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Field Studies: MLB Manager Hiring Criteria and Career Pathways from 2010-19

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Abstract

The purpose of this report was to explore and describe Major League Baseball (MLB) manager hiring and firing trends over the past decade. All data presented were gathered from publicly-accessible sources, such as news articles, official websites, and press releases. Trends in hirings and firings related to race were examined along with patterns linked to managerial pipelines and pathways. Results indicate that MLB managers of Color hired during the past decade have the same or more robust playing experience and managerial/coaching experience as their White managerial colleagues. However, they acquire managerial positions through fewer pathways, are hired across a truncated age range, have reduced tenures, and are given fewer second chances as managers. Much of this data reflects similar findings from Rimer's (1996) study of MLB managers from 1975-1994. One important overlay in comparing this study with the earlier work is the overall decline in the number of African Americans playing baseball at the major-league level. At the end of this current period of study, the percentage of MLB players who were African American was 7.5%, the lowest since 1991, according to the TIDES 2020 Racial and Gender Report Card. Implications for future research and the need for data-driven policy are discussed.

Introduction

There has been a total of 35 managers of Color in Major League Baseball history¹ (see Appendix A for an alphabetical list). The first was Preston Gomez, hired by the San Diego Padres in 1969. There is, however, a long history of people of Color managing in professional baseball. For example, the first Black professional baseball team (not part of the MLB), the Cuban Giants, originated in 1885 and there were numerous attempts to establish regional and national leagues beginning in 1886, including the Southern League of Colored Base Ballists (1886), National Colored Base Ball League (1887), National Colored League of Professional Ball Clubs (1908), National Negro Baseball League (1911) and Southwestern Negro League of Professional Ball Clubs (1912), but the travel was not economical and some clubs did not own a ballpark, which created problems for scheduling (Eberle, 2019). The Negro National League also started over 100 years ago in 1920. This and several Negro Leagues that followed included African Americans and a small number of Latinos. Interestingly, many African American managers and owners peopled these Negro Leagues. Nevertheless, such leagues declined as integration into the MLB infrastructure increased in the late 1940s. The accomplishments and subsequent opportunities forged

¹ Race or ethnicity determinations are limited by the accuracy of publicly-available information. Managers with two European parents were counted as White.

by some of the first players of Color in MLB's integrated league, such as Jackie Robinson and Larry Doby, and later MLB stars such as Ernie Banks, Willie Mays and Hank Aaron, are seen as pivotal for establishing the pathways available to players of Color today.

What exactly are the opportunities for players of Color today? There are many discussions about professional sports leagues being meritocracies, where players get what they earn. There have been recent discussions, however, forcing a spotlight on the unequal realities in sports, including MLB. For example, Robert Arthur in a 2020 article highlights statistics that show race plays a factor for umpires when it comes to calling balls and strikes. Similarly, researchers have examined the influence of these types of race-based biases on career opportunities and pay (Burge & Zillante, 2017). Beyond statistics, we see cultural biases in the league and individual clubs (e.g. Hayhurst, 2015) and the actions of fans (Bonesteel, 2020). What this means is that winning and losing is not colorblind, race and culture shape who plays, how they are treated, and how they are compensated.

Despite recent press coverage regarding racism in sports, there is a dearth of research to date examining racism in MLB specifically related to the impact of racism on career trajectories within leadership and managerial positions. Of the existing studies, many focus on player discrimination (e.g. Burge & Zillante, 2017; Kim & King, 2014; Kanago & Surdam, 2020). A notable exception is a study done by Volz (2012) that found Black former players are 74% less likely to become MLB managers and Hispanic players are 66% less likely to coach in the major leagues and 69% less likely to manage in the minor leagues compared to White players. Additional examination of variables leading to careers as MLB managers may provide further insights into opportunities for greater diversity throughout the ranks.

The foundational research examining these questions, and to a degree the motivation for this study, is from Edward Rimer's "Discrimination in Major League Baseball: Hiring standards for major league managers, 1975-1994" (1996). Rimer's study examined the professional playing and coaching experiences of managers, which Rimer figured to be the formal and informal hiring standards. The standards used were not explicitly known-they were not written or spelled out by any team. In their absence, Rimer developed three specific, job-related experiences: longevity of playing career (and statistics that speak to career performance), minor league managerial experience, and major league coaching background. Rimer concluded that the three job-related experiences were valid measures of qualifications across the population of managers, but the gualifications were not applied evenly – Whites varied from Blacks and Latinos. Generally, Rimer found that all managers had some combination of these experiences, but the quality, types, and amount of experiences differed for Hispanic, Black, and White men. Hispanic and Black managers had longer and more productive playing careers than White managers. Managers of Color in Rimer's study also tended to have been outfielders, positions where players of Color are overrepresented, and which often do not lead to being hired as a manager. Managers of Color also had less minor league managerial experience than Whites but similar amounts of major league coaching experience before being hired as a manager.

