.03	0	1.10
	Pittsburgh Pirates	700	22	0.03	1	1.10
	San Francisco Giants	700	22	0.03	2	1.10
	St. Louis Cardinals	700	22	0.03	0	1.10
	Washington Senators	700	22	0.03	2	1.10
	Baltimore Orioles	702	22	0.03	0	1.10
	Boston Red Sox	702	22	0.03	0	1.10

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	California Angels	702	22	0.03	2	1.10
	Chicago White Sox	702	22	0.03	0	1.10
	Chicago Cubs	702	22	0.03	2	1.10
	Cincinnati Reds	702	22	0.03	0	1.10
	Cleveland	702	22	0.03	0	1.10
	Detroit Tigers	702	22	0.03	1	1.10
	Houston Astros	702	22	0.03	1	1.10
	Kansas City Athletics	702	22	0.03	4	1.10
	Los Angeles Dodgers	702	22	0.03	4	1.10
	Minnesota Twins	702	22	0.03	0	1.10
	Milwaukee	702	22	0.03	1	1.10
	New York Yankees	702	22	0.03	1	1.10
	New York Mets	702	22	0.03	0	1.10
	Philadelphia Phillies	702	22	0.03	0	1.10
	Pittsburgh Pirates	702	22	0.03	2	1.10
	San Francisco Giants	702	22	0.03	2	1.10
	St. Louis Cardinals	702	22	0.03	0	1.10

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Washington Senators	702	22	0.03	2	1.10
	Atlanta	714	18	0.03	1	0.90
	Baltimore Orioles	714	18	0.03	0	0.90
	Boston Red Sox	714	18	0.03	3	0.90
	California Angels	714	18	0.03	1	0.90
	Chicago White Sox	714	18	0.03	0	0.90
	Chicago Cubs	714	18	0.03	2	0.90
	Cincinnati Reds	714	18	0.03	0	0.90
	Cleveland	714	18	0.03	0	0.90
	Detroit Tigers	714	18	0.03	0	0.90
	Houston Astros	714	18	0.03	0	0.90
	Kansas City Athletics	714	18	0.03	2	0.90
	Los Angeles Dodgers	714	18	0.03	4	0.90
	Minnesota Twins	714	18	0.03	0	0.90
	New York Yankees	714	18	0.03	1	0.90
	New York Mets	714	18	0.03	0	0.90
	Philadelphia Phillies	714	18	0.03	0	0.90

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Pittsburgh Pirates	714	18	0.03	2	0.90
	San Francisco Giants	714	18	0.03	2	0.90
	St. Louis Cardinals	714	18	0.03	0	0.90
	Washington Senators	714	18	0.03	1	0.90
	Atlanta	718	18	0.03	1	0.90
	Baltimore Orioles	718	18	0.03	0	0.90
	Boston Red Sox	718	18	0.03	3	0.90
	California Angels	718	18	0.03	0	0.90
	Chicago White Sox	718	18	0.03	0	0.90
	Chicago Cubs	718	18	0.03	2	0.90
	Cincinnati Reds	718	18	0.03	0	0.90
	Cleveland	718	18	0.03	1	0.90
	Detroit Tigers	718	18	0.03	0	0.90
	Houston Astros	718	18	0.03	1	0.90
	Kansas City Athletics	718	18	0.03	1	0.90
	Los Angeles Dodgers	718	18	0.03	1	0.90
	Minnesota Twins	718	18	0.03	1	0.90

Table 3: Table Title (*continued*)**1967**

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	New York Yankees	718	18	0.03	2	0.90
	New York Mets	718	18	0.03	0	0.90
	Philadelphia Phillies	718	18	0.03	0	0.90
	Pittsburgh Pirates	718	18	0.03	3	0.90
	San Francisco Giants	718	18	0.03	2	0.90
	St. Louis Cardinals	718	18	0.03	0	0.90
	Washington Senators	718	18	0.03	1	0.90
	Atlanta	676	14	0.02	1	0.70
	Baltimore Orioles	676	14	0.02	0	0.70
	Boston Red Sox	676	14	0.02	3	0.70
	California Angels	676	14	0.02	0	0.70
	Chicago White Sox	676	14	0.02	0	0.70
	Chicago Cubs	676	14	0.02	3	0.70
	Cincinnati Reds	676	14	0.02	0	0.70
	Cleveland	676	14	0.02	2	0.70
	Detroit Tigers	676	14	0.02	1	0.70
	Houston Astros	676	14	0.02	1	0.70