For this study, we used Rimer's job-related experiences to compare whether or not hiring practices have become more equal over time, and to look at the numbers of manager hires by race and ethnicity to assess whether MLB has improved during the past ten years in hiring more diverse managers. We analyzed who was hired and fired and looked for patterns over a 10-season window, from the 2010 through the 2019 MLB seasons. A couple of points about the limits of the research: the data contained in this report are not exhaustive and the total number of coaches in this data set is insufficient for inferential statistical analyses. **The purpose of this report is to explore and report on managerial hiring and firing trends, not to extrapolate how or why these patterns occur.**

It is our goal to show trends, and, in future iterations, provide potential explanations and discussion points for next steps in terms of research and considerations for sustainable change. We see these findings as complementary and supplementary to the foundational and ongoing commentaries of Dr. Harry Edwards and the important and groundbreaking Race and Gender Report Cards produced by Dr. Richard Lapchick and The Institute for Diversity and Ethics in Sport (TIDES) at the University of Central Florida.

Method

All data presented were gathered from publicly-accessible sources, such as news articles and press releases, that report on managers' entrances into and exits from Major League Baseball managerial positions. The data encompassed all MLB managerial changes from the 2010 season through the 2019 season. We defined each season by the calendar year (January to December) but did not include anyone hired after the 2019 World Series which concluded on October 30, 2019. All 30 MLB teams were included in this study, except for the San Francisco Giants, whose manager Bruce Bochy held his position during the entirety of our 10-season window and was therefore not included in our incoming or outgoing manager data sets. A list of outgoing and incoming managers along with team name and year of manager change can be found in Appendix B.

The data set included information on both the incoming and outgoing managers' race/ethnicity, age at the time of hire, highest level of playing experience, and career MLB batting and fielding statistics. For outgoing managers, the team win/loss record, tenure with the team, and the next coaching or managerial opportunity was also collected. For incoming managers, we collected additional data such as prior MLB

coaching and managerial experience and prior Minor League Baseball (MiLB) managerial experience.

Data collection was completed by a team of research assistants who then verified each other's work. Another round of data verification was then completed by one of the researchers within the Global Sport Institute using publicly available sources. Discrepancies were reconciled by accessing multiple sources, with the preponderance of information determining final data inclusion.

All figures represent data collected prior to the start of the truncated 2020 MLB season in order to capture hiring and firing outcomes of the 2019 full season. Over the 10-season window included in our analyses, there were 63 managerial changes. Table 1 provides the total number and percent of outgoing managers. Table 2 provides the total number and percent of newly-hired managers included in our analyses, each broken down by race/ethnicity.

Results

Table 1

Total Number and Percent of Outgoing Managers by Race/Ethnicity for 2010-19

	Total Number	Percent
White	47	74.6
African American	8	12.7
Cuban	2	3.2
Venezuelan	2	3.2
Japanese American	1	1.6
Multiracial	1	1.6
Puerto Rican	1	1.6
Mexican American	1	1.6
Total	63	100

Note. The racial/ethnic category of multiracial indicates that the manager had two non-White parents.

Table 2

Total Number and Percent of Newly-Hired Managers by Race/Ethnicity for 2010-19

	Total Number	Percent
White	50	79.4
African American	3	4.8
Cuban	1	1.6
Venezuelan	1	1.6
Japanese American	0	0
Multiracial	2	1.6

Puerto Rican	4	6.3
Mexican American	2	3.2
Total	63	100

Note. The racial/ethnic category of multiracial indicates that the manager had two non-White parents.

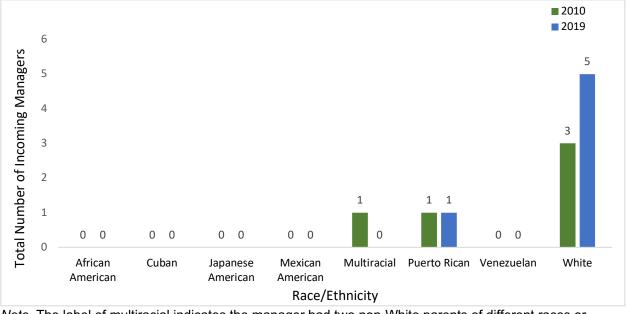
In our analyses, we defined "hires" as officially-hired managers who were not designated "interim." We excluded interim managers because, by definition, they were temporary and transient in nature and therefore may add variability to the data that is not representative of actual hiring patterns. "Age" represented the age of the manager at the time he was hired by the MLB team. We calculated the age based on hire date and birthdate, both of which were found in publicly-available sources. "Next Position" was the next role an outgoing manager accepted within our analyzed timeframe.

Race and ethnicity are not biological, but rather social constructs. Race is associated with biological characteristics, while ethnicity is linked with cultural expressions. Both were used to categorize different populations and have evolved throughout history. We made determinations as closely as possible to what seemed to be current societal and academic norms. Our decisions for categorizing each manager were made from a holistic collection of information from publicly-available sources. We looked at birthplace, where the manager was raised, languages spoken, and parents' racial/ethnic identity. Given the nature of race being a social construct, there may be varying perspectives on a manager's race. For example, Manny Acta was a manager we identified as multiracial. We used this classification so as to not erase any part of his racial or ethnic identity. Others may have made a different identification based on available information. We defined "Multiracial" as being of two or more racial or ethnic groups that are historically minoritized. For managers who were biracial, that is, having one White parent and one racially or ethnically minoritized parent, the racially or ethnically minoritized identity was documented as their race/ethnicity. This is again an instance in which we followed societal norms. "Mexican American" and "African American" managers were of Mexican and African descent, respectively, but born in the United States. "Venezuelan" and "Cuban" managers were both born in their respective countries. "Puerto Rican" managers were of Puerto Rican descent and/or born in Puerto Rico. Due to the small number of managers from minoritized groups, our data at times referred to the group as "managers of Color," however, it is important to note that each racial/ethnic group has its own unique experiences, representation, and hiring patterns.

Results

Incoming MLB Managers

The majority of managers hired in 2010 were White. That majority increased in 2019. Figure 1 shows the racial/ethnic breakdown of managers hired in the bookend years examined in this report. Figure 2 shows the season-by-season breakdown of incoming and outgoing managers by race/ethnicity.

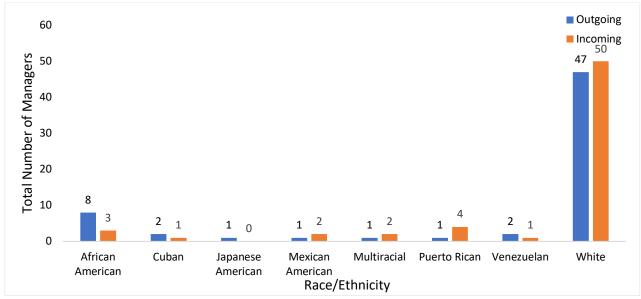


Total Number of Incoming MLB Managers by Race/Ethnicity for 2010 vs. 2019

Note. The label of multiracial indicates the manager had two non-White parents of different races or ethnicities.

Figure 2

Total Number of Incoming and Outgoing Managers by Race/Ethnicity for 2010-19

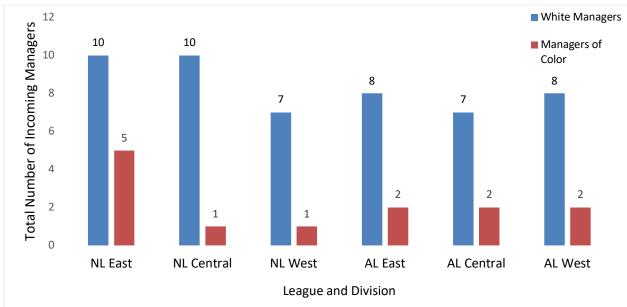


Note. The label of multiracial indicates the manager had two non-White parents of different races or

ethnicities.

It was also important to see how hiring diversity differed across divisions and leagues within MLB. Figure 3 shows the total number of White managers compared to managers of Color hired in each division and league.



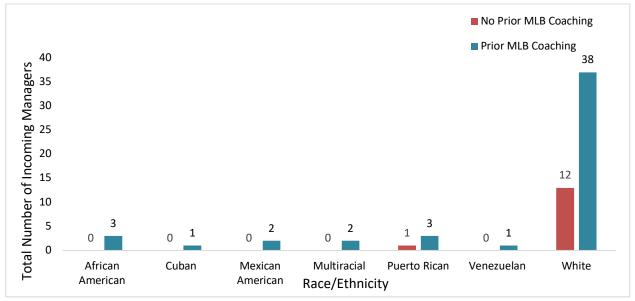


MLB Division History of Hiring White Managers vs. Managers of Color for 2010-19

based on status in 2019.

The seasonal and bookend numbers related to race/ethnicity in hiring provided a cursory overview. Further examination was warranted, however, in order to consider the full picture of hiring patterns. As a result, we unpacked some of the relevant playing and coaching experience of the managers hired over the last ten seasons.