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1968	Los Angeles Dodgers	676	14	0.02	0	0.70
	Minnesota Twins	676	14	0.02	0	0.70
	New York Yankees	676	14	0.02	1	0.70
	New York Mets	676	14	0.02	0	0.70
	Oakland Athletics	676	14	0.02	1	0.70
	Philadelphia Phillies	676	14	0.02	0	0.70
	Pittsburgh Pirates	676	14	0.02	2	0.70
	San Francisco Giants	676	14	0.02	2	0.70
	St. Louis Cardinals	676	14	0.02	0	0.70
	Washington Senators	676	14	0.02	1	0.70
	Atlanta	849	15	0.02	1	0.62
	Baltimore Orioles	849	15	0.02	0	0.62
	Boston Red Sox	849	15	0.02	1	0.62
	California Angels	849	15	0.02	1	0.62
	Chicago White Sox	849	15	0.02	0	0.62
	Chicago Cubs	849	15	0.02	2	0.62

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Cincinnati Reds	849	15	0.02	0	0.62
	Cleveland	849	15	0.02	0	0.62
	Detroit Tigers	849	15	0.02	1	0.62
	Houston Astros	849	15	0.02	0	0.62
	Kansas City Royals	849	15	0.02	1	0.62
	Los Angeles Dodgers	849	15	0.02	1	0.62
	Minnesota Twins	849	15	0.02	0	0.62
	Montreal Expos	849	15	0.02	2	0.62
	New York Yankees	849	15	0.02	0	0.62
	New York Mets	849	15	0.02	1	0.62
	Oakland Athletics	849	15	0.02	2	0.62
	Philadelphia Phillies	849	15	0.02	0	0.62
	Pittsburgh Pirates	849	15	0.02	0	0.62
	San Diego Padres	849	15	0.02	0	0.62
	Seattle Pilots	849	15	0.02	1	0.62
	San Francisco Giants	849	15	0.02	2	0.62
	St. Louis Cardinals	849	15	0.02	0	0.62

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Washington Senators	849	15	0.02	1	0.62
	Atlanta	849	14	0.02	2	0.58
	Baltimore Orioles	849	14	0.02	0	0.58
	Boston Red Sox	849	14	0.02	2	0.58
	California Angels	849	14	0.02	0	0.58
	Chicago White Sox	849	14	0.02	0	0.58
	Chicago Cubs	849	14	0.02	2	0.58
	Cincinnati Reds	849	14	0.02	0	0.58
	Cleveland	849	14	0.02	0	0.58
	Detroit Tigers	849	14	0.02	1	0.58
	Houston Astros	849	14	0.02	0	0.58
	Kansas City Royals	849	14	0.02	1	0.58
	Los Angeles Dodgers	849	14	0.02	1	0.58
	Milwaukee Brewers	849	14	0.02	1	0.58
	Minnesota Twins	849	14	0.02	0	0.58
	Montreal Expos	849	14	0.02	0	0.58
	New York Yankees	849	14	0.02	0	0.58

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	New York Mets	849	14	0.02	1	0.58
	Oakland Athletics	849	14	0.02	1	0.58
	Philadelphia Phillies	849	14	0.02	0	0.58
	Pittsburgh Pirates	849	14	0.02	0	0.58
	San Diego Padres	849	14	0.02	0	0.58
	San Francisco Giants	849	14	0.02	2	0.58
	St. Louis Cardinals	849	14	0.02	0	0.58
	Washington Senators	849	14	0.02	1	0.58
	Atlanta	828	13	0.02	2	0.54
	Baltimore Orioles	828	13	0.02	0	0.54
	Boston Red Sox	828	13	0.02	1	0.54
	California Angels	828	13	0.02	1	0.54
	Chicago White Sox	828	13	0.02	0	0.54
	Chicago Cubs	828	13	0.02	1	0.54
	Cincinnati Reds	828	13	0.02	1	0.54
	Cleveland	828	13	0.02	0	0.54
	Detroit Tigers	828	13	0.02	1	0.54