Note. NL = National League; AL = American League; Teams' league and division membership were



Incoming Managers' Prior MLB Coaching Experience by Race/Ethnicity for 2010-19

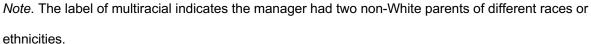


Figure 4 shows the breakdown by race/ethnicity of prior MLB coaching experience for incoming managers across the 10-season period. With the exception of one Puerto Rican manager, managers of Color consistently had prior MLB coaching experience in other areas, for example, pitching coach, hitting coach, or bench coach, prior to becoming MLB managers. However, more than a quarter of White managers had no prior MLB coaching experience. Although managers may gain extensive coaching experience in minor leagues, obtaining a manager position as a first entry point into MLB had not generally been a pathway for managers of Color. These findings suggest prior MLB coaching experience has remained a qualification for managers of Color and decreased in importance for White managers when compared with Rimer's (1996) findings from 1975-1994. In that span, only one of 11 managers of Color had no prior coaching experience, while 17 of 128 (13%) White managers lacked such experience.

In examining experience, age was also a factor to consider. Table 3 shows the similar mean hiring age for incoming White managers and managers of Color, but a slightly truncated age range for managers of Color.

Table 3

Mean Age and Age Ranges of Hire for Incoming White Managers vs. Incoming Managers of Color for 2010-19

	Mean Age of Hire	Age Ranges of Hire	Standard Deviation
White Managers	49.6	37-68	7.23
Managers of Color	49.15	40-66	7.34

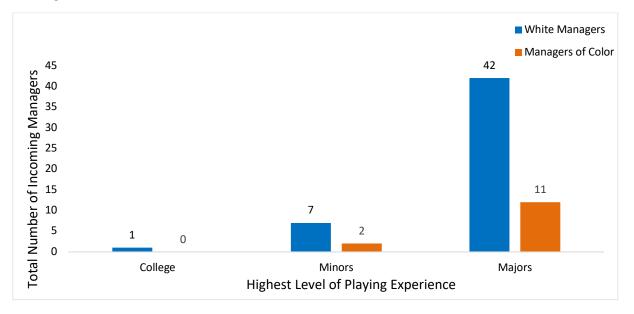
For managers hired within our ten-season window, managers of Color held prior MLB coaching and managerial positions for slightly longer than their White managerial peers. The mean and ranges of years of experience are detailed in Table 4.

Table 4

Mean and Ranges of Years of Experience for Incoming White Managers vs. Incoming Managers of Color for 2010-19

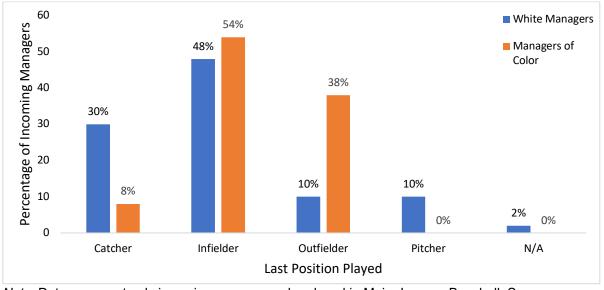
	Mean Years of Experience	Ranges of Years of Experience	Standard Deviation
White Managers			
Coaching	4.66	0-14	4.24
Managing	2.90	0-15	4.52
Managers of Color			
Coaching	5.23	0-12	3.24
Managing	3.23	0-20	5.70

An examination of playing experience levels highlighted a pattern similar to coachingexperience levels. Figure 5 details the highest level of playing experience for White managers and managers of Color hired from 2010-19.

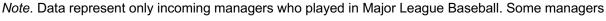


Incoming Managers' Highest Level of Playing Experience for White Managers vs. Managers of Color for 2010-19

The minimum playing level reached for new-hire managers of Color was the minor leagues, while only one White manager did not play baseball above the college level. These data indicated a potential point of progress since the span of Rimer's (1996) study, which ranged from 1975-1994. His data, which included all managers (not only those hired during the span), revealed that 103 of 128 (80.4%) White managers had MLB playing experience, whereas 100% of Black (7) and Hispanic (5) managers had such experience. For the present study, given that 88% of all managers played in MLB, exploring the positions they played may help elucidate the pipelines for managers. Figure 6 details managers' last positions played for those who played in the major leagues.



Incoming Managers' Last MLB Positions for White Managers vs. Managers of Color for 2010-19



were designated hitters in the American League and therefore did not play an offensive position.

Infielder positions served as the largest pipelines for all managers. Outfielder positions were a more robust pipeline for managers of Color compared to White managers. The position of catcher was a more salient pipeline for White managers, but less so for managers of Color. Similar to Rimer's (1996) findings, all managers who were previously MLB pitchers were White. From 1975-1994, there were six White former pitchers who became managers, and from 2010-19, there were five.

Playing statistics are a common data point used to measure success. Given the low number of managers of Color hired within the timeframe of these data, it was difficult to meaningfully compare many statistics. For example, earned run averages could not be compared because there were no pitchers of Color hired as managers during these ten seasons. However, batting average and fielding percentage comparisons can be made because almost all managers with prior MLB playing experience have a batting average and fielding percentage noted on record. Table 5 provides the mean batting averages for White managers and managers of Color who played in MLB². Batting averages were similar across both groups.

²Batting averages were taken from public sources and did not consider minimum at bats, such as those calculated for batting titles and rookie status designation.

Table 5

Means and Ranges of Major League Baseball Batting Averages for Incoming White Managers vs. Incoming Managers of Color for 2010-19

	Mean Batting Average	Ranges of Batting Averages	Standard Deviation
White Managers	.253	.198307	.028
Managers of Color	.250	.150298	.037

Total fielding percentage³ was used as a defensive statistic (Putouts + Assists/ Putouts + Assists + Errors) are also similar across both groups. Table 6 shows the mean total fielding percentage and standard deviation for White managers and managers of Color.

Table 6

Means and Ranges of Major League Baseball Fielding Percentages for Incoming White Managers vs. Incoming Managers of Color for 2010-19

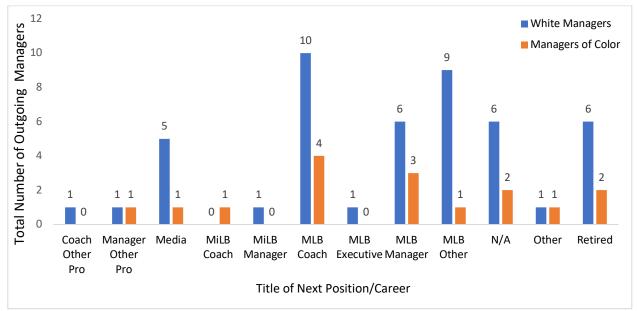
	Mean Fielding Percentage	Ranges of Fielding Percentages	Standard Deviation
White Managers	.975	.906996	.019
Managers of Color	.975	.938991	.015

Outgoing MLB Managers

Within our hiring window, it was also important to look at variables related to outgoing managers. Figure 7 details the racial/ethnic breakdown of next careers for outgoing managers. In MLB, White managers have a broader range of opportunities after leaving manager positions.

³ Fielding percentages were taken from public sources and were not available for all managers, including some who were designated hitters. The statistic reflects the total fielding percentage taken across the span of the MLB managers' playing career and across positions played.

Outgoing Managers' Next Careers for White Managers vs. Managers of Color for 2010-19



Note. Coach Other Pro = Coaching in a professional league other than Major League Baseball; Manager Other Pro = Managing in a professional league other than Major League Baseball; MiLb = Minor League Baseball; MLB = Major League Baseball; N/A indicates there was a delay in obtaining a new position that extended beyond the timeline of these analyses; Other = the next position was not sport/broadcasting related; Retired = retired.

A comparison of mean seasons with the team for outgoing managers shown in Table 7 reveals that managers of Color had fewer seasons on average with a team compared to White managers.

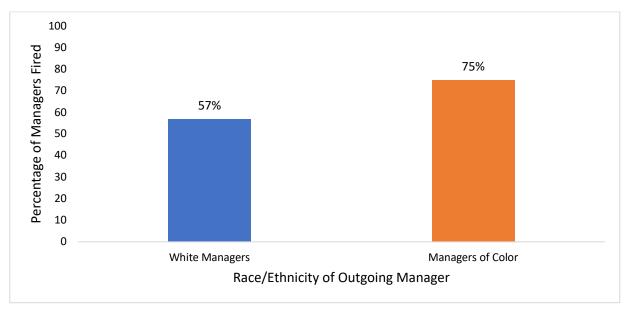
Table 7

Mean and Ranges of Managerial Tenure for Outgoing White Managers vs. Outgoing Managers of Color for 2010-19

	Mean Tenure	Ranges of Tenure	Standard Deviation
White Managers	5.66	1-21	4.33
Managers of Color	3.5	1-8	2.28

Being fired versus retiring or taking a position with another team also differed for managers of Color compared to White managers. Indeed, a higher percentage of managers of Color were fired.