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1971	Houston Astros	828	13	0.02	0	0.54
	Kansas City Royals	828	13	0.02	0	0.54
	Los Angeles Dodgers	828	13	0.02	1	0.54
	Milwaukee Brewers	828	13	0.02	0	0.54
	Minnesota Twins	828	13	0.02	0	0.54
	Montreal Expos	828	13	0.02	0	0.54
	New York Yankees	828	13	0.02	0	0.54
	New York Mets	828	13	0.02	1	0.54
	Oakland Athletics	828	13	0.02	1	0.54
	Philadelphia Phillies	828	13	0.02	0	0.54
	Pittsburgh Pirates	828	13	0.02	0	0.54
	San Diego Padres	828	13	0.02	0	0.54
	San Francisco Giants	828	13	0.02	2	0.54
	St. Louis Cardinals	828	13	0.02	0	0.54
	Washington Senators	828	13	0.02	1	0.54
	Atlanta	824	11	0.01	2	0.46

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Baltimore Orioles	824	11	0.01	0	0.46
	Boston Red Sox	824	11	0.01	1	0.46
	California Angels	824	11	0.01	1	0.46
	Chicago White Sox	824	11	0.01	0	0.46
	Chicago Cubs	824	11	0.01	0	0.46
	Cincinnati Reds	824	11	0.01	0	0.46
	Cleveland	824	11	0.01	0	0.46
	Detroit Tigers	824	11	0.01	1	0.46
	Houston Astros	824	11	0.01	0	0.46
	Kansas City Royals	824	11	0.01	0	0.46
	Los Angeles Dodgers	824	11	0.01	1	0.46
	Milwaukee Brewers	824	11	0.01	0	0.46
	Minnesota Twins	824	11	0.01	0	0.46
	Montreal Expos	824	11	0.01	0	0.46
	New York Yankees	824	11	0.01	0	0.46
	New York Mets	824	11	0.01	1	0.46
	Oakland Athletics	824	11	0.01	1	0.46

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Philadelphia Phillies	824	11	0.01	0	0.46
	Pittsburgh Pirates	824	11	0.01	0	0.46
	San Diego Padres	824	11	0.01	0	0.46
	San Francisco Giants	824	11	0.01	2	0.46
	St. Louis Cardinals	824	11	0.01	1	0.46
	Texas Rangers	824	11	0.01	1	0.46
	Atlanta	821	9	0.01	2	0.38
	Baltimore Orioles	821	9	0.01	0	0.38
	Boston Red Sox	821	9	0.01	1	0.38
	California Angels	821	9	0.01	1	0.38
	Chicago White Sox	821	9	0.01	0	0.38
	Chicago Cubs	821	9	0.01	0	0.38
	Cincinnati Reds	821	9	0.01	1	0.38
	Cleveland	821	9	0.01	0	0.38
	Detroit Tigers	821	9	0.01	1	0.38
	Houston Astros	821	9	0.01	0	0.38

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1973	Kansas City Royals	821	9	0.01	0	0.38
	Los Angeles Dodgers	821	9	0.01	0	0.38
	Milwaukee Brewers	821	9	0.01	0	0.38
	Minnesota Twins	821	9	0.01	0	0.38
	Montreal Expos	821	9	0.01	0	0.38
	New York Yankees	821	9	0.01	0	0.38
	New York Mets	821	9	0.01	1	0.38
	Oakland Athletics	821	9	0.01	1	0.38
	Philadelphia Phillies	821	9	0.01	0	0.38
	Pittsburgh Pirates	821	9	0.01	0	0.38
	San Diego Padres	821	9	0.01	0	0.38
	San Francisco Giants	821	9	0.01	1	0.38
	St. Louis Cardinals	821	9	0.01	0	0.38
	Texas Rangers	821	9	0.01	0	0.38
	Atlanta	861	7	0.01	2	0.29
	Baltimore Orioles	861	7	0.01	0	0.29

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Boston Red Sox	861	7	0.01	1	0.29
	California Angels	861	7	0.01	0	0.29
	Chicago White Sox	861	7	0.01	0	0.29
	Chicago Cubs	861	7	0.01	0	0.29
	Cincinnati Reds	861	7	0.01	1	0.29
	Cleveland	861	7	0.01	0	0.29
	Detroit Tigers	861	7	0.01	1	0.29
	Houston Astros	861	7	0.01	0	0.29
	Kansas City Royals	861	7	0.01	0	0.29
	Los Angeles Dodgers	861	7	0.01	0	0.29
	Milwaukee Brewers	861	7	0.01	0	0.29
	Minnesota Twins	861	7	0.01	0	0.29
	Montreal Expos	861	7	0.01	0	0.29
	New York Yankees	861	7	0.01	0	0.29
	New York Mets	861	7	0.01	0	0.29
	Oakland Athletics	861	7	0.01	1	0.29
	Philadelphia Phillies	861	7	0.01	0	0.29