Percentage of Outgoing Managers Fired for White Managers vs. Managers of Color for 2010-19



Win-loss percentages as a measure of success did not explain the higher rate of firing for managers of Color. Table 8 shows the win-loss percentages are similar for White managers and managers of Color.

Table 8

Mean Win-Loss Percentage for All Seasons, First Season, and Last Season for Fired White Managers vs. Fired Managers of Color

	All Seasons Winning Percentage	First Season Winning Percentage	Last Season
White Managers	.47 (.06)	.49 (.08)	.42 (.09)
Managers of Color	.49 (.06)	.48 (.07)	.45 (.09)

Note. Standard deviation presented in parentheses.

Discussion

Overall Pool

Between the 2010 and 2019 seasons, 63 managerial changes occurred across Major League Baseball, with the highest occurrences happening in 2011 and 2015. Within the ten-season window we analyzed, the overall number and percentage of managers of Color decreased, while the number and percentage of White managers increased. Within specific racial/ethnic minority groups, African Americans saw the greatest decrease, while Puerto Ricans saw the only increase of more than one manager. Rimer did not study hirings and firings, and therefore, his data were not directly comparable here. However, Rimer identified 210 changes and found that 140 different managers held jobs; 128 were White, seven were Black, and five were Latino.

A more magnified lens revealed the National League East leads all six MLB divisions in hiring diversity during the decade. Of the 13 managers of Color hired during this span, five were in the NL East, while the other five divisions accounted for the remaining eight hires, with only one or two hired in each division.

For team-specific data on total hires and hires of managers of Color, see Appendix C. During the decade, 29 of the MLB's 30 teams hired new managers. Of those teams, fewer than half (14) hired managers of Color, and only two teams hired more than one manager of Color: the Miami Marlins and the Washington Nationals.

Qualification and Pipeline Disparities

Of the 13 incoming managers of Color hired during the decade we examined, only one had no prior MLB coaching experience, whereas more than one-third of incoming White managers lacked such experience. Additionally, incoming managers of Color had more previous MLB coaching and managing experience at the time they were hired than incoming White managers.

Playing experience indicated further qualification disparities. While the vast majority of all incoming managers had MLB playing experience, no managers of Color achieved a manager position without at least minor league experience. Although only one White manager was hired with only college experience, it nonetheless represented a pathway closed to managers of Color. A closer examination of playing experience showed that the infield, outfield, and catcher positions were strong pipelines for managers. Of these positions, infielders and outfielders yielded more robust percentages of managers of Color. The position of catcher did not provide a pathway for managers of Color to the same degree as it did for White managers. Previous research going back to the 1970s on positional segregation or stacking showed a decades-long trend that Blacks and Latinos are generally outfielders and not in "leadership" positions, such as middle infielders, pitchers, and catchers (Loy & Elvogue, 1970; Scully, 1974; Guppy, 1983; Phillips, 1983; Jiobu, 1988; Lavoie & Leonard, 1994; Pattnayak & Leonard, 1989). The exclusion of players of Color from on-field leadership positions led to their exclusion from becoming managers (Scully, 1989). At the time of these analyses, approximately 45% of catchers active in MLB were people of Color,⁴ a percentage that suggests potential for building another pipeline for aspiring managers of Color. While pitching represents a narrow pathway for managers overall, it has been closed to managers of Color.

⁴ Note that African Americans have all but disappeared as catchers and so this is really a segregated position held by Whites and Latinos.

Incoming managers' age was consistent between managers of Color and White managers. However, the range was slightly broader for White managers, showing they are hired at younger and older ages compared to candidates of Color. Overall, the data suggest that coaching experience, playing experience, and age are all more flexible for White managers than for managers of Color, despite the fact that MLB playing statistics such as a batting average are similar between the two groups. These comparisons beg the question: if playing career and coaching experience statistics do not differentiate managers of Color from White managers, why weren't managers of Color hired in numbers similar to White managers? Additionally, Rimer's (1996) findings from managers between 1975-1994 indicated limited or no progress over the past 25-45 years, especially when considering coaching and playing experience.

Tenure and Firing

Overall, outgoing managers of Color had fewer seasons managing before their terms as manager ended. They were also more likely to be fired than White managers, as just over half of outgoing White managers were fired, while three-quarters of managers of Color were fired (as opposed to leaving the position for other reasons). This was despite the fact that managers of Color and White managers had similar winning percentages across seasons, including during their final seasons.

On average, White managers held their managerial positions with a single team longer than managers of Color during the decade we analyzed. Of note, the longest tenure for a manager of Color in this span was eight years, while 19% of White managers exceeded this tenure. Although White managers had a few outliers at the upper extensions of the tenure range, they also had ten managers who were fired after three years, and seven who were fired after only two years.

After being fired, there were fewer opportunities for managers of Color compared to White managers whose next jobs are distributed over slightly more options, especially within MLB. The numbers did not indicate dramatic differences, but it appeared fewer opportunities are available to managers of Color.

Conclusion and Future Directions

Inferring causation or establishing ideal percentages are beyond the scope of these analyses. Instead we provide a consolidated picture of existing hiring and firing patterns related to race and ethnicity with the intention of driving future research to examine the *why* beyond the perfunctory popular assumption of a meritocracy. The numbers do not support this achieve-and-advance paradigm in baseball. It is not evidenced in the numbers, which show managers of Color achieve similarly to White managers during both their playing careers and managing careers but are still given fewer opportunities. Additional research is needed to examine the variables yielding this pernicious influence on hiring diversity in MLB and to determine the course forward for increasing that diversity.

References

- Arthur, R. (2020, June 5) Moonshot: Baseball ought to confront its own racism. Baseball Prospectus. <u>https://www.baseballprospectus.com/news/article/59340/moonshot-baseball-ought-to-confront-its-own-racism/</u>
- Burge, G., & Zillante, A. (2017). Racial Discrimination and Statistical Discrimination: MLB Rookie Card Values and Performance Uncertainty. *Social Science Quarterly*, 98(5), 1435–1455. <u>https://doi.org/10.1111/ssqu.12330</u>
- Bonesteel, M. (2020, June 11). *Red Sox acknowledge that racism at Fenway Park 'is real," promise action. The Washington Post.* <u>https://www.washingtonpost.com/sports/2020/06/11/red-sox-acknowledge-racism-fenway-park-is-real-promise-action/</u>
- Eberle, M.E. (2019). *Toward a Black Baseball League for Kansas City, 1890-1916: Proposals and Challenges.* Fort Hays State University, Hays, Kansas.
- Guppy, N. (1983). Positional centrality and racial segregation in professional baseball. International Review of Sport Sociology, 18(4), 95-109.
- Hayhurst, D. (2015, October 1). *Racism in Baseball isn't going anywhere*. Vice. Retrieved from: <u>https://www.vice.com/en_us/article/vva95j/racism-in-baseball-isnt-going-anywhere</u>
- Jiobu, R. (1988). Racial inequality in a public arena: The case of professional baseball. *Social Forces, 67*, 524-534.
- Kanago, B., & Surdam, D. (2020). Intimidation, Discrimination, and Retaliation: Hit-by-Pitches during the Integration of Major League Baseball. *Atlantic Economic Journal*, 48(1), 67–85.
- Kim, J., & King, B. (2014). Seeing Stars: Matthew Effects and Status Bias in Major League Baseball Umpiring. *Management Science*, *60*(11), 2619–2644.
- Lavoie, M., & Leonard, W.M., II. (1994). In search of an alternative explanation of stacking in baseball: The uncertainty hypothesis. *Sociology of Sport Journal, 11*, 140-154.
- Loy, J., & Elvogue, J. (1970). Racial segregation in American sport. *International Review of Sport Sociology*, 5(1), 5-24.
- Pattnayak, S., and Leonard, J. (1989). Racial segregation in major league baseball. Sociology and Social Research, 76(1), 3-9.
- Phillips, J. (1983). Race and career opportunities in major league baseball: 1960-1980. *Journal of Sport & Social Issues*, 7(2), 3-9.

- Rimer, E. (1996). Discrimination in major league baseball: hiring standards for major league managers, 1975-1994. *Journal of Sport and Social Issues, 20*(2), 118-134.
- Scully, G. (1974). Discrimination: the case of Baseball. In R. Noll (Ed.), *Government and the sport business* (pp.221-273). Washington, DC: Brookings Institution.
- Scully, G. (1989). The business of major league baseball. University of Chicago Press.
- Volz, B. (2012). Race and the Likelihood of Managing in Major League Baseball. *Journal of Labor Research*, *34*(1), 30–51.