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Pittsburgh Pirates	861	7	0.01	0	0.29
	San Diego Padres	861	7	0.01	1	0.29
	San Francisco Giants	861	7	0.01	0	0.29
	St. Louis Cardinals	861	7	0.01	0	0.29
	Texas Rangers	861	7	0.01	0	0.29
	Atlanta	844	3	0.00	1	0.12
	Baltimore Orioles	844	3	0.00	0	0.12
	Boston Red Sox	844	3	0.00	0	0.12
	California Angels	844	3	0.00	0	0.12
	Chicago White Sox	844	3	0.00	0	0.12
	Chicago Cubs	844	3	0.00	0	0.12
	Cincinnati Reds	844	3	0.00	0	0.12
	Cleveland	844	3	0.00	1	0.12
	Detroit Tigers	844	3	0.00	0	0.12
	Houston Astros	844	3	0.00	0	0.12
	Kansas City Royals	844	3	0.00	0	0.12

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1975	Los Angeles Dodgers	844	3	0.00	0	0.12
	Milwaukee Brewers	844	3	0.00	1	0.12
	Minnesota Twins	844	3	0.00	0	0.12
	Montreal Expos	844	3	0.00	0	0.12
	New York Yankees	844	3	0.00	0	0.12
	New York Mets	844	3	0.00	0	0.12
	Oakland Athletics	844	3	0.00	1	0.12
	Philadelphia Phillies	844	3	0.00	0	0.12
	Pittsburgh Pirates	844	3	0.00	0	0.12
	San Diego Padres	844	3	0.00	1	0.12
	San Francisco Giants	844	3	0.00	0	0.12
	St. Louis Cardinals	844	3	0.00	0	0.12
	Texas Rangers	844	3	0.00	0	0.12
	Atlanta	818	4	0.00	0	0.17
	Baltimore Orioles	818	4	0.00	0	0.17
	Boston Red Sox	818	4	0.00	0	0.17

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	California Angels	818	4	0.00	0	0.17
	Chicago White Sox	818	4	0.00	2	0.17
	Chicago Cubs	818	4	0.00	0	0.17
	Cincinnati Reds	818	4	0.00	0	0.17
	Cleveland	818	4	0.00	0	0.17
	Detroit Tigers	818	4	0.00	0	0.17
	Houston Astros	818	4	0.00	0	0.17
	Kansas City Royals	818	4	0.00	0	0.17
	Los Angeles Dodgers	818	4	0.00	0	0.17
	Milwaukee Brewers	818	4	0.00	1	0.17
	Minnesota Twins	818	4	0.00	0	0.17
	Montreal Expos	818	4	0.00	0	0.17
	New York Yankees	818	4	0.00	0	0.17
	New York Mets	818	4	0.00	0	0.17
	Oakland Athletics	818	4	0.00	1	0.17
	Philadelphia Phillies	818	4	0.00	0	0.17
	Pittsburgh Pirates	818	4	0.00	0	0.17

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	San Diego Padres	818	4	0.00	1	0.17
	San Francisco Giants	818	4	0.00	0	0.17
	St. Louis Cardinals	818	4	0.00	0	0.17
	Texas Rangers	818	4	0.00	0	0.17
	Atlanta	900	1	0.00	0	0.04
	Baltimore Orioles	900	1	0.00	0	0.04
	Boston Red Sox	900	1	0.00	0	0.04
	California Angels	900	1	0.00	0	0.04
	Chicago White Sox	900	1	0.00	0	0.04
	Chicago Cubs	900	1	0.00	0	0.04
	Cincinnati Reds	900	1	0.00	0	0.04
	Cleveland	900	1	0.00	0	0.04
	Detroit Tigers	900	1	0.00	0	0.04
	Houston Astros	900	1	0.00	0	0.04
	Kansas City Royals	900	1	0.00	0	0.04
	Los Angeles Dodgers	900	1	0.00	0	0.04