Appendix A

Managers of Color in Major League Baseball History

Alex Cora **Bo Porter Buck Martinez** Carlos Tosca **Cecil Cooper** Charlie Montoyo Cito Gaston Cookie Rojas **Dave Garcia Dave Martinez Dave Roberts Davey Lopes Don Baylor** Don Wakamatsu **Dusty Baker** Edwin Rodríguez Felipe Alou Frank Robinson Fredi González Hal McRae Jerry Manuel Jerry Royster Larry Doby Lloyd McClendon Luis Rojas Manny Acta Maury Wills Nick Leyva Ozzie Guillén Pat Corrales Preston Gómez **Rick Renteria** Ron Washington Tony Peña Tony Pérez Willie Randolph

Appendix B

Years, Teams, Outgoing, and Incoming Managers Included in this Study

Year	Team	Outgoing Manager	Incoming Manager
2010	Miami Marlins	Fredi González	Edwin Rodríguez
2010	Chicago Cubs	Lou Piniella	Mike Quade
2010	Cleveland Indians	Eric Wedge	Manny Acta
2010	Kansas City Royals	Trey Hillman	Ned Yost
2010	Houston Astros	Cecil Cooper	Brad Mills
2011	Atlanta Braves	Bobby Cox	Fredi González
2011	New York Mets	Jerry Manuel	Terry Collins
2011	Washington Nationals	Jim Riggleman	Davey Johnson
2011	Milwaukee Brewers	Ken Macha	Ron Roenicke
2011	Pittsburgh Pirates	John Russell	Clint Hurdle
2011	Arizona Diamondbacks	A. J. Hinch	Kirk Gibson
2011	Los Angeles Dodgers	Joe Torre	Don Mattingly
2011	Baltimore Orioles	Dave Trembley	Buck Showalter
2011	Toronto Blue Jays	Cito Gaston	John Farrell
2011	Oakland Athletics	Bob Geren	Bob Melvin
2011	Seattle Mariners	Don Wakamatsu	Eric Wedge
2012	Miami Marlins	Edwin Rodríguez	Ozzie Guillén
2012	Chicago Cubs	Mike Quade	Dale Sveum
2012	St. Louis Cardinals	Tony La Russa	Mike Matheny
2012	Boston Red Sox	Terry Francona	Bobby Valentine
2012	Chicago White Sox	Ozzie Guillén	Robin Ventura
2013	Miami Marlins	Ozzie Guillén	Mike Redmond
2013	Philadelphia Phillies	Charlie Manuel	Ryne Sandberg
2013	Colorado Rockies	Jim Tracy	Walt Weiss
2013	Boston Red Sox	Bobby Valentine	John Farrell
2013	Toronto Blue Jays	John Farrell	John Gibbons
2013	Cleveland Indians	Manny Acta	Terry Francona
2013	Houston Astros	Brad Mills	Bo Porter
2014	Washington Nationals	Davey Johnson	Matt Williams
2014	Chicago Cubs	Dale Sveum	Rick Renteria
2014	Cincinnati Reds	Dusty Baker	Bryan Price
2014	Detroit Tigers	Jim Leyland	Brad Ausmus
2014	Seattle Mariners	Eric Wedge	Lloyd McClendon
2015	Philadelphia Phillies	Ryne Sandberg	Pete Mackanin
2015	Chicago Cubs	Rick Renteria	Joe Maddon
2015	Milwaukee Brewers	Ron Roenicke	Craig Counsell
2015	Arizona Diamondbacks	Kirk Gibson	Chip Hale
2015	Tampa Bay Rays	Joe Maddon	Kevin Cash
2015	Minnesota Twins	Ron Gardenhire	Paul Molitor
2015	Houston Astros	Bo Porter	A. J. Hinch
2015	Texas Rangers	Ron Washington	Jeff Banister
2016	Atlanta Braves	Fredi González	Brian Snitker

Year 2016 2016 2016 2016 2017 2017 2017 2017 2018 2018 2018	Team Miami Marlins Washington Nationals Los Angeles Dodgers San Diego Padres Seattle Mariners Arizona Diamondbacks Colorado Rockies Chicago White Sox New York Mets Philadelphia Phillies Washington Nationals	Outgoin Mike Re Matt Wi Don Ma Bud Bla Lloyd M Chip Ha Walt We Robin V Terry C Pete Ma Dusty B
2018 2018	Washington Nationals St. Louis Cardinals Boston Red Sox	Dusty B Mike Ma John Fa
2018 2018 2019 2019 2019 2019 2019 2019	New York Yankees Detroit Tigers Cincinnati Reds Baltimore Orioles Toronto Blue Jays Minnesota Twins Los Angeles Angels	Joe Gira Brad Au Bryan P Buck Sh John Gi Paul Mc Mike Sc
2019	Texas Rangers	Jeff Bar

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Incoming Manager

Don Mattingly Dusty Baker Dave Roberts Andy Green Scott Servais Torey Lovullo Bud Black **Rick Renteria** Mickey Callaway Gabe Kapler Dave Martinez Mike Shildt Alex Cora Aaron Boone Ron Gardenhire David Bell Brandon Hyde Charlie Montoyo Rocco Baldelli Brad Ausmus Chris Woodward