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
1977	Milwaukee Brewers	900	1	0.00	0	0.04
	Minnesota Twins	900	1	0.00	0	0.04
	Montreal Expos	900	1	0.00	0	0.04
	New York Yankees	900	1	0.00	0	0.04
	New York Mets	900	1	0.00	0	0.04
	Oakland Athletics	900	1	0.00	0	0.04
	Philadelphia Phillies	900	1	0.00	0	0.04
	Pittsburgh Pirates	900	1	0.00	0	0.04
	San Diego Padres	900	1	0.00	0	0.04
	Seattle Mariners	900	1	0.00	0	0.04
	San Francisco Giants	900	1	0.00	1	0.04
	St. Louis Cardinals	900	1	0.00	0	0.04
	Texas Rangers	900	1	0.00	0	0.04
	Toronto Blue Jays	900	1	0.00	0	0.04
	Atlanta	904	2	0.00	0	0.08
	Baltimore Orioles	904	2	0.00	0	0.08

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Boston Red Sox	904	2	0.00	0	0.08
	California Angels	904	2	0.00	0	0.08
	Chicago White Sox	904	2	0.00	1	0.08
	Chicago Cubs	904	2	0.00	0	0.08
	Cincinnati Reds	904	2	0.00	0	0.08
	Cleveland	904	2	0.00	0	0.08
	Detroit Tigers	904	2	0.00	0	0.08
	Houston Astros	904	2	0.00	0	0.08
	Kansas City Royals	904	2	0.00	0	0.08
	Los Angeles Dodgers	904	2	0.00	0	0.08
	Milwaukee Brewers	904	2	0.00	0	0.08
	Minnesota Twins	904	2	0.00	0	0.08
	Montreal Expos	904	2	0.00	0	0.08
	New York Yankees	904	2	0.00	0	0.08
	New York Mets	904	2	0.00	0	0.08
	Oakland Athletics	904	2	0.00	0	0.08
	Philadelphia Phillies	904	2	0.00	0	0.08

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Pittsburgh Pirates	904	2	0.00	0	0.08
	San Diego Padres	904	2	0.00	0	0.08
	Seattle Mariners	904	2	0.00	0	0.08
	San Francisco Giants	904	2	0.00	1	0.08
	St. Louis Cardinals	904	2	0.00	0	0.08
	Texas Rangers	904	2	0.00	0	0.08
	Toronto Blue Jays	904	2	0.00	0	0.08
	Atlanta	899	2	0.00	0	0.08
	Baltimore Orioles	899	2	0.00	0	0.08
	Boston Red Sox	899	2	0.00	0	0.08
	California Angels	899	2	0.00	0	0.08
	Chicago White Sox	899	2	0.00	1	0.08
	Chicago Cubs	899	2	0.00	0	0.08
	Cincinnati Reds	899	2	0.00	0	0.08
	Cleveland	899	2	0.00	0	0.08
	Detroit Tigers	899	2	0.00	0	0.08

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Houston Astros	899	2	0.00	0	0.08
	Kansas City Royals	899	2	0.00	0	0.08
	Los Angeles Dodgers	899	2	0.00	0	0.08
	Milwaukee Brewers	899	2	0.00	0	0.08
	Minnesota Twins	899	2	0.00	0	0.08
	Montreal Expos	899	2	0.00	0	0.08
	New York Yankees	899	2	0.00	0	0.08
	New York Mets	899	2	0.00	0	0.08
	Oakland Athletics	899	2	0.00	0	0.08
	Philadelphia Phillies	899	2	0.00	0	0.08
	Pittsburgh Pirates	899	2	0.00	0	0.08
	San Diego Padres	899	2	0.00	0	0.08
	Seattle Mariners	899	2	0.00	0	0.08
	San Francisco Giants	899	2	0.00	1	0.08
	St. Louis Cardinals	899	2	0.00	0	0.08
	Texas Rangers	899	2	0.00	0	0.08

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	Toronto Blue Jays	899	2	0.00	0	0.08
	Atlanta	916	3	0.00	0	0.12
	Baltimore Orioles	916	3	0.00	0	0.12
	Boston Red Sox	916	3	0.00	0	0.12
	California Angels	916	3	0.00	0	0.12
	Chicago White Sox	916	3	0.00	2	0.12
	Chicago Cubs	916	3	0.00	0	0.12
	Cincinnati Reds	916	3	0.00	0	0.12
	Cleveland	916	3	0.00	0	0.12
	Detroit Tigers	916	3	0.00	0	0.12
	Houston Astros	916	3	0.00	0	0.12
	Kansas City Royals	916	3	0.00	0	0.12
	Los Angeles Dodgers	916	3	0.00	0	0.12
	Milwaukee Brewers	916	3	0.00	0	0.12
	Minnesota Twins	916	3	0.00	0	0.12
	Montreal Expos	916	3	0.00	0	0.12
	New York Yankees	916	3	0.00	0	0.12

1980

Table 3: Table Title (*continued*)

season	Team	player_count	nlp_count	nlp_per_pop	nlp_team_count	nlp_per_team
	New York Mets	916	3	0.00	0	0.12
	Oakland Athletics	916	3	0.00	0	0.12
	Philadelphia Phillies	916	3	0.00	0	0.12
	Pittsburgh Pirates	916	3	0.00	0	0.12
	San Diego Padres	916	3	0.00	0	0.12
	Seattle Mariners	916	3	0.00	0	0.12
	San Francisco Giants	916	3	0.00	1	0.12
	St. Louis Cardinals	916	3	0.00	0	0.12
	Texas Rangers	916	3	0.00	0	0.12
	Toronto Blue Jays	916	3	0.00	0	0.12

Appendix B: Charts

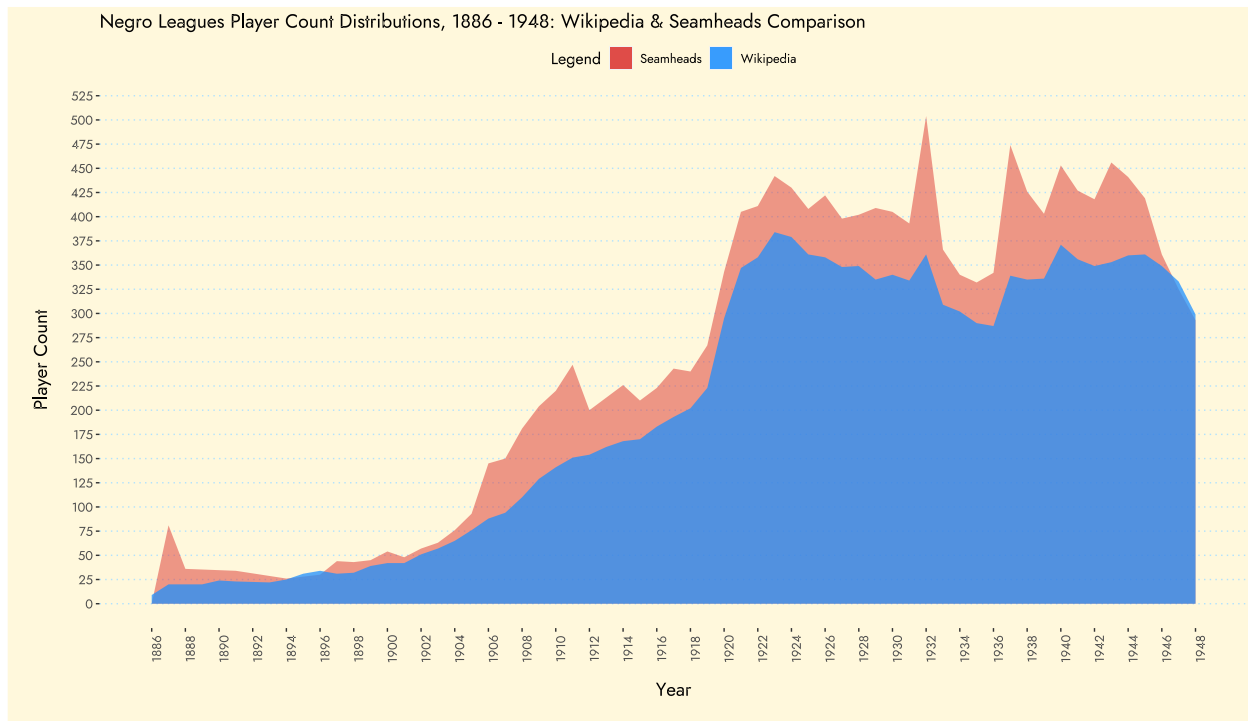


Figure 10: The estimated distribution of players in the Negro Leagues, 1886 to 1948: Wikipedia-Seamheads comparison.

